PROGRAM IMPLEMENTATION PLAYBOOK

AUGUST 2024 EDITION

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Emeril's CULINARY GARDEN & TEACHING KITCHEN

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FOREWORD

WORD FROM EMERIL

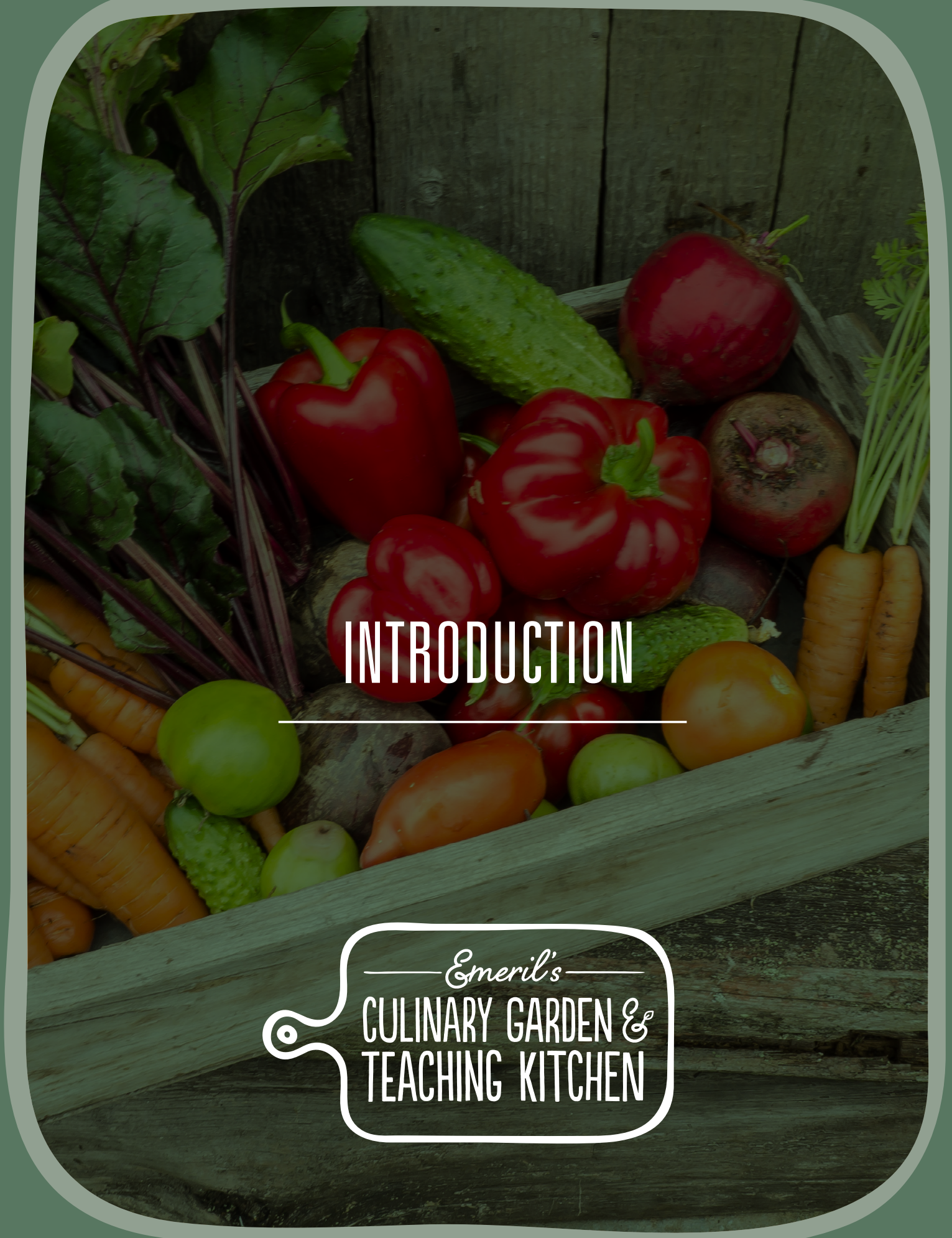
My first memory about food was picking vegetables in the garden of my family's home, and then going inside to make soup with my mother using these same vegetables. I was eight years old, and I had to stand on a stepping stool just to reach the kitchen counter. I can still smell the aromas from that day and hear my mother's voice as she taught me the name of each ingredient and how to prepare it. It wasn't until later in life, as an adult and father, that I realized that day was when I started to develop an appreciation for the source of food.

Throughout my youth, my mom and I continued to grow food in our garden and to prepare many other dishes together. The kitchen was where she taught me invaluable life skills through cooking. I gained self-confidence as I developed my culinary skills and began to understand the importance of ingredients and nutrition.

It has been the good fortune of my life to have benefited from the experience, wisdom and support of a long line of teachers and mentors, starting with my mom and Ella Brennan of Commander's Palace, and I have very mindfully tried to pay that forward. In 2002, my wife Alden and I created the Emeril Lagasse Foundation to inspire, mentor and enable youth to reach their fullest potential. We have had great success supporting garden and cooking education programs through grants, most notably with our friends at the Edible Schoolyard New Orleans as well as in Orlando with our friends at the Edible Education Experience. You will find mention of these programs in this playbook.

We have learned so much alongside these and other very impactful organizations teaching students through food. The stories of the students and families at the schools we've supported have touched me deeply. I have learned heartfelt lessons from some of the youngest students. It was because of these programs that Alden and I decided we wanted our family's philanthropic legacy to be a school-based garden and cooking program that would directly impact children on a national level, Emeril's Culinary Garden & Teaching Kitchen.

We want more kids to have positive memories and experiences learning through the world of food because we believe, as I hope you do too, that gardening and cooking education integrated with academics nurtures a child not only in the classroom, but in life. I hope that you will find the curriculum, recipes, resources, and best practices included in this playbook instrumental to the growth of your students, their families and your community.



INTRODUCTION

Emeril's
CULINARY GARDEN &
TEACHING KITCHEN

INTRODUCTION

HOW TO USE THIS PLAYBOOK

We created this book to serve as a road map for how to implement, promote, evaluate and grow Emeril's Culinary Garden & Teaching Kitchen at your school. Developed in collaboration with other experts, this book is organized in the following sections to help you easily find information on specific topics.

INTRODUCTION: This section includes the foundation's mission, an overview of the program pillars, philosophy, and goals, along with expectations of school partners.

GETTING STARTED: Here, you'll find readiness and development information to support program planning and evaluation, as well as design standards, best practices, and guidelines for the teaching kitchen and culinary garden.

OUTREACH AND ENGAGEMENT: This section includes messaging for how to communicate your role as a school partner and best practices for our standards for communicating best practices for holding community and fundraising events to promote and support your program.

INSTRUCTION: This section includes the curriculum overview, details, program standards, learning objectives, scope and sequence, lesson plans, and lesson templates.

RECIPES: This section includes a listing of recipes written by Emeril, organized by grade, that are referenced in the scope and sequence – and additional recipes by Emeril that educators can use for instruction.

APPENDIX: This section includes useful resources to support instruction and program implementation.

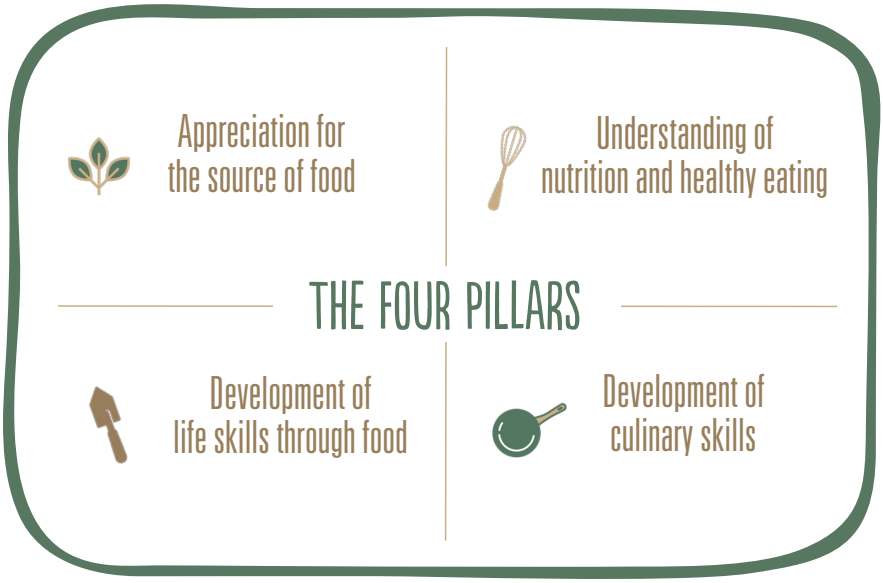
SCHOOL PARTNER LESSON PLANS: This section includes lesson plans created by teachers from our school partner sites, presented in their original formats. We believe sharing these varied formats highlights how other educators use and adapt our curriculum, providing additional insights and inspiration.

OUR MISSION

The Emeril Lagasse Foundation seeks to inspire, mentor and enable all young people, especially those from disadvantaged circumstances, to realize their full potential as productive and creative individuals, and to make a lasting impact on their lives.

PROGRAM OVERVIEW

Emeril's Culinary Garden & Teaching Kitchen is a national education initiative that integrates culinary gardens and teaching kitchens in schools to create interactive learning environments centered on food. The program has four key pillars, which guide the overall goals and desired outcomes of its implementation.



PROGRAM PHILOSOPHY

We all share a passion for helping children realize their full potential. Giving kids the knowledge and tools to grow and become their best selves is our true purpose. That's why we created a signature program that allows us to make a direct, lasting impact on the lives of young people. Emeril's Culinary Garden & Teaching Kitchen reflects our mission to inspire, mentor and enable youth while broadening our reach nationally. By integrating gardening and cooking concepts in school curriculums, we offer an engaging experience that connects kids to the world of food and nurtures skills that benefit them not only in the kitchen but also throughout life. Through a growing network of like-minded schools, Emeril's Culinary Garden & Teaching Kitchen ***enriches the lives of kids through a fun, fresh perspective on food.***

PROGRAM GOALS AND OUTCOMES

PILLARS	GOALS	OUTCOMES
Appreciation for the source of food	To instill in children a **respect** for and **understanding** of the source of their food.	Children gain knowledge of how food grows and where it comes from, leading to a deeper understanding and reverence for the ground-to-plate process.
Development of life skills through food	To develop in children **self-confidence**, a foundation of **self-reliance,** and other life skills through the rigors of gardening and cooking.	Children acquire and understand the importance of life skills such as discipline and diligence, leading to increased engagement during school and improved academic performance scores.
Understanding of nutrition and healthy eating	To impart in children the **values** and benefits of **healthy eating** and influence their families and communities to adopt **healthy lifestyles.**	Children gain knowledge of healthy and nutritious eating habits, leading to increased engagement at home as they share their knowledge and experiences with family.
Development of culinary skills	To teach children **culinary skills** that give them the ability to cook for themselves.	Children acquire the skills necessary to prepare meals for themselves, their families and communities, nurturing their self-reliance and confidence.

SCHOOL PARTNERS

As a school-based program, Emeril's Culinary Garden & Teaching Kitchen is implemented in elementary and middle schools across the U.S, with a preference for schools serving students from economically disadvantaged backgrounds.

SCHOOL PARTNER PROFILE

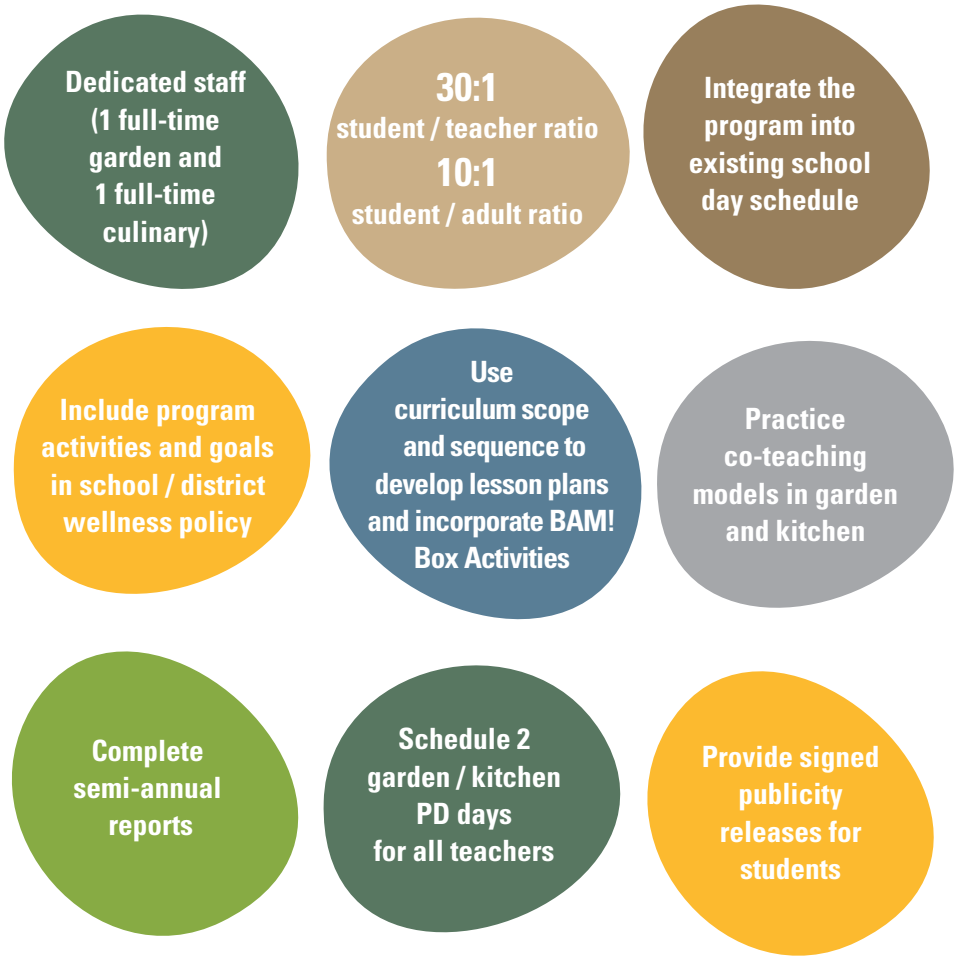
Size: 500-700 students

Grades: K-8

Criteria:

- Existing operational school garden with on-site space to construct a teaching kitchen.
- At least 12 months of experience with experiential teaching practices.
- Dedicated development staff member or committee with proven fundraising capabilities.

SCHOOL PARTNER RESPONSIBILITIES



GETTING STARTED

Emeril's
CULINARY GARDEN & TEACHING KITCHEN

READINESS AND DEVELOPMENT

A diverse team will help to develop action items that reflect the school community.

HOW TO GET STARTED

This guide provides a clear step-by-step process to help schools establish and grow Emeril's Culinary Garden & Teaching Kitchen program. The process involves building a dedicated team, creating action plans, and maintaining ongoing communication and updates with Emeril Lagasse Foundation.

BUILDING A TEAM

OVERVIEW

The first step in developing a successful Emeril's Culinary Garden & Teaching Kitchen program is to identify and assemble a team of motivated and diverse individuals from the school community. This team will be responsible for implementing, growing, and sustaining the program over time. It is ideal to begin this process a full school year before launching the program.

STEPS

1. Identify Team Members

- School Food Service / Cafeteria Personnel
- Teachers
- Students
- School Board Members
- Family Members (Parents, Grandparents)
- Local Chefs
- Master Gardeners
- School Facilities Managers
- PTO Members
- Extension Agents
- District/School Wellness Coordinators
- Local Community Foundation / NPO Program Managers
- District/School Curriculum Directors

See Readiness and Development Tools in the Appendix for planning templates and grant reporting forms.

2. Consider Team Structure

- Decide how often the team will meet.
- Determine the decision-making process.
- If an ideal team member cannot meet regularly, consider having them serve in an advisory role.

3. Engage Team Members

- Ensure shared decision-making so all members are invested and responsible for the established goals and action steps.

GROWING THE PROGRAM

OVERVIEW

Once the team is established, the next step is to complete the School Partner Action Plan and Implementation Timeline. This helps organize planning between program implementation and capital improvements.

1. Complete the Action Plan

- Identify team members.
- Set school-wide goals.
- Plan steps for the current and future years.
- Assign responsibilities to team members for each action step.

2. Include Promotion and Sustainability Goals:

- Develop realistic goals using a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats).
- Identify opportunities for development with grant funding.
- Address gaps through external support, resources, and expertise.

3. Annual Review and Reporting:

- At the end of each school year, submit updated action plans with implementation timelines and a completed School Partner Report to the Emeril Lagasse Foundation.
- Include a minimum of 5 lesson plans created using the curriculum scope and sequence and lesson plan templates for grant reporting

NOTE:
In the first year of the program, schools will complete the Action Plan Template and Implementation Timeline twice: once in the beginning of the school year and again at the end of the school year. In subsequent years, these planning templates need to be completed only at the end of each school year.

CREATING THE TEACHING SPACES

School gardens and teaching kitchens serve as engaging learning spaces for students and are primary elements of Emeril's Culinary Garden & Teaching Kitchen. Food grown and harvested from your culinary garden can be used in the teaching kitchen, academic classroom, in taste tests, in the cafeteria, and at community, family and school events.

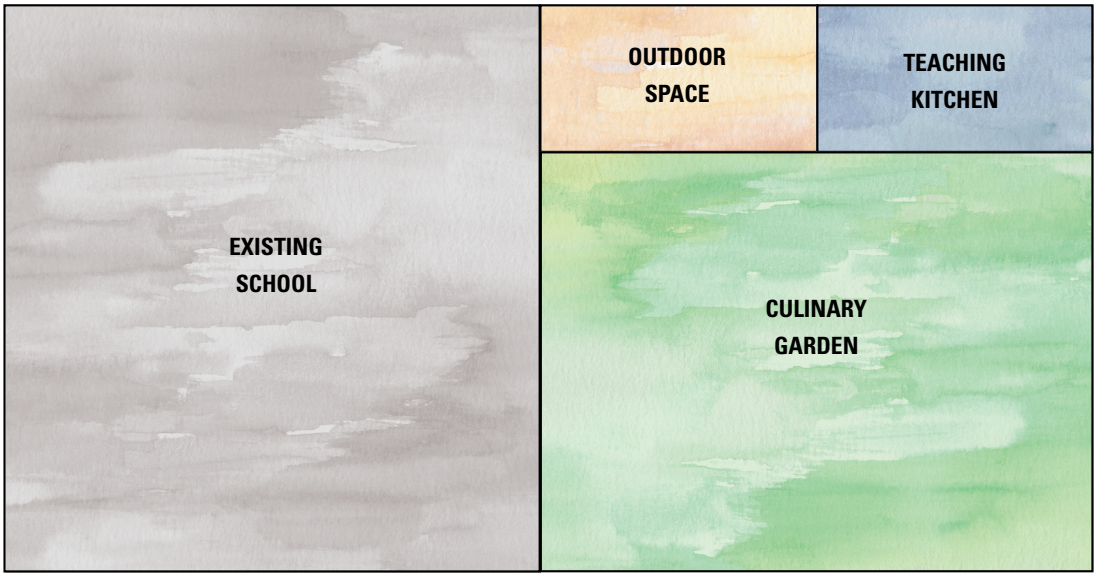
DESIGN CONSIDERATIONS

This chapter of the playbook is intended to serve as a starting point for design to be performed by licensed professionals. The school's architect, engineer, designer or any other design professional of record is responsible for compliance with any laws or regulations governing the proposed construction for the teaching kitchen and culinary garden.

CONCEPTUAL DESIGNS

The **conceptual designs** for the teaching kitchen illustrated on the following pages, represent 3 build-out options for the teaching kitchen: a freestanding building, a building addition, and a retrofitted classroom (conversion of existing space). The schools should work with design professionals to select the best option for its architectural footprint and school culture. It is strongly encouraged that the location of the teaching kitchen be adjacent to or within sight of the culinary garden, and the location should be on school property.

FREESTANDING BUILDING



BUILDING ADDITION

INTERIOR RETROFIT

CONCEPTUAL LAYOUT

The **conceptual layouts** for the culinary garden and teaching kitchen on the next 2 pages, illustrate how the space can be designed. Each layout highlights key elements, or design standards, that together make up the space. Every school must meet the design standards, regardless of the build-out option it selects. If market conditions exceed the design standards, schools should incorporate enhancements as additional features to the design standards. Additional best practices for planning the garden and kitchen space to meet these design standards can be found in the Best Practices and Guidelines section of this playbook.

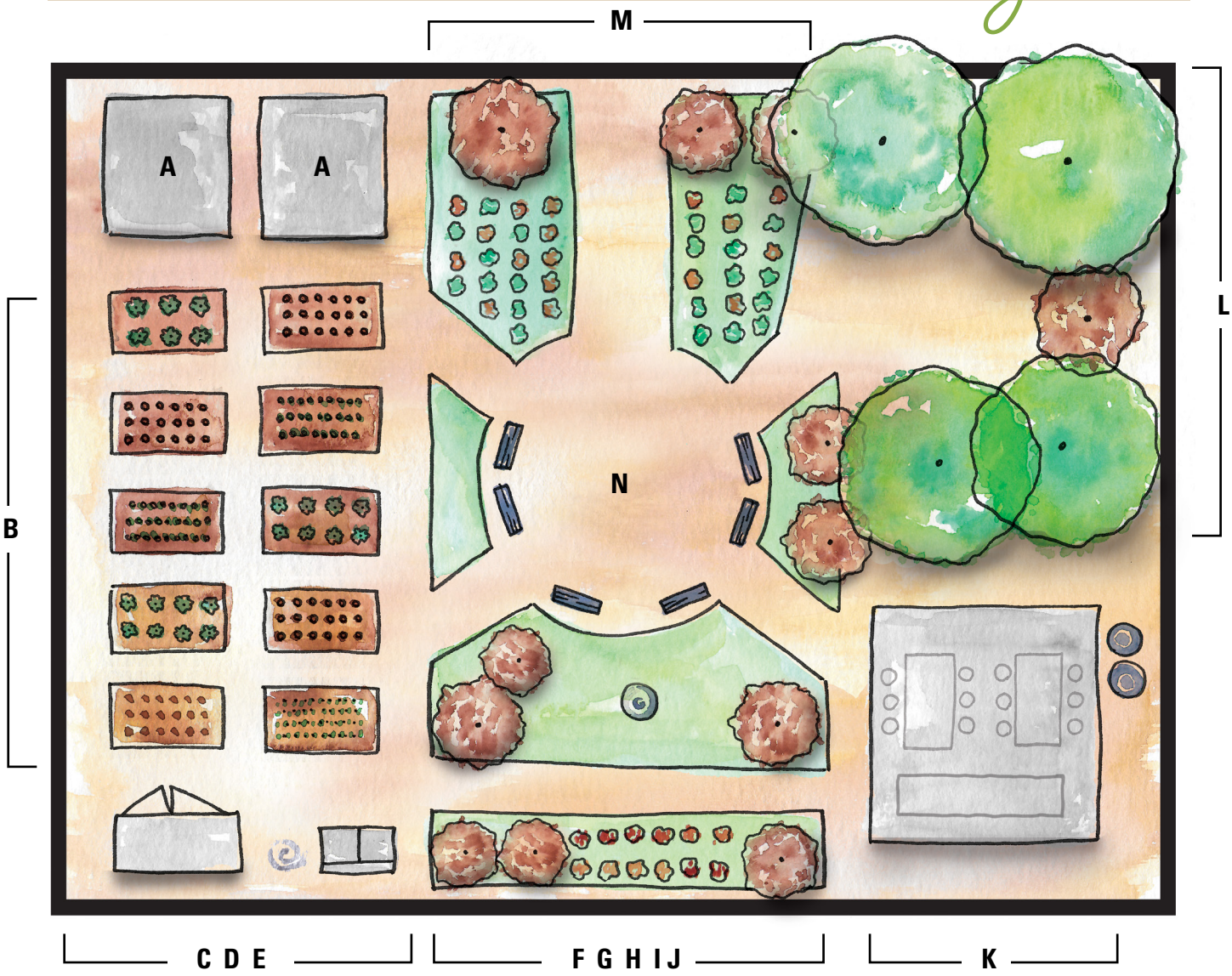
ACCESSIBILITY (ADA)

All projects should be designed in accordance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) as required by the Americans with Disabilities Act (ADA). Specific reference to accessibility design requirements are not used in this book because design professionals are required to ensure the design intent of ADAAG is met throughout the project.

ENVIRONMENTAL DESIGN

Emeril Lagasse Foundation strongly encourages green building practices but does not require this of school partners.

Garden



A Green House

B Garden Beds*

C Toolshed*

D Irrigation / Watering Source / Hose

E Food Prep Sink*

F Perennials*

G Shrubs

H Path

I Bird Bath

J Butterfly & Bird Garden

K Covered Shade Area*
- Hand Washing Station*
- White board / Instruction board*
- Work Tables*
- Rain Barrels
- Food Prep*

L Shaded Area
- Fruit Trees*
- Shrubs
- Small Trees*
- Compost*

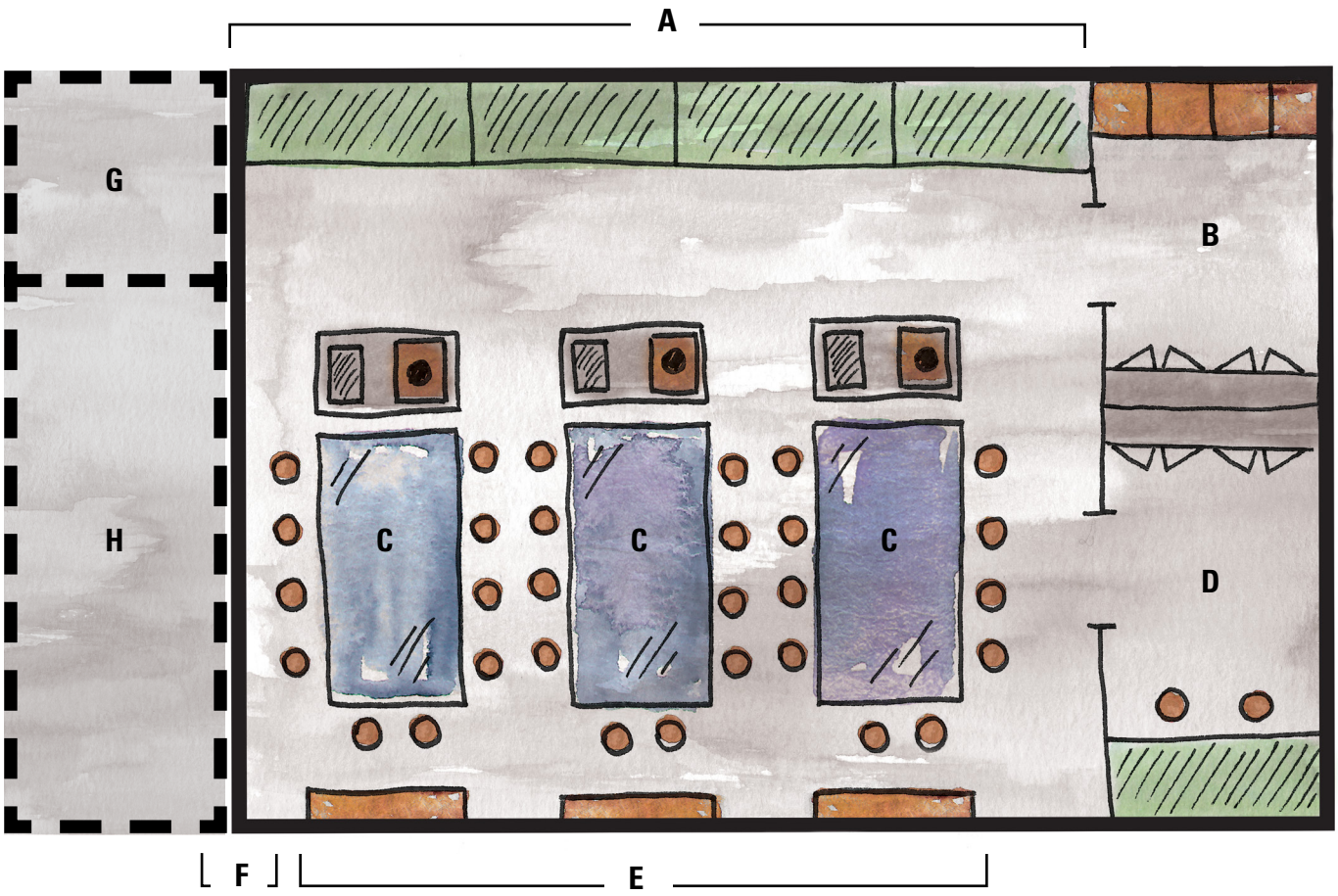
M Main Entrance (Fits Truck)
- Shrubs
- Perennials* & Native Plants
- Annual Beds

N Central Gathering Area*
- Benches*
- Perennial Beds*
- Weather Station Area
- Shrubs

Also required:
- signage*
- access to restrooms*

**Design elements with asterisk indicate required design standard.*

Kitchen



A Teaching Appliance Wall
- Refrigerator / Freezer*
- Oven*
- Staging / Work Counter
- Storage / Shelving*

B Dishwashing & Laundry Room*
- Washer / Dryer*
- 3 Compartment Sink*
- Dishwashing Appliance

C Student Cooking Station*
- Working Table*
- 2 Burner Range*
- Ventilation & Exhaust Hood*
- Kitchen Sink*

D Pantry & Administration Room
- Bulk Food Storage
- Teacher /Chef Staging Counter
- Administrative Station
- Audio, Visual & Media Controls

E Student Storage Wall
- Storage Cubbie (10)*
- Hanging Rack

F Instructional Media Wall
- White Board*
- Digital Projection / Monitor

G Restroom*

H Flexible Space
- Additional Restroom
- Equipment Storage
- Utility / Mop Closet
- Etc.

Also required:
- signage*

**Design elements with asterisk indicate required design standard.*

BEST PRACTICES AND GUIDELINES *Garden*

Review and complete the Culinary Garden Best Practices Checklist in the Appendix of this book at the beginning of every school year.

The following best practices and safety guidelines are meant to be a tool for schools to minimize risks associated with school gardens. These practices and guidelines are an outline that may easily be adapted to meet the unique needs and local requirements of a school.

At the beginning of every school year, schools should review the best practices checklist in the Appendix and keep a record of when the checklist was reviewed. If any actions should take place in order for the school to meet a best practice, it should be documented. Always share completed checklists with school administration and/or facilities management teams.

SAFETY AND SANITATION GUIDELINES

- Students, staff, parents, or volunteers involved in harvesting food for public consumption should wash hands thoroughly in warm soapy water for at least 20 seconds prior to harvesting.
- A person with a food-safety certification should supervise students, parents, or staff who participate in any food preparation such as taste-tests or special cafeteria events.
- All students and staff should have access to restrooms with potable (safe to drink) hot running water, soap, and a hand drying mechanism.
- All students and staff should wear closed toe shoes.
- Anyone with open cuts or wounds should not participate in harvest until healed.
- Any students or staff exhibiting symptoms of illness should not handle produce in the garden.
- All harvesting tools should be food-grade and designated only for harvest and food handling.
- All garden tools and utensils should be cleaned and free of dirt at the end of the day. Any tools or utensils that come into contact with food need to be properly cleaned and sanitized.
- School garden produce delivered for use in a school cafeteria should be received and inspected by food service personnel upon delivery with the same system used to receive and inspect all other incoming products.
- If storage is necessary, produce should be cooled and refrigerated promptly after harvest.

SAFETY AND ACCESSIBILITY

Safety and accessibility are key to a school garden. To be able to learn students must feel comfortable in the setting and understand the proper use of space and tools, as well as how to behave in unexpected situations.

- Planning a garden with a setback from public thoroughfares is important. A setback of at least 30 feet from a public sidewalk is recommended. Schools should follow local zoning set back regulations. Regardless of the setback available, students should understand school procedure for dealing with strangers who want to ask questions.
- Tools should be stored in a shed or classroom space. They should not be accessible to students until garden staff has instructed them to use the tools. Emphasis should be placed on keeping anything potentially dangerous out of reach until proper procedure has been discussed.
- Students should be spoken to maturely about the presence of bugs and animals and should be informed of which common bugs and animals to avoid, or how to get an instructor when sighted. A full first-aid kit should be kept in the garden space at all times. Students with severe allergies, such as to bee stings, should not be allowed in the garden unless an adult or school nurse has an EpiPen or other safety protocols are in place.
- ADA accessibility should be important when planning your garden space. All students deserve the ability to spend time in the garden, and accommodations should be made to allow accessibility. Best practice is including a central ADA-compliant walkway which connects to at least one bed. If graded well and maintained, often turf can be accessible to those in wheelchairs and with ambulatory equipment. Consult your school design professional to ensure the most up-to-date requirements for accessible gardens are in practice.

PLANNING GARDEN COMPONENTS

SOIL

Soil is one of the top concerns when planning a school garden, and it will influence the design of the garden greatly. Considerations should be made with regard to the state of the native or existing soil and the resources available to continue to build healthy soil.

- If soil used for growing is coming from school property, test for contaminants before planting. Testing kits are usually available through state cooperative extension or state health offices.
- An HCL and heavy metals test should be conducted along with the general soil testing. There are no national standards published by the EPA on acceptable lead levels in garden soil, but most gardeners believe less than 400 ppm is acceptable (as measured by a Total Sorbed Metals soil test). Any level of soil lead should encourage teachers to make students wear gloves when working in the soil and wash produce before consuming. Minimal or naturally occurring levels should not discourage a garden project.
- Identify the history of the garden site to help determine areas of the garden that are not suitable for growing food or may need special amendments.

LIGHT

Without the proper amount of light, a vegetable garden will not thrive and plants will be more susceptible to bugs and disease.

Full Sun

For the main garden area, the site should receive 6 to 8 hours of unobstructed sunlight each day.

Partial Shade

For perennial areas, use a mix of different sunlight conditions to build the garden space. Ask local gardeners and garden centers for suggestions on plants for sunlight conditions from full sun to full shade.

Shade

Highly shaded areas are an asset to a school garden but cannot be used for vegetable production. It would be advisable to seek out some shade in any school garden for ferns, mint, gingers, and woodland plants. These can be spaces for student reflection and conversation.

WATER

Water should be readily accessible to school gardens. Any compromises made in the availability of water will greatly threaten a garden's success in the long run.

Hose Bibbs

A hose should be no further than 8 feet from the edge of the garden space.

Irrigation

As budget allows, irrigation and timers should be installed so that the garden can get precise amounts of water, even on holidays and weekends, and so that precious garden time can be used for instruction as often as possible. When using water for irrigation make sure it is potable and from a tested source. Check with your state cooperative extension or state health offices for simple testing kits. Drip irrigation is recommended to maximize water conservation.

Rain Barrels

Rain barrels are a wonderful way to talk about the water cycle, recycling, and water conservation. At least one rain barrel should be on site for teaching purposes, but ideally include as many as existing school roofs allow.

Watering Cans

If there is no irrigation, there should be one watering can per 10 square feet of the garden, or one can per student in any given class period, whichever is smallest.

NOTE:
Sprinklers are not recommended for watering the garden. Overhead watering is less effective and can increase the spread of disease. Use student garden time for watering with a can and sprinkler watering only when absolutely necessary.

PLANNING GARDEN SPACES

SPACE

The amount of space a school garden uses is very specific to the program itself. Below are general spacing guidelines for making those decisions.

- A garden should be large enough to show a variety of food and plants to students, but some schools may have space restrictions. A minimum of 500 square feet is recommended.
- An ideal amount of space for a school garden is 10 square feet per student in the largest class at any given time.
- The maximum amount of garden space should be determined by staff capability. There should be a dedicated garden teacher/gardener for each 10,000 square feet of garden space.
- In-ground gardens should have walkways that are a minimum of 3 feet wide and beds that are a maximum of 4 feet wide. A 4-foot-wide bed should be accessible from both sides so that a student may access every part of it. A 3-foot walkway allows for student congregation and for students who may not be as agile or aware of their physical space to work on rows without damaging adjacent rows.
- Raised beds should, for structural reasons, be no more than 4'x8'. Larger beds have a tendency to bow and break. Beds should be at least 2.5' feet deep in order to support plant growth and not dry out too quickly.

STORAGE

Storage of garden tools, supplies, and materials should be on site and within eyesight of the garden. The use of chemicals and chemical fertilizers in the garden is discouraged. The recommendation is that each garden have a shed. If a shed is not possible due to budget constraints, an adjacent classroom will do, but it should be in eyesight of the garden. If a garden is over 1,000 square feet there should be an equal amount of storage space for bulk materials such as mulch, manure, or bulk compost materials.

WASHING STATION

A washing station with a deep bottomed sink, such as a utility sink, should be within the proximity of the garden and designated for garden use. This sink can be used for hand washing, but shouldn't be used for any other purposes, as it may contaminate harvest. Other vessels and hoses can be substituted for this purpose. Many gardens and farms use recycled clawfoot tubs with drains, for example, for processing food. As long as water can flow in, there is plenty of room for washing produce, and drainage is properly hooked up (this can be part of a grey water system) this is acceptable. Any vessel being used to process food should have the ability to be sanitized and should be sanitized frequently.

SHADED OUTDOOR CLASSROOM AND MEETING AREA

Shaded space is important for garden instruction. Ample seating should be available for every student that would be instructed at any given time. These spaces should also be suitable for adult meetings.

Shade structures with roofs are recommended and helpful for installation of a rain barrel. If writing surfaces under a shade structure are not available, teachers should be prepared to provide a clipboard for each student when writing is necessary. The area should include at least one picnic table or table structure for garden staff to conduct meetings and visitors to sit and speak with staff and students.

In lieu of a shade structure a pre-existing shaded area will do, but it should be shaded with non-deciduous trees. In this case, the area should be graded and the ground should be turf or a comfortable material that will not become muddy on rainy days. A table still needs to be provided for garden meetings to take place.

It is advised that a quiet, dry spot that showcases the beauty and serenity of the garden be set aside for sitting and talking with potential funders, supporters, and even students in need of de-escalation or intervention. This small step can be incredibly important when building a community in the garden and fostering advocates for the program. These spaces should be clean and accessible to even the most unaccustomed to the outdoors.

SEED STARTING AREA

Seed starting is incredibly important for the vitality and financial sustainability of a school garden. Seedlings can be an expensive investment every season, and school gardens should be prepared to start from seeds a sizeable portion of their plants every season to manage costs.

Consider source and quality when purchasing seeds for your school garden. Look for seeds that are preferably non-genetically modified and come from companies that have taken a "safe seed pledge."

GREENHOUSE

A greenhouse should be no smaller than 10'x10' to be effective. If a greenhouse is not an option, then schools should be prepared to start seedlings outside or inside under lights. Seedlings should not be started indoors without light, as they will be weak and reaching for sun. Seedling starting space should be at least 50 square feet.

THE GARDEN ENVIRONMENT

SIGNAGE

Signage is important for student pride and informing the public of how to interact with the garden.

If the school garden is visible to the public, a sign should introduce it as well as thank donors. Schools should also consider signage for other parts of the garden that may be helpful for neighbors and volunteers, such as the compost and the seedling starting area. These signs help build rapport with the public and instruct volunteers when they visit.

If the garden is not visible to the public, it is still helpful for school pride and donor recognition to provide signage. A minimum of a name and a thank-you to donors is recommended.

GARDEN NORMS AND BEHAVIORS

All gardens should have a sign explaining garden norms or guidelines for behavior. Some find it helpful to review every time students enter the garden. This list of norms should be clearly posted so that students can be held accountable, and students should be deeply involved in the creation process. Workshopping this sign with groups of students gives them ownership of the garden and helps them encourage one another to follow the norms.

RESTROOMS

- All students and staff should have access to restrooms with potable hot running water, soap, and disposable towels (or other hand drying mechanism).
- Restrooms should have adequate handwashing signs. Many informative signs are available for educating garden staff on this subject, and some may be helpful for students. If hand washing isn't easy and encouraged, poor sanitation can lead to food contamination in the garden.
- Never use the bathroom sink for washing food.
- If school procedure requires an instructor to accompany a student to the restroom, then the restrooms should be within eyesight so that the proper number of instructors remain in the vicinity.

PLANNING WITH MAINTENANCE IN MIND

Understanding the way maintenance will happen will help with the layout of the garden.

Mowing

Adhering to walkway standards and setbacks should allow for the passage of most lawn mowers. If your school has a larger mower, considerations should be made to accommodate it. Also, knowing who will be mowing, and how often, is important.

Weeding

Weeding can be a fun task with students or a time drain depending on the goals of the garden and the number of students and staff. Gardens should be mulched heavily for water conservation, temperature regulation, and weed control. Recommended mulches are recycled wood chips (not bagged or dyed), straw or hay without seed heads, and pine straw in areas without a problem with acidic soil.

Harvesting

A harvest plan should be set up so that fruit does not rot, attract birds, or reduce the productivity of the plant. If time allows only to harvest once a week, then plant selection should take this into account. Plants which require daily harvest, like okra, should be avoided.

Wheelbarrows

A necessary tool for soil hauling and debris removal, wheelbarrows should be measured to make sure that they fit easily down walkways. Most common wheelbarrows fit down recommended path sizes.

At least one path should be able to fit a truck for hauling bulk materials if the garden is over 1,000 square feet.

COMPOST

All gardens should incorporate a composting component. There are two basic methods of composting: compost bins and vermicomposting.

Compost Bins

Compost bins can follow a slow method that takes 6 to 12 months or a fast method that takes 3 to 4 months. The slow method is ideal for school gardens because it requires less labor. For detailed information about how to make compost, visit Life Lab's Resource Page.

An important consideration when making a compost bin system is where to find the compost materials. The system will need to have a carbon and nitrogen balance, so a carbon source must to be available. A 3-bin system for turning compost is recommended as it allows for different degrees of readiness.

NOTE:
It is recommended that schools do not use cafeteria scraps unless the garden coordinator and/or staff as well as the student monitors helping with the composting are trained in compost management and have a system in place that minimizes risks.

A proper composting system includes:

- Training staff and students in proper composting techniques
- Documentation of time and temperature required to destroy pathogens associated with composting
- Monitoring of composting stations

If you decide to collect cafeteria scraps for composting, ensure that the station for collecting the scraps is monitored by an adult or responsible student who can identify what should and should not go into compost.

Vermicomposting

Vermicomposting is ideal for school gardens with little space or mostly food waste. It is also very enriching for students and very effective in producing useable compost. This method requires a lidded container, red worms, food scraps, and bedding for the worms to live in. For more information on how to get started with vermicomposting visit Life Lab's Resource Page.

TYPES OF GARDENS

Whether to install raised garden beds, in-ground garden beds, or a combination of both is dependent on the population the program serves and the intended outcome. Materials used for garden beds, containers, stakes, or trellises should be constructed of non-toxic, non-leaching material.

IN-GROUND GARDEN BEDS

In-ground gardens have a soil structure established and are far less expensive to begin. In-ground gardens should be considered in areas where the soil is amenable and the community has a connection to row-cropped agriculture. Community members will be more able to interact with in-ground gardens if there is a strong cultural tradition. Additionally, these gardens require the same organic matter as raised beds do, without the maintenance of lumber that raised beds need.

In-ground gardens should be avoided where the soil condition is not ideal or the population using the garden is small. Also, they are less physically accessible to students or guests with limited mobility.

RAISED GARDEN BEDS

Raised beds allow for the building of a new soil structure, which can be advantageous in areas with poor soil. They are easy for people to interact with and building them is a rewarding project to do with students. Raised beds are also tidier for the first several years, which can help with manageability of the garden.

Raised beds should be avoided when the budget is tight, as lumber can be a big investment. They also should be avoided in areas where good, healthy bulk soil and compost are not available, as they will be difficult to fill effectively.

MIXED PROJECT WITH RAISED BEDS AND IN-GROUND GARDENS

If conditions are right and funding exists, a mix of the two methods can be the best option. In this scenario, various needs are served and the best of both methods can be enjoyed.

FRUIT TREES

Fruit trees are a boon to school garden programs. If space allows, fruit trees are a recommended part of every program. Fruit trees should be given the proper amount of space depending on variety, and they should never be planted in too small a space. Shade trees can also be useful in a garden space, especially ones of specific importance to a place or school. When planting any trees, think about their eventual space needs rather than their immediate space needs.

PERENNIALS AND THEMED GARDENS

All school gardens should have some sort of perennial component to soften edges and aid in showing the change of seasons. These gardens can have as little as a simple buffer row of perennial plants, or can be extensive perennial gardens.

Meditation space is important for decompression of an upset student or an exhausted staff. These spaces can greatly strengthen the healing capacities of the garden and the sense of community within it.

Craft projects can be conducted more easily in perennial spaces. Hanging birdfeeders, making light-sensitive prints, or growing plants for making dye are all activities best done in a perennial garden. Meetings can be held in the perennial space, as they are designed to provide shade and a calm environment.

FURTHER CONSIDERATIONS

Some school garden guidelines are not as universal. Options for the personalization of a school garden should take many factors into account such as student needs, staffing, summer plans, and the role of the garden in everyday instruction.

ANIMALS

Owning farm animals at a school, while it provides an enriching experience, should be approached with a great deal of planning and consideration. Adding animals to a program means that weekends and holidays, including summers, will require the help of a volunteer or teacher on a daily basis. Chickens or ducks are the most accessible animals for a school garden. Three or four chickens can make a big difference in the interest and investment level of students and neighbors, but always make sure the program is fully following local ordinances for space and noise of pets. Chickens should have no less than 80 square feet and a proper space for laying, eating, and sleeping. Improper care of animals can lead to various problems for a garden. Proper care teaches students and the community animal welfare, stewardship, and responsibility. Programs should have birds for at least a year before deciding to add any other farm animals.

Bug and wild bird habitats, or hotels, can be a wonderful addition to a garden for biodiversity and for teaching. These are recommended in every garden setting, and allowing students to participate in their construction can be a rewarding way to increase student interest. In schools where ecology lessons are being employed in the garden, ask students to make observations about biodiversity at installation and again several months later. Bug and bird hotels can be as small as 3'x6' and hang on a wall surface.

Animal habitats such as piles of sticks, piles of leaves, underbrush, and upside-down flower pots can increase wildlife.

AT A GLANCE: SCHOOL GARDEN GUIDELINES

- Raised beds following size requirements if raised beds are chosen.
- In-ground beds following size requirements if in-ground beds are chosen.
- Adequate light in main production space
- A hose bibb within eight feet of the garden
- Adequate number of watering cans or irrigation
- A dedicated washing station
- Adequate space
- Adequate storage
- Adequate year-round shade
- A composting system
- A dedicated seed starting area
- Signage, including a norms and behavior sign
- Adequate restrooms within eye-sight
- A safety plan, first-aid kit and ADA accessibility to at least some of the garden
- A fully composed safety plan in advance of students entering the garden
- A thought-out maintenance plan during design and installation

BEST PRACTICES AND GUIDELINES *Kitchen*

Review and complete the Teaching Kitchen Best Practices Checklist in the Appendix of this book at the beginning of every school year.

The following best practices and guidelines are meant to be a tool for school partners to minimize risks associated with cooking in the classroom. These practices and guidelines are intended to serve as a framework that may easily be adapted to meet the unique needs and local requirements of a school.

At the beginning of every school year, schools should review the best practices checklist in the Appendix and keep a record of when the checklist was reviewed. If any actions should take place to ensure the space is ready for instruction, they should be documented and a plan created to implement them. Always share completed checklists with school administration and/or facilities management teams.

SAFETY AND SANITATION GUIDELINES

SAFETY AND ACCESSIBILITY

- Safety and accessibility are key to a teaching kitchen. To be able to learn, students must feel comfortable in the setting and understand the proper use of space and tools, as well as how to behave in unexpected situations.
- Tools should be stored in workstations, on shelves, or in a closet. They should not be accessible to students until kitchen staff has instructed them to use the tools. Emphasis should be placed on keeping anything potentially dangerous out of reach until proper procedure has been discussed.
- A full first-aid kit should be kept in the kitchen at all times. Students with severe allergies should be identified and should not be allowed to prepare or eat the foods that affect them. An adult or school nurse should have an EpiPen or other safety protocols in place.
- ADA accessibility should be important when planning the kitchen space. All students deserve the ability to spend time in the kitchen, and accommodations should be made to allow accessibility. Consult the school design professional to ensure the most up-to-date requirements for accessible workstations are met.

FOOD ALLERGIES

Food allergy policies are critical for providing a safe and healthy learning environment for students with food allergies. The level of sensitivity and the types of reactions vary greatly among individuals with food allergies so it is important that schools tailor the approach to preventing and treating these allergies to the individual's needs. Unless school policy states otherwise, instructors and adults who may be involved in the care of a student diagnosed with a food allergy should be informed of the individual health care plan for that student, as well as the school's emergency health care plan, as appropriate. It is the responsibility of the school to ensure that instructors and adults caring for students with food allergies understand and consistently follow plans and procedures, be able to recognize symptoms of an allergic reaction, know what to do in an emergency, and work with other school staff to eliminate the use of food allergens in the allergic student's snacks and meals, educational tools, arts and crafts projects, or incentives.

PLANNING KITCHEN SPACES

As with the garden space and design, the amount of space a school needs for a teaching kitchen is very specific to the school and program itself. Below are general guidelines for making those decisions, however, a school should consult with its school district facilities management to determine minimum square footage requirements and other regulations in its state.

- The teaching kitchen should be large enough to accommodate food preparation and cooking activities with a minimum of 3 cooking stations, various storage needs for food and equipment, access to adequate restroom facilities and handwashing stations, a dishwashing / laundry area, and an instructional wall for a white board or other media. 1,000sq ft – 1500sq ft is suggested.
- A general rule of thumb for a school kitchen preparing and serving food is to have 1,000sq ft for every 200 – 1,000 meals that will be served from the kitchen.
- Anticipate potential growth in student enrollment when planning the size of the teaching kitchen and how many students it should accommodate. The space should accommodate 10 students per cooking station with a minimum of 3 cooking stations.

TEACHING ISLANDS (STUDENT COOKING STATIONS)

Each cooking station should comfortably seat 10 students, be equipped with the same basic cookware, and include a two-burner range with ventilation and exhaust hood, counter space for food prep, and a sink. If a school prefers an alternative to gas, an induction range could be an option. Schools should keep in mind that induction capable cookware is needed for induction to work. To distinguish what tool belongs to which cooking station, use a labeling or coding system, such as color coding the handles of each stations equipment a different color. This will help students identify their tools and help instructors reinforce kitchen norms and behaviors.

STORAGE

Teaching Appliance Wall

The teaching appliance wall includes a refrigerator/freezer, oven, microwave, staging/work counter, storage, and shelving. Each cooking station should have its own dedicated staging/work counter and storage area on the appliance wall, and all drawers, cabinets, and shelves should be labeled clearly for students. Equipment and tools used regularly for the whole class that are not stored at individual cooking stations should have a designated area on the appliance wall, too. Similar tools, such as electronic appliances, should be stored together. Any raw foods in the refrigerator should be stored below cooked and ready-eat-foods. Always label and date stored food.

Student Storage Wall

Students should have a separate, designated space for personal belongings that is away from the food prep and cooking stations and appliance wall.

Pantry and Administration Room

All dry bulk food items such as flour, beans, sugar, etc., should be stored in clean, covered, labeled containers. This general area can also be designed to accommodate an administrative work station if space allows, however, the food items and personal work spaces should remain separate.

RESTROOM/HAND WASHING STATION

All students and staff should have access to restrooms with potable hot running water, soap, and disposable towels (or other hand drying mechanism) and a conveniently located waste receptacle. Hand washing signs must be posted. Never use the bathroom sink for washing food.

DISH WASHING / LAUNDRY AREA

A designated dish washing area with a washer and dryer for kitchen towels, aprons, and other linens should be located away from the cooking stations. Cleaning products should be labeled and stored in a designated area. Schools should establish rules with each class at the beginning of the year regarding clean up responsibilities and dishes. A common practice is for cooking stations to rotate clean-up duties either on a monthly or weekly basis. It is discouraged to use clean-up duties as positive punishment.

THE KITCHEN ENVIRONMENT

SIGNAGE

Signage is important for student pride and informing the public of how to interact with the kitchen. If the entrance to the kitchen is visible to the public, an exterior sign should introduce it as well as thank donors. Programs should also create signage for interior parts of the kitchen, helpful for school pride and donor recognition. A minimum of a name and a thank-you to donors is recommended.

KITCHEN NORMS AND BEHAVIORS

All kitchens should have a sign explaining kitchen norms or guidelines for behavior. Some find it helpful to review every time students enter the kitchen. This list of norms should be clearly posted so that students can be held accountable, and students should be deeply involved in the creation process. Workshopping this sign with groups of students gives them ownership of the kitchen and helps them encourage one another to follow the norms.

Protect your fingertips in the shape of a claw, and use your knuckles to guide the knife.

COOKING TECHNIQUES

WASHING

Always rinse food under cold running water and pat dry with paper towels before using. Depending on the food, you may have to use tools to remove loose dirt. When it comes to blemished fruits and vegetables or food, evaluate the food to determine if the blemished area can be removed or if the food should be discarded as compost or trash.

Fresh Veggies and Fruits

Rinse veggies and fruits well under cold running water and then pat dry with paper towels before using. Some veggies, such as potatoes, need to be scrubbed with a vegetable brush. Others, such as mushrooms should be brushed with a soft bristled brush to remove loose dirt and should not be soaked in water.

Berries and Dried Beans

Rinse well and pick through to remove bad or blemished pieces.

Meat, Poultry and Seafood

Rinse under cold water and then pat dry with paper towels.

NOTE:
Use extreme caution when handling raw meat or poultry.

Peeling

Some fruits and vegetables peel easily with a vegetable peeler while others should be peeled using another kitchen tool.

If using a vegetable peeler, place the food item on a clean cutting board and hold firmly with one hand. Using the other hand, scrape the peeler down (away from the person peeling) for the length of the food. Turn the food to remove the entire peel.

If using a knife to peel fruits and vegetables, such as garlic or onions, make sure the knife is sharpened, and then cut off both ends of the food. Then, use fingers to peel away the dry outer layer. When peeling garlic, press the garlic down against the clean cutting board using the palm of the hand to loosen the skin.

Adapted with permission from Emeril's Children's Cookbook Series, "There's A Chef..." by Emeril Lagasse

CHOPPING

Chopping is interchangeable with slicing and is a type of cut that is used for precision cutting of vegetables and herbs using a very sharp knife. The four main ways to chop something are: cubed, roughly chopped, finely chopped, and minced. The more a food is chopped, the smaller the pieces will get. When chopping or slicing foods, always place them in a stable position, preferably with a cut surface flat against a clean cutting board. Guide the knife blade against the food with the free hand.

GRATING

Grating is a technique used to cut foods into smaller pieces by rubbing the food against a grater. To grate a food item, hold the food in one hand and the grater with the other hand. For hard foods, rub the end of the food downward over the holes of the grater, moving the food back and forth so that the grated pieces fall through the holes. For soft foods like cheese, use less pressure with the same technique.

NOTE:
Make sure to place a large mixing bowl or piece of waxed paper under the grater to create a space for grated food to land. Always be careful of fingers near the grater.

ZESTING

Zesting is a technique used to scrape or cut away the outer layer of a citrus fruit. Ideal tools are a zester, a microplane, or a fine grater. If using a zester, press and pull the zester down the side of a piece of fruit to remove tiny strips of the outermost layer. If using a fine grater or microplane, rub the side of the fruit along the grater while pressing down lightly so that small pieces of zest fall through the holes of the grater. If a recipe calls for a strip of zest, simply run a vegetable peeler across the skin of the fruit to remove a portion of the outermost, colored layer of skin.

REMOVING CORN FROM THE COB

To remove corn from the cob, hold the ear of corn in one hand and rest the thicker end of the ear on a clean cutting board so that it is standing up. Using a large chef's knife (this should be done by and adult) starting at the tip with a downward motion, cut the kernels from the cob. Turn the cob with every cut to get all the kernels. To release milk from the corn, scrape the corncobs with the back side of the chef's knife or with a spoon.

CLARIFYING BUTTER

Clarified butter refers to butter in which the liquid and milk solids have been removed, leaving only pure butterfat. To clarify butter, heat the butter over low heat in a small saucepan until it is completely melted and slightly bubbling. Using a small spoon, skim from the top and discard the milk solids that have risen to form a white bubbly layer. The second layer will be the pure yellow butterfat. Spoon this out into a bowl for saving without disturbing the bottom layer that is in the pan. The bottom layer will be a cloudy, white, watery substance that should also be discarded.

MEASURING

The most accurate way to measure something is with individual measuring cups (1/4-, 1/3-, 1/2- and 1-cup) and measuring spoons (1/8 tsp, 1/4 tsp, 1/2 tsp, 1ts(1/8 tsp,1/4 tsp, 1/2 tsp, 1tsp and 1Tbsp)p and 1Tbsp).

MEASURING EQUIVALENTS			
3 TEASPOONS =	1 TABLESPOON		
4 TABLESPOONS =	¼ CUP		
1 CUP =	½ PINT =	8 OUNCES	
2 CUPS =	1 PINT =	16 OUNCES	
2 PINTS =	1 QUART =	32 OUNCES	
4 QUARTS =	1 GALLON =	128 OUNCES	
1 STICK OF BUTTER =	8 TABLESPOONS =	¼ POUND =	= ½ CUP

Measuring Dry Ingredients

When measuring dry ingredients such as flour, sugar, rice, etc., use a metal measuring cup and dip the cup into the ingredient to be measured. Level off the top using the flat side of a knife or hand. Use the same technique for measuring dry goods with measuring spoons.

Measuring Liquid Ingredients

When measuring liquid ingredients, use see-through glass or plastic measuring cups. Fill to the appropriate line and check at eye level. When using measuring spoons, hold the measuring spoon level in one hand and pour the liquid into the spoon with the other hand.

CONTAINER CAPACITY

If unsure about the size of a container, including saucepans and baking dishes, use a 1-cup measuring cup to fill the container with water and count how many cups it takes to fill. Then, convert the cups using a measuring equivalent chart.

FOLDING

Folding is a technique used to mix ingredients together so they remain fluffy. Rather than stirring, use a large plastic or rubber spatula to combine ingredients by using 2 or 3 "up and over motions" taking care not to overmix.

SIFTING

Sifting is a technique that is done to ensure there are no lumps in dry ingredients like flour. To sift, hold the sifter over a bowl and move side to side. If your sifter has handles to squeeze or a knob, squeeze the handles or turn the top while moving side to side.

TESTING THE HEAT OF A PAN

To test the heat of a pan, drop a teaspoon of water into the pan. If the water "dances" across the bottom of the pan, it is hot enough to cook in.

INSTANT READ THERMOMETER

Instant read thermometers help to make sure that things are cooked enough. If using a thermometer, make sure it is inserted far enough into the food being tested to measure a true temperature. Also, make sure not to touch the end of thermometer to the bone of the meat. Most thermometers have a line on them that indicates how far they should be inserted. After placing the thermometer into the food, wait a few seconds until the temperature stops rising and read the number.

NOTE:
Meat may contain germs so it is always best to cook until it is no longer pink inside. This is often called being "cooked through." Use an instant read thermometer to test if the meat being cooked is the right temperature.
For beef, medium well to well done is 150 degrees F.
For poultry and pork, always cook to at least 160 degrees F.

COOKING WITH HERBS

When cooking with herbs, remove the stems from the herbs before chopping into small pieces with a knife. If a recipe calls for dried herbs but fresh herbs are desired, use nearly 3 times the amount of fresh herbs to get the same flavor as dried herbs.

PRESERVING

Preserving is a technique used to prevent unwanted growth, such as yeast, mold, and bacteria, from ruining harvested fruits and vegetables. Schools should invest in a detailed resource and keep that resource on hand to ensure best practices and safety are being met. For general guidelines visit the USDA's Complete Guide to Home Canning.

AT A GLANCE: SCHOOL KITCHEN GUIDELINES

- Student workstations for food prep and cooking according to the site plan chosen
- A dedicated hand washing station
- A dedicated space for washing food
- Adequate space
- Adequate storage
- Signage, including a norms and behavior sign
- Adequate restrooms according to school requirements
- A safety plan, first-aid kit and ADA accessibility to at the least some of the kitchen
- A fully composed safety plan in advance of students entering the kitchen
- A thought-out maintenance plan during design and installation

Emeril's
CULINARY GARDEN & TEACHING KITCHEN

OUTREACH AND ENGAGEMENT

COMMUNICATIONS GUIDELINES

MARKETING GUIDELINES

As an Emeril's Culinary Garden & Teaching Kitchen school partner, it is important to always refer to this guide when developing communications or marketing materials to ensure consistency with the program's voice and mission.

HOW TO COMMUNICATE YOUR ROLE AS A SCHOOL PARTNER

As a school partner, you must use the official program name when referring to your role and partnership.

The required usage in all references is Emeril's Culinary Garden & Teaching Kitchen. It is important that you not deviate from this usage. For example, you should not insert the name of your school into the official program name, i.e. [Your School's] Culinary Garden & Teaching Kitchen would not be an acceptable usage.

Examples of how to describe your role as a school partner:

- Our school applied for and was awarded a grant to become an Emeril's Culinary Garden & Teaching Kitchen school partner.
- We are part of Emeril's Culinary Garden & Teaching Kitchen, a growing network of like-minded schools ***enriching the lives of kids through a fun, fresh perspective on food.***
- We are an Emeril's Culinary Garden & Teaching Kitchen school partner, a signature program of the Emeril Lagasse Foundation.
- We are a proud school partner in this program and support the impact it seeks to make on children and the environment around them.

HOW TO TALK ABOUT THE PROGRAM

The talking points below are intended to guide messaging when referencing the signature program in internal communications and to external media, community partners, and the general public.

- Founded in 2016 by the Emeril Lagasse Foundation, Emeril's Culinary Garden & Teaching Kitchen is a national education program that integrates culinary gardens and teaching kitchens in schools to create interactive learning environments centered on food.
- The program's vision is ***"to enrich the lives of children through a fun, fresh perspective on food."***
- The program has four key pillars:
    - Appreciation for the source of food
    - Understanding of nutrition and healthy eating
    - Development of life skills through food
    - Development of culinary skills

HOW TO TALK ABOUT THE PROGRAM (continued)

- Through these key pillars, children:
    - Gain knowledge of how food grows and where it comes from, leading to a deeper understanding and reverence for the ground-to-plate process.
    - Acquire and understand the importance of life skills such as discipline and diligence, leading to increased engagement during school and improved academic performance.
    - Gain knowledge of healthy and nutritious eating habits, leading to increased engagement at home as they share their knowledge and experiences with family.
    - Acquire the skills necessary to prepare meals for themselves, their families, and surrounding communities, nurturing their self-reliance and confidence.
- The program strengthens our school environment through a project-based learning approach that empowers children through food.
- Emeril's Culinary Garden & Teaching Kitchen uses a one of a kind K-8 gardening and cooking curriculum that is integrated across all core subjects and aligned with national academic standards.
- By immersing children in a hands-on learning environment that nurtures critical thinking and life skills that prepare them for life beyond the classroom, Emeril's Culinary Garden & Teaching Kitchen paves the way for children from all walks of life to be healthier, to appreciate food and its role in culture, and to serve as confident role models for healthy eating within their families and communities.
- The program gives children guidance and opportunities to develop social and emotional skills critical to their success in life. With the personal and community skills gleaned from this program, children gain knowledge and skills that poise them for success in life.
- The Emeril Lagasse Foundation is a 501c(3) public charity founded in 2002 by Chef Emeril Lagasse and his wife Alden. The Foundation is headquartered in New Orleans, LA, and seeks to inspire, mentor, and enable youth to reach their fullest potential.

ECGTK_logo.pdf

LOGO USAGE GUIDELINES

Emeril's Culinary Garden & Teaching Kitchen logo should only be used to communicate a direct affiliation with or the promotion of Emeril's Culinary Garden & Teaching Kitchen program work.

Do not use the logo to endorse work that Emeril Lagasse Foundation does not directly support.

All uses of the Emeril's Culinary Garden & Teaching Kitchen logo should meet the terms outlined in the school partner Grant Agreement.

PUBLIC RELATIONS GUIDELINES

NEWSWORTHINESS

Does your school have something new and noteworthy regarding your Emeril's Culinary Garden & Teaching Kitchen partnership that you think is worth sharing with media?

When considering press announcements, story pitches or other media outreach, refer to the five points of newsworthiness to evaluate the news potential of your content:

1. Timeliness – Is the story new/current?
2. Proximity – Does your local audience care about this news? Locality is key.
3. Prominence – Who's involved? Interesting people, community leaders, and local influencers can add a hook to stories.
4. Human Interest – Everyone loves a heartwarming story. Does yours include an emotional and impactful element?
5. Significance – Does the story impact your community? Is it a first or does it include some type of milestone?

A good story does not need to include every point above to be newsworthy, but it should include at least one.

MEDIA RELATIONS

Fostering relationships with news media within your community is an important part of earning coverage for Emeril's Culinary Garden & Teaching Kitchen at your school. There is value in developing an open line of communication with key media contacts in your area. Securing coverage of program accomplishments, human-interest pieces, or events can sometimes be as simple as letting your local newspapers, radio stations, and TV stations know what's going on at your school.

Here are some general media relations tips and industry practices that will help you grow relationships in your community and secure valuable media coverage.

- Create a media list with the names and contact information of media contacts who specifically cover education in your community: Get to know the staff on this list and what information will be useful to them.

- When you have something newsworthy to share regarding the program, contact the people on your press list and let them know. It is always helpful to provide interview opportunities when reaching out with possible story ideas or press announcements.

- Do not ignore media requests, deadlines, or let lengthy spans of time pass after you have been contacted.

- Maintain a list of national awareness days/months that relate to Emeril's Culinary Garden & Teaching Kitchen. For example, National Nutrition Month, National Gardening Month or National Giving Tuesday are great times to pitch updates from your program to local media.

- Invite contacts form your press list to tour your facilities. This helps familiarize reporters with the physical environment and program offerings and provides an opportunity to connect them with administrators and teachers.

- Avoid asking to see a story before it runs. This is typically a taboo practice with traditional news media and underscores the importance of providing good, clear information during an interview.

- Do not take correction requests lightly. If you are quoted or featured in a story and perceive mistakes in how it is reported, exercise good judgment when deciding whether to point them out, especially if they are relatively minor such as typos or misspellings. When writing a correction, the reporter may want to contact you directly to avoid additional errors. If so, another tip on industry parlance: Corrections, clarifications, and retractions are completely different actions. Reporters can be sensitive to an interchanging of the terms.

PRESS RELEASES

When considering topics for press releases, be mindful of the five points of newsworthiness outlined in the media relations section. Evaluate those points to determine whether the information you want to share is best communicated through a formal announcement to news media via a press release. Not all topics warrant a press release. A good general rule of thumb: PR does not equal press release. If the topic only meets one or two points of newsworthiness, consider sharing the information in a more informal manner instead, such as a brief email to one of the key contacts on your media list that positions the topic as a potential story idea consideration. However, if the topic has broader appeal based on your assessment of its newsworthiness, developing and distributing a press release can be a great way to earn local media coverage across multiple news outlets, whether print, online, or broadcast media.

Guidelines for the development and distribution of press releases:

- Press releases should be drafted in AP (Associated Press) style, which is the writing style used by news media. This style includes some departures from standard grammar rules, such as using a single space between sentences and not using the oxford comma.

- Do not blast press releases out to a group of media all in one email. Take the time to personalize each email and send individually.

- It is best to send press releases in the early part of the day and week. The most optimal time to distribute press releases to media is between 8 a.m. – 10 a.m. Monday-Wednesday, with Tuesday at 9 a.m. being the ideal day of the week and time of day. Refrain from sending releases to media on a Friday, the days surrounding popular local or national holidays, or on days in close proximity to major political events and local/national/international occurrences that dominate headlines and media attention. Exercise good judgment and common sense by avoiding sending releases during times of local, national, or international importance, particularly during times of crisis.

- Photographs and video are excellent assets to accompany a press release or story pitch. Add multimedia to your outreach, but avoid using low-res or poor-quality images/video. It is best to send images that are at least 300 dpi resolution. This is a high-resolution image and a standard specification among media when using photos provided for a story.

- Avoid sending attachments, especially those with large file sizes, to media. When sharing photos or video, include a link to a platform like Dropbox or Google Drive for media to access and download the photos. Similarly, it is best to copy and paste a press release into an email instead.

PRESS RELEASE STYLE GUIDE

Refer to the following guidelines for drafting press releases in the proper format and writing style. These instructions are intended to provide general guidance on style, tone, and key elements to include.

Guide to style and tone of press releases:

- Use AP (Associated Press) Style for all press releases. Resource link with AP style rules: www.apstylebook.com

- Overall tone should use positive messaging.

- Include substantiated facts that can be easily referenced.

- Keep releases objective, straightforward, and concise. Hyperbole, rhetoric, and opinion commentary are not acceptable when writing for the media. Use quotes in releases for opinion statements.

Hyperbole: Used to make an exaggerated statement or comparison that lacks substantiated facts, i.e., "this is the best culinary education program." These types of opinion statements should be kept to quotes attributed to school spokespersons, if used at all.

Rhetoric: This type of language is used to persuade or appeal to readers' emotions but is often viewed as lacking sincerity and substance/meaning. Refrain from using "colorful" rhetoric language. Write in plain terms with clear impact versus aspirational statements, i.e., "we're so excited to help students from our area achieve a better future" vs. "we have 200 students currently progressing through our Emeril's Culinary Garden & Teaching Kitchen program, which is allowing us not only to make an impact on youth in our community through food but also to extend the values and knowledge this program offers to students' family and friends."

Opinion statements: Similar to hyperbole, these are subjective comments that should be used in quotes only, i.e. "we're changing how culinary and nutrition education is integrated into schools." This is a great comment, but it is an opinion and should be captured in a quote attributed to a school spokesperson/representative.

PRESS RELEASE EXAMPLE

The following example displays the format and key elements that should be used when drafting press releases.

LOGOS:

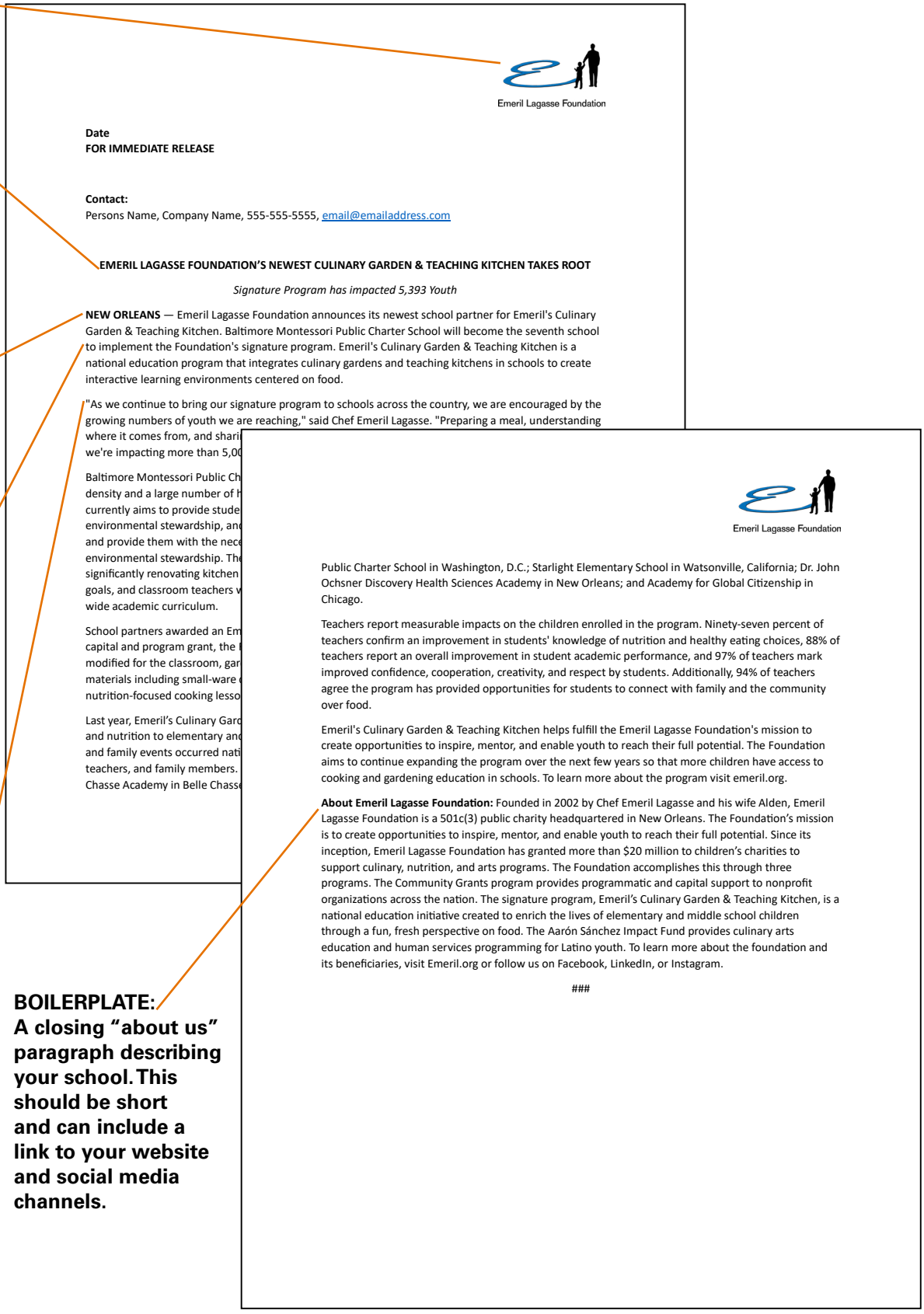
HEADLINE: What the release is about. Set the reader's expectations for the content.

DATELINE: Includes the city of origin, and state. Refer to AP style datelines when inserting.

LEAD PARAGRAPH: Grab the attention of the reader. Summarize what you're announcing, use key messaging and frame up the release.

QUOTES: Attribute to a school spokesperson or other individual involved with the program. Use casual, conversational language. This is where you can include opinion statements.

BOILERPLATE: A closing "about us" paragraph describing your school. This should be short and can include a link to your website and social media channels.



Emeril Lagasse Foundation

Date
FOR IMMEDIATE RELEASE

Contact:
Persons Name, Company Name, 555-555-5555, email@emailaddress.com

EMERIL LAGASSE FOUNDATION'S NEWEST CULINARY GARDEN & TEACHING KITCHEN TAKES ROOT

Signature Program has impacted 5,393 Youth

NEW ORLEANS — Emeril Lagasse Foundation announces its newest school partner for Emeril's Culinary Garden & Teaching Kitchen. Baltimore Montessori Public Charter School will become the seventh school to implement the Foundation's signature program. Emeril's Culinary Garden & Teaching Kitchen is a national education program that integrates culinary gardens and teaching kitchens in schools to create interactive learning environments centered on food.

"As we continue to bring our signature program to schools across the country, we are encouraged by the growing numbers of youth we are reaching," said Chef Emeril Lagasse. "Preparing a meal, understanding where it comes from, and shari
we're impacting more than 5,00

Baltimore Montessori Public Ch
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Emeril Lagasse Foundation

Public Charter School in Washington, D.C.; Starlight Elementary School in Watsonville, California; Dr. John Ochsner Discovery Health Sciences Academy in New Orleans; and Academy for Global Citizenship in Chicago.

Teachers report measurable impacts on the children enrolled in the program. Ninety-seven percent of teachers confirm an improvement in students' knowledge of nutrition and healthy eating choices, 88% of teachers report an overall improvement in student academic performance, and 97% of teachers mark improved confidence, cooperation, creativity, and respect by students. Additionally, 94% of teachers agree the program has provided opportunities for students to connect with family and the community over food.

Emeril's Culinary Garden & Teaching Kitchen helps fulfill the Emeril Lagasse Foundation's mission to create opportunities to inspire, mentor, and enable youth to reach their full potential. The Foundation aims to continue expanding the program over the next few years so that more children have access to cooking and gardening education in schools. To learn more about the program visit emeril.org.

About Emeril Lagasse Foundation: Founded in 2002 by Chef Emeril Lagasse and his wife Alden, Emeril Lagasse Foundation is a 501c(3) public charity headquartered in New Orleans. The Foundation's mission is to create opportunities to inspire, mentor, and enable youth to reach their full potential. Since its inception, Emeril Lagasse Foundation has granted more than $20 million to children's charities to support culinary, nutrition, and arts programs. The Foundation accomplishes this through three programs. The Community Grants program provides programmatic and capital support to nonprofit organizations across the nation. The signature program, Emeril's Culinary Garden & Teaching Kitchen, is a national education initiative created to enrich the lives of elementary and middle school children through a fun, fresh perspective on food. The Aarón Sánchez Impact Fund provides culinary arts education and human services programming for Latino youth. To learn more about the foundation and its beneficiaries, visit Emeril.org or follow us on Facebook, LinkedIn, or Instagram.

###

[LOGO]

July 18, 2017
FOR IMMEDIATE RELEASE
Contact: [NAME], [SCHOOL], [PHONE], [EMAIL]

[SCHOOL/DISTRICT] Awarded Grant to Implement Emeril's Culinary Garden & Teaching Kitchen

Emeril Lagasse Foundation's signature program will create interactive learning environment centered on food

[CITY, STATE ABBREVIATION] – [SCHOOL/DISTRICT] has been awarded a grant to implement Emeril's Culinary Garden & Teaching Kitchen, a national education program established by the Emeril Lagasse Foundation that seeks to enrich the lives of children through a fun, fresh perspective on food.

By integrating the Emeril's Culinary Garden & Teaching Kitchen program, [SCHOOL/DISTRICT] will be designated as one of ten forthcoming school partner sites in the United States. In addition to [PROJECT AREAS DIRECTLY BENEFITING STUDENTS], [SCHOOL/DISTRICT] will provide training for academic professionals in order to help increase these opportunities for all students.

["We could not be more excited to become an Emeril's Culinary Garden & Teaching Kitchen official school partner," said PRINCIPAL. "The program strengthens our school environment through a project-based learning approach that empowers children through food, nurturing critical thinking and life skills that pave the way for our students to be healthier, to appreciate food and its role in culture, and to serve as confident role models for healthy eating within their families and our community."]

Emeril's Culinary Garden & Teaching Kitchen will integrate an outdoor culinary garden and robust teaching kitchen space within the [SCHOOL] campus. The program uses a one of a kind K-8 gardening and cooking curriculum that is integrated across all core subjects and aligned with national academic standards. Construction will begin in [MONTH] [YEAR] and is anticipated to be complete by [MONTH] [YEAR].

"Schools across the nation are ready and willing to incorporate cooking and garden-based education into their academic subjects, but schools often lack the capital and other resources necessary to launch, establish and sustain these programs," said Katie Mularz, program manager for the Emeril Lagasse Foundation. "With school partners like [SCHOOL/DISTRICT], Emeril's Culinary Garden & Teaching Kitchen is providing critical resources and technical assistance for schools to successfully implement the program for the benefit of its students, families and the community."

For more information about Emeril's Culinary Garden & Teaching Kitchen, visit [LINK TO EMERIL LAGASSE FOUNDATION WEBSITE OR SCHOOL WEBSITE].

About [SCHOOL/DISTRICT]:
[BOILERPLATE FOR SCHOOL/DISTRICT]

About Emeril Lagasse Foundation:
Founded in 2002 by Chef Emeril Lagasse and his wife Alden, Emeril Lagasse Foundation is a 501c(3) public charity headquartered in New Orleans. The Foundation's mission is to create opportunities to inspire, mentor and enable youth to reach their full potential through culinary, nutrition and arts education. Since its inception, Emeril Lagasse Foundation has granted more than $7 million to children's charities to support culinary, nutrition and arts programs. To learn more about the Foundation and its beneficiaries, visit Emeril.org.

###

SOCIAL MEDIA GUIDELINES

Use social media to engage and inspire! We encourage all school partners to share the good work they are doing in a quality manner.

Approach social media with the same strategic mindset you would bring to traditional marketing communications. Content and interactions on social media should be message-driven, suitable for your audience, and aligned with your overall communications tactics.

Social media content should convey a positive tone and allude to growth—both educational and personal—that children experience through the program. Messaging and visuals should focus on the social and emotional skills the program develops in students and aim to represent how the program ***enriches the lives of kids through a fun, fresh perspective on food.***

POSTING TIPS

- Keep copy short.
- Include engaging imagery pertinent to the program and its curriculum (garden and kitchen classes, students, facilities and outdoor teaching areas, food, etc.).
- Include a call to action for your school or the Emeril Lagasse Foundation where possible:
  Example: Follow @EmerilOrg to learn more about this engaging program!
- Build in links to online or other social media channels where appropriate.
- Utilize program-specific hashtags. Incorporate at least one hashtag and no more than three to four hashtags per post. Below is a sampling of recommended hashtags for social media posts, including the official hashtag for Emeril's Culinary Garden & Teaching Kitchen:

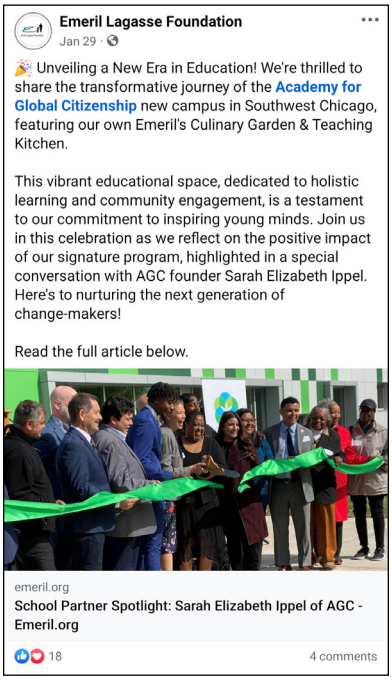
Official program hashtag:
#EmerilsCulinaryGarden

Additional hashtags:
#EmerilOrg / #EmerilLagasse / #NutritionEducation / #CulinaryEducation / #LifeSkills / #GardenToPlate / #CulinaryGarden / #TeachingKitchen / #GrowingConfidentKids / #InspireMentorEnable

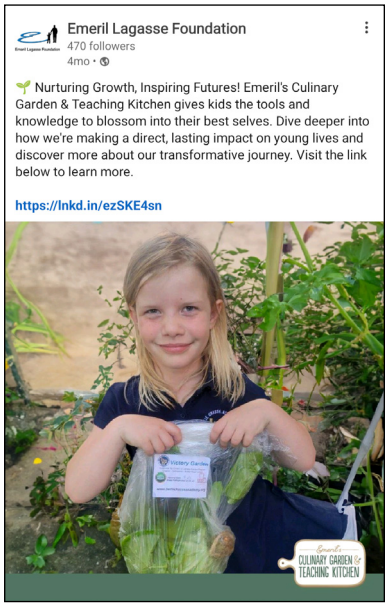
- Tag Emeril Lagasse Foundation in photos related to the signature program:
  Instagram, LinkedIn, Facebook: @EmerilOrg

CONTENT EXAMPLES

Facebook post examples:



LinkedIn post examples:



Social graphic examples:

SUMMARY

Please remember these general tips and recommendations for marketing, public relations, and social media efforts related to your Emeril's Culinary Garden & Teaching Kitchen program.

DO:

- Use social media to share inspiring, engaging content that shows Emeril's Culinary Garden & Teaching Kitchen program in a positive way.
- As allowable by your school, share testimonials/quotes from students in social media content and using personal stories in media outreach efforts. Always secure parental/guardian consent. (Please refer to the school partner Grant Agreement for publicity terms and conditions).
- Engage your community.
  Example: Host "open-house" days that invite community members to tour the facilities during non-school hours and learn about the program.
- Use branded elements and key messaging.
- Host events that allow local media contacts, elected officials, and influencers to tour your facilities and gather information for potential stories or social media content.
- Provide program updates and general information via monthly newsletters or emails for parents of children involved with the program.
- Participate in your community's "Giving Day" if applicable (for example givenoladay.org).

DO NOT:

- Use unapproved brand standards (logo, different fonts, etc.) in marketing or communications materials.
- Edit or revise the official logo in any way in marketing materials.

COMMUNITY EVENT & FUNDRAISING BEST PRACTICES

COMMUNITY EVENTS

Community engagement is a key component of Emeril's Culinary Garden & Teaching Kitchen program. Engaging students' families, nearby residents, and community members in the school's activities enhances the program's impact. Below are some best practices and ideas for organizing community events:

- **Highlight Student Achievements:** Host fairs, festivals, or performances that showcase individual and group accomplishments. Feature the garden or kitchen as central elements of these events, or even create new events to inform and educate the community about the program.
- **Keep it Accessible:** Ensure community events are free or have a very low admission price. Incorporate on-site fundraising opportunities such as games or raffles.
- **Student Involvement:** Families to demonstrate their achievements. Have students develop and lead tours of the garden and kitchen, allowing them to showcase their work and knowledge.

SUGGESTED EVENTS

- **Schoolwide Garden Work Party:** Kicks off the school year with a focus on the garden.
- **Feast Around the World:** Celebrates the lessons learned throughout the year with a global culinary theme.
- **Additional Events:** Host events that reflect school culture and incorporate the program's progress and bounty.

Build Relationships: Use events to establish and strengthen relationships with community members, which can lead to increased in-kind support. For example, request donations from local businesses for event supplies.

Engage Volunteers: Properly engaged volunteers feel empowered and are more likely to return, contributing to the program's success.

EXAMPLES FROM EMERIL LAGASSE FOUNDATION BENEFICIARIES:

Sweet Potato Festival at Edible Schoolyard

Outdoor festivals, large and small, are popular gatherings in Louisiana. Edible Schoolyard New Orleans plays upon the bounty of a native crop, the sweet potato, and each fall hosts a Sweet Potato Fest. The community is invited to a parade, harvest, and wellness fair. The festival is free. https://esynola.org/about/family-events/

Family Cook Night Series at Starlight Elementary

Starlight Elementary uses their culinary garden and teaching kitchen to host Family Cook Night, a California Department of Food and Agriculture cooking lesson video series that is shared district wide. In conjunction with Life Lab and PVUSD's Food Services Department, these instructional videos teach the viewer how to make a nutritious and delicious meal using Starlight's harvest of the month and other California specialty crops. https://starlight.pvusd.net/

FUNDRAISING EVENTS

The kitchen and garden spaces are perfect for hosting revenue-generating events. Below are ideas and best practices for organizing fundraising events:

TARGET AUDIENCE

Invite parents, nearby residents, community leaders, and other nonprofits to use the space for fundraising activities.

ANNUAL FUNDRAISING EVENT

Host an annual event to introduce the community to the program. Set admission prices and sponsorship levels based on the school site and fundraising goals.

REVENUE-GENERATING ACTIVITIES

- **Auctions and Raffles:** Increase revenue through creative onsite appeals.
- **Food Stations:** Local chefs and student teams can provide food at a tasting reception or a seated dinner.
- **Honor a Champion:** Recognize a program champion and invite local officials as complimentary guests.

PRESENTATION

Create a short presentation highlighting student accomplishments, and display photos and examples of student work.

INSTRUCTIONAL CLASSES

Offer cooking and gardening classes as popular fundraising tools. These can be individual workshops or class series for adults or families.

SPACE RENTAL

Consider renting out the kitchen and garden space for local community events, luncheons, social gatherings, or fundraising events for other nonprofits.

EXAMPLES FROM EMERIL LAGASSE FOUNDATION BENEFICIARIES:

Chef Night at Edible Education Experience

Edible Education Experience makes use of the new Emeril Lagasse Foundation Kitchen House & Culinary Garden at Orlando Junior Academy. After hours, chefs present one-time cooking classes on a particular theme, such as pasta making or making your own green kitchen cleaning products. Fees are charged for participation.
http://www.edibleed.org/chefnight/

Guest Chef Night at Liberty's Kitchen

In New Orleans at the hospitality training café Liberty's Kitchen, chefs are invited to prepare a dinner for patrons. Students assist in creating, preparing and serving the meal, which results in a true mentorship experience. Fees are charged for the evening, and sponsorships are solicited for ingredients, beverages, and supplies.
https://www.libertyskitchen.org/

INSTRUCTION

Emeril's
CULINARY GARDEN &
TEACHING KITCHEN

CURRICULUM OVERVIEW

Emeril's Culinary Garden &Teaching Kitchen provides school partners with resources and standards necessary for achieving the program goals and outcomes introduced in the Program Overview.

The four program pillars served as a guide in creating the program standards, instruction topics, learning objectives, and suggested lesson activities.

The CURRICULUM includes an outline, or scope and sequence, of the learning objectives and the recommended teaching order for Grades K-8 garden and kitchen lessons, program standards, one complete lesson plan per grade for garden and kitchen courses of instruction, editable lesson plan templates for instructors to create their own lessons, and an appendix of resource materials to support instruction.

The SCOPE AND SEQUENCE includes 18 suggested lesson activities per grade for both the garden and kitchen courses of instruction. All activities support the program standards, meet the program learning objectives, and are aligned to national academic standards.

The PROGRAM STANDARDS include anchor standards and grade level standards for both garden and kitchen courses of instruction. Anchor standards are broad end point goals that span a grade cluster, or series of grades, such as K-2, 3-5, 6-8. The anchor standards are further supported by specific grade level standards, found at the beginning of each scope and sequence. Instructors working with varied student readiness have the flexibility to make adjustments within the program by referencing the program standards.

The LEARNING OBJECTIVES include content and life skills goals that students are expected to meet at the end of each course of instruction for every grade level. Learning objectives are organized by topic and sophisticate over time.

There are several IMPLEMENTATION tactics to fully integrate the program curriculum across all grade levels. Schools should start slow and set realistic goals. Below is an example of a suggested implementation timeline, beginning with the grade K-2 cluster. Each year one additional grade can be added from the other two grade clusters. Using this approach, the curriculum will be fully integrated across all grades in 5 years, creating institutional knowledge among both students and staff.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
K-2	K-2	K-2	K-2	K-2	K-2
3-5	-	3	3,4	3-5	3-5
6-8	-	6	6,7	6-8	6-8

CURRICULUM DETAILS

SCOPE AND SEQUENCE

One Scope and Sequence document serves as an outline for each course of instruction (garden and kitchen). Each Scope and Sequence is organized by grade (K-8) and includes: lesson # and title, topic, content learning objective(s), a suggested lesson activity, life skills learning objective(s), a garden/kitchen connection, possible extensions, academic standard connections, and health standard connections. The recommended number of days/lessons is less than the number of days in the grading cycle/academic year in order to accommodate differentiated instruction and to allow school partners flexibility with schedules.

SCOPE AND SEQUENCE KEY ELEMENTS:

Grade Level Standards: The grade specific standards for garden/kitchen that students are expected to meet each year.

Lesson # & Title: The name and lesson number (1–18) for the suggested lesson activity. Each course of instruction and grade's Scope and Sequence begins numbering lessons at 1 and ends at 18.

Topic: The main theme of the suggested lesson activity.

Content Learning Objective(s): The main goal(s) of the suggested lesson that students are expected to learn. Objectives are classified by topic area.

Suggested Lesson Activity: A detailed overview of how to teach the lesson topic. Suggested Lesson Activities are intended to be taught sequentially, building on one another. However, the majority will also work as standalone lessons. The exception to this applies to any lesson titled Part 1, Part 2, etc. If there is a need to teach a lesson out of sequence, instructors can check the lesson description for any skills or concepts that are to be reviewed, and, if those skills are new to students, introduce them as part of the lesson.

Life Skills Learning Objective(s): The main social/emotional goal(s) of the suggested lesson that students are expected to learn and further develop.

Connections to Garden/Kitchen Lessons: Opportunities to connect with specific garden or kitchen lessons from the Scope and Sequence, or general ideas for connecting instruction with the garden or kitchen. Garden and Kitchen Educators should read through both the Garden and Kitchen Scope and Sequences, and communicate with one another regularly to ensure they are making clear connections between the garden and kitchen classrooms.

Possible Extensions: Ideas for extending the concepts learned in the lesson beyond the garden or kitchen environment. Includes classroom extension ideas, community extension ideas and BAM! Box Activities (suggestions to incorporate activities related to the curriculum at home with the family).

Academic Standard Connections: Connections to the applicable national core standards the suggested lesson complements (Common Core and Next Generation Science Standards), as well as suggestions for connecting to other relevant state standards.

Health Standard Connections: Connections to the applicable common health standards the suggested lesson complements (instructors should refer to any state health standards as well).

INSTRUCTION METHODOLOGY

Lessons are designed to last approximately 45 minutes and can easily be adapted for instructional needs. If a lesson requires more time, it is indicated on the scope and sequence for instructors. There is one type of garden lesson and two types of kitchen lessons—cooking concept and cooking. All lessons begin with a brief engaging activity and end with time for students to reflect and discuss what they learned and/or experienced. Garden lessons and cooking concept lessons follow the 5E Instructional Model from the Biological Sciences Curriculum Study (BSCS). Cooking lessons follow one of Emeril's recipes to guide the instruction sequence.

The 5E model is a student-centered approach that sequences instruction using the following terms: engage, explore, explain, elaborate and evaluate. Students become the center of their learning experience through hands-on activities, develop their own understanding of a concept and then relate their understanding to other concepts.

Lesson plan templates for garden and kitchen that follow the instruction sequence are included in the Appendix of this book for instructors to use when creating their own lesson plans.

Below is a table of the 5E terms, how they are labeled in the garden and cooking concept lesson plans and what each term means / how to use them in a lesson plan.

5E TERMS	GARDEN	COOKING CONCEPT	MEANING
Engage	Cultivate Curiosity	Ignite Interest	A "hook," or opening activity to engage students with the essential question driving the lesson. Connect to students prior knowledge on the subject and inspire in them a thirst to learn more.
Explore	Root Around	Stir Discoveries	An opportunity for students to explore physical materials and/or open-ended questions related to the lesson topic. Ensure time for students to make discoveries and raise questions.
Explain	Grow Understanding	Clarify New Ideas	The steps for leading a discussion and introducing new information to students once they are fully engaged with a topic and have questions and discoveries to share. When introducing new, important vocabulary to students, write the terms in bold and define them.
Elaborate	Observe the Fruits	Watch It Rise	An opportunity for students to apply their new learning in a meaningful, real-world context, and an opportunity for instructors to measure how well students have achieved the learning objectives. Use the Observational Checklist while students are working to assess development of Personal and Community Life Skills.
Evaluate	Reflect	Reflect	Guiding questions used to engage students in a reflective discussion about what they've learned, and also about collaboration, communication, or other Personal and Community Life Skills they practiced.

Adapted from the Biological Sciences Curriculum Study (BSCS) 5E Instructional Model.

LESSON PLAN KEY ELEMENTS:

Each grade, K-8, has one complete garden lesson plan and one complete kitchen lesson plan. Additionally, there are 2 welcome to the garden lesson plans and 2 welcome to the kitchen lesson plans that may be adapted to meet the grade level of the class. All lesson plans include the following key elements. Some key elements are outlined in the Scope and Sequence, while some are developed further in a lesson plan.

Lesson # and Title:* The name and number of the lesson.

Time and Length: The suggested season and duration for the lesson.

Location: The intended location for instruction (garden, kitchen).

Essential Question: The "big idea" of the lesson or the overarching theme to build upon. The conceptual question students will be exploring and working toward answering in the lesson.

Lesson Description: A 1-2 sentence overview of the lesson, describing what students will do.

Academic Standards:* Connections to national academic standards as well as any other relevant state standards.

Health Standards:* Connections to relevant health standards.

Learning Objective:* The main goal(s) of the lesson (outlined in the scope and sequence) that completes the sentence: "Students will be able to". Includes content learning objectives and life skills learning objectives.

Materials: Materials needed for students and/or teachers in the lesson.

Vocabulary: New words that need to be defined before the lesson (for the teacher/student).

Preparation (time): The time it will take and the steps the educator will need to take to prepare for the lesson.

Instruction Sequence (5E's): The order and organization of learning activities. In garden and cooking concept lessons: the steps to engage students, encourage exploration, explain ideas, elaborate on concepts learned and evaluate learning.

Possible Extensions:* Ideas for extending the concepts learned beyond the classroom. Includes classroom extension ideas, community extension ideas and BAM! Box Activities (suggestions to incorporate activities related to the curriculum at home with the family).

Teacher Background: Major concepts the educator needs to know to teach the lesson effectively.

Additional Resources: Additional, relevant resources that might be useful to educators teaching the lesson (such as links to visual aids, other published lesson plans, Emeril recipes, etc).

Adaptations: Notes or ideas to modify a lesson to work indoors in inclement weather.

Connections to the Garden / Kitchen Lessons:* Opportunities to connect with specific garden or kitchen lessons from the Scope and Sequence, or general ideas for connecting with the garden or kitchen. Garden and kitchen instructors should read through both the garden and kitchen Scope and Sequences, and communicate with one another regularly to ensure they are making clear connections.

**elements taken from the scope and sequence*

PROGRAM STANDARDS *Garden*

ANCHOR STANDARDS

GRADES K-2

At the end of Grades K-2, students know where the garden is located, that it is a learning environment, and they understand how to be in the garden in a safe and caring way. They begin to understand that the garden is integrated with and complements the teaching kitchen. Students can describe structure and function of plants, identify edible parts of plants and they understand what plants need to grow. Students can describe the life cycle of a plant and explain the concepts of soil web and food web. Students understand how seasons, climate, and geography play a role in food production, and they begin to understand that a garden is a natural system that produces food. Students develop key observational, data collection, and critical thinking skills in support of activities they will conduct in later grades.

GRADES 3-5

At the end of Grades 3-5, students understand the structure and function of plant parts and how to propagate plants. They are able to identify components of and build soil. Students are able to define what local means, and they can map local food regions. Students understand the environmental factors that shape food regions. They acquire a foundational understanding of the garden as a natural system. They are able to design, plot and implement elements of a school garden. Students perform these skills with appropriate grade level personal and community life skills that include and/or benefit their families and communities.

GRADES 6-8

At the end of Grades 6-8, students understand how the culinary garden is complementary to and wholly integrated with the teaching kitchen by growing foods to use in the kitchen. Students understand basic garden maintenance and safety skills, how to build and amend soil, how to build and use compost, the seed-to-plant cycle, and how to harvest plants for food. They perform these skills while applying social and emotional life skills that include and/or benefit their families and communities.

PROGRAM STANDARDS *Kitchen*

ANCHOR STANDARDS

GRADES K-2

At the end of Grades K-2, students know where the teaching kitchen is located, understand that it is a learning environment and model proper safety and sanitary practices in the kitchen. They begin to understand that the kitchen is integrated with and complements the culinary garden. Students can identify and name various fruits, vegetables, grains, and legumes. Students can identify food groups and categorize different foods into the correct food group. They can describe taste and texture sensations. Students understand how to use their hands as tools along with basic kitchen tools to safely carry out simple cooking tasks.

GRADES 3-5

At the end of Grades 3-5, students understand the parts of a recipe, ingredients, flavors and basic cooking techniques. Students demonstrate knowledge of proper safety and sanitation in the kitchen environment. Students understand the basic concepts of a food system, principals of home economics and nutrition. Students perform these skills with appropriate grade level personal and group skills that include and/or benefit their families and communities.

GRADES 6-8

At the end of Grades 6-8, students demonstrate mastery of culinary flavors and textures, recipe concepts, food preparation, menu development and health concepts. Students can identify seasonal ingredients, spices and flavors through taste and texture. They can cook independently using various cooking methods and describe the reason they selected a specific cooking method. Students can read, follow, modify and create recipes for a variety of occasions and they are knowledgeable of food traditions in their community and in other cultures. Students understand the origin of food, can explain how the kitchen is integrated with the garden, and can apply principals of home economics and food business skills outside the classroom to include and/or benefit their families and communities.

LEARNING OBJECTIVES *Life Skills*

GRADES K-8

Throughout the program, students receive guidance and opportunities to develop life skills benefiting, themselves, their families and the community.

Personal Life Skills	
PLS.1	Students are self-aware and show respect for their own needs, the needs of others and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.
PLS.2	Students are able to express empathy and caring for themselves, others and the environment.
PLS.3	Students cultivate honest and responsible behaviors that contribute to the learning of the community.
PLS.4	Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.
PLS.5	Students develop the ability to make informed and responsible decisions.
PLS.6	Students actively seek creative and resourceful solutions.

Community Life Skills	
CLS.1	Students demonstrate problem solving and resolve conflict as a team.
CLS.2	Students cooperate and communicate well with each other.
CLS.3	Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.
CLS.4	Students appreciate and are respectful of differences and diversity in their communities.
CLS.5	Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.

LEARNING OBJECTIVES *Garden*

GRADES K-2			
TOPIC	**KINDERGARTEN**	**GRADE 1**	**GRADE 2**
Garden Planning and Maintenance (GPM)	GPM.K.1 Describe what lives in a garden and name what it needs to live. GPM.K.2 Understand how to be present in the garden with all five senses.	GPM.1.1 Decide as a group what to plant in the garden. GPM.1.2 Demonstrate knowledge of what plants need. GPM.1.3 Demonstrate ability to plan a garden that has a diversity of plants. GPM.1.4 Understand the difference between a weed and a cultivar.	GPM2.1 Understand how to prepare soil for planting in terms of weeding and cultivating. GPM.2.2 Understand when to plant seeds and transplant seedlings into the garden
Garden Tools and Equipment (GTE)	GTE.K.1 Name, identify, and safely use new tools. GTE.K.2 Match new tools to tasks. GTE.K.3 State how to properly care for new tools. GTE.K.4 Describe the purpose of a new tool. New Tools: Hands, hand trowel, harvest basket and 5-gallon bucket	GTE.1.1 Use tools introduced in previous grades independently. GTE.1.2 Name, identify, and safely use new tools. GTE.1.3 Match tools to tasks. GTE.1.4 State how to properly care for tools. New Tools: Garden string, hand weeding tool, cleaning brush, and watering can	GTE.2.1 Use tools introduced in previous grades independently. GTE.2.2 Name, identify, and safely use new tools. GTE.2.3 Select the correct tool to perform and complete a task with minimal instructor input. GTE.2.4 Explain the reason for selecting a tool for a task. New Tools: Spading fork, hand fork, rain gauge, and air thermometer
Soil (S)	S.K.1 Identify the difference between brown (carbon) and green (nitrogen) in a compost system. S.K.2 Identify living and non-living components of soil. S.K.3 Identify different types of soil in the garden. S.K.4 Describe what lives and what does not live in soil.	S.1.1 Identify and draw organisms living in various soil samples. S.1.2 Describe how soil is living and how it is not living. S.1.3 Describe the relationship between living and non-living things in soil.	S.2.1 Explain how soil is made. S.2.2 Describe characteristics and components of soil. S.2.3 Balance carbon (browns) and nitrogen (greens) in compost.

TOPIC	KINDERGARTEN	GRADE 1	GRADE 2
Weather and Seasons, Climate and Geography (WSCG)	WSCG.K.1 Name the four seasons and what foods grow in each season. WSCG.K.2 Describe where you live and the foods that grow there.	WSCG.1.1 Describe weather. WSCG.1.2 Describe what foods grow nearby and what foods come from other places.	WSCG.2.1 Name, describe, and collect data on local weather events. WSCG.2.2 Describe how geographic place influences what grows in the garden. WSCG.2.3 Predict and apply weather patterns to the garden.
Plants (P)	P.K.1 Describe the life cycle of a plant. P.K.2 Identify edible and non-edible plants in the garden. P.K.3 Understand what above ground and underground mean.	P.1.1 Understand what a seed is and what it does. P.1.2 Understand that a plant produces another plant like itself. P.1.3 Understand form and function of seed design. P.1.4 Identify edible seeds in the garden.	P.2.1 Describe the structure and functions of plant parts. P.2.2 Identify edible leaves and stems in the garden. P.2.3 Identify weeds. P.2.4 Describe the role of plants in the food web.
Garden and Food Systems (GFS)	GFS.K.1 Identify insects in the garden. GFS.K.2 Develop an understanding of abundance and scarcity in the garden.	GFS.1.1 Identify the roles beneficial insects and pests play in the garden. GFS.1.2 Describe a soil web. Identify fungi, bacteria, and invertebrates.	GFS.2.1 Identify pollinators in the garden, what service they perform, and how to increase the number of them living in the garden. GFS.2.2 Describe structure and function of insect parts. GFS.2.3 Strategize solutions for abundance and scarcity in the garden.

GRADES 3-5			
TOPIC	**GRADE 3**	**GRADE 4**	**GRADE 5**
Garden Planning and Maintenance (GPM)	GPM.3.1 Calculate number of seeds and seed spacing for garden beds. GPM.3.2 Describe and/or demonstrate proper weeding techniques. GPM.3.3 Identify needs and create support systems for various plants (beans, peas, tomatoes, cane fruit).	GPM.4.1 Demonstrate ability to create a planting map for the garden. GPM.4.2 Calculate amounts of produce to grow in school garden. GPM.4.3 Calculate square footage of garden beds and paths.	GPM.5.1 Calculate volumes of soil, compost, and/or amendments for garden beds. GPM.5.2 Demonstrate understanding of when to water by observing plants and soil for signs of no or low moisture. GPM.5.3 Demonstrate ability to create watering system for plants. GPM.5.4 Identify a need in the school or community and create a garden plan to address it.
Garden Tools and Equipment (GTE)	GTE.3.1 Use tools introduced in previous grades independently. GTE.3.2 Name, identify, and safely use new tools. GTE.3.3 Select the correct tool to perform and complete a task with minimal instructor input. GTE.3.4 Explain form and function of tools in garden environment. GTE.3.5 Apply skills to solutions in garden environment. New Tools: Staking and trellising equipment, hoe, measuring tape	GTE.4.1 Use tools introduced in previous grades independently. GTE.4.2 Name, identify, and safely use new tools. GTE.4.3 Demonstrate proper care and storage of tools. GTE.4.4 Practice various tool techniques with increasing independence. New Tools: Round point shovel, worm box	GTE.5.1 Use tools introduced in previous grades independently. GTE.5.2 Name, identify, and safely use new tools. GTE.5.3 Investigate different uses and techniques of tools to complete various tasks. GTE.5.4 Practice various tool techniques with increasing independence. New Tools: Wheelbarrow, hose and nozzle, drip watering systems
Soil (S)	S.3.1 Describe and/or create a planting medium for different types of gardens	S.4.1 Identify and describe structure and function of organisms living in soil. S.4.2 Describe the role of fungi, bacteria, and invertebrates in soil.	S.5.1 Describe the various activities that create soil.

TOPIC	GRADE 3	GRADE 4	GRADE 5
Weather and Seasons, Climate and Geography (WSCG)	WSCG.3.1 Define and map the bioregions of your state	WSCG.4.1 Understand and describe how geographic place and cultural significance might influences what and when foods grow in your location. WSCG.4.2 Understand the effect of latitude on foods from various places around the world.	WSCG.5.1 Describe the effect of human migration on seeds and plants. WSCG.5.2 Map the geographic, cultural, and historical influences that shape what is grown (maritime climate, altitude, soil composition, climate) in your bioregion.
Plants (P)	P.3.1 Describe structures and functions of flowers. P.3.2 Create an experiment (inquiry, observe, collect data, and make conclusions) to test various growing environments for plants.	P.4.1 Describe structures and functions of seeds. P.4.2 Explain photosynthesis. P.4.3 Know how and when to plant seeds. P.4.4 Understand signs of distress or poor health in plants and create solutions.	P.5.1 Understand how to identify and cultivate genetic traits in plants.
Garden and Food Systems (GFS)	GFS.3.1 Understand how to increase the beneficial insects in a garden environment. GFS.3.2 Design a plan to support and increase beneficial insects in the garden. GFS.3.3 Describe a food web. GFS.3.4 Define local food system.	GFS.4.1 Identify pests in the garden. GFS.4.2 Create a plan to mitigate pests in the garden. GFS.4.3 Define a regional food system.	GFS.5.1 Describe the roles beneficial insects and pests play in the garden. GFS.5.2 Understand the relationship between weather patterns and watering in garden. GFS.5.3 Demonstrate ability to identify and map a food system; include a historical or cultural perspective.

GRADES 6-8			
TOPIC	**GRADE 6**	**GRADE 7**	**GRADE 8**
Garden Planning and Maintenance (GPM)	GPM.6.1 Understand and apply basic garden math skills to the design of a garden. GPM.6.2 Demonstrate understanding of compost and/or vermi-culture system.	GPM.7.1 Understand and apply basic garden math skills to the design and planning of school/community gardens.	GPM.8.1 Identify and utilize community resources available to support business project. GPM.8.2 Resolve watering, weeding, harvest and distribution challenges that exist in a garden.
Garden Tools and Equipment (GTE)	GTE.6.1 Use tools introduced in previous grades independently. GTE.6.2 Name, identify, and safely use new tools. GTE.6.3 Match tools to tasks and explain selection process. GTE.6.4 Demonstrate proper and safe use of tools and equipment with independence. New Tools: Stirrup hoe, four-tined cultivator, digging fork, rake, leaf rake, pruning shears/scissors	GTE.7.1 Use tools introduced in previous grades independently. GTE.7.2 Name, identify, and safely use new tools. GTE.7.3 Match tools to tasks and explain selection process. GTE.7.4 Determine different uses and techniques of tools to complete various tasks. GTE.7.5 Model gardening independently. New Tools: Grafting and propagation tools	GTE.8.1 Use tools introduced in previous grades independently. GTE.8.2 Correlate measuring tools and mathematical functions. GTE.8.3 Investigate different uses and techniques of garden tools to complete various tasks and solve problems.
Soil (S)	S.6.1 Identify soil compositions. S.6.2 Understand how to assess and mitigate soil. S.6.3 Build a balanced soil medium.	S.7.1 Identify soil compositions in the school environment. S.7.2 Recognize and classify various soils types.	S.8.1 Describe soil components and explain the proportional relationships.
Weather and Seasons, Climate and Geography (WSCG)	WSCG.6.1 Describe the growing climate and seasons of your school/home garden. WSCG.6.2 Compare and contrast your climate and a climate in a different geographic location in terms of growing food. WSCG.6.3 Describe the impact of seasonal weather patterns on edible gardens.	WSCG.7.1 Understand and identify microclimates around your school, what foods grow best in each one, and why. WSCG.7.2 Demonstrate knowledge of seasonal gardening.	WSCG.8.1 Utilize knowledge of weather and seasonal changes to create a 12-month planting calendar.

TOPIC	GRADE 6	GRADE 7	GRADE 8
Business Planning (BP)	BP.6.1 Compare and contrast a home garden to a school garden. BP.6.2 Create a garden planting list. BP.6.3 Create project expense list.	BP.7.1 Demonstrate the ability to create a food business project. BP.7.2 Create a garden planting list. BP.7.3 Create a basic income/expense model.	BP.8.1 Demonstrate the ability to run a food business project. BP.8.2 Understand Profit/Loss for project. BP.8.3 Create a marketing, outreach, communications plan for project.
Plants (P)	P.6.1 Interpret directions on seed packets. P.6.2 Describe seed germination. P.6.3 Understand best harvest practices for food grown in garden.	P.7.1 Describe and perform grafting, slips, and cutting propagation methods. P.7.2 Explain photosynthesis.	P.8.1 Identify and describe structure and function of edible plants. P.8.2 Identify and describe full cycle of a diversity of plants in the garden.
Garden and Food Systems (GFS)	GFS.6.1 Identify and create attraction strategies for beneficial insects in the home or school garden. GFS.6.2 Understand what foods grow best in your specific geographic location and why. GFS.6.3 Compare and contrast your geographic location to various other locations around in the world and understand how seasonality influences foods in other cultures GFS.6.4 Describe producer and consumer in the garden environment. GFS.6.5 Define local and seasonal eating.	GFS.7.1 Identify beneficial and non-beneficial insects in the soil and garden environments and create management strategies. GFS.7.2 Evaluate the interdependence of organisms in the garden environment. GFS.7.3 Describe the relationship between producers and consumers	GFS.8.1 Understand physical changes in the garden environment. GFS.8.2 Apply basic home and garden economics to the garden system. GFS.8.3 Describe and characterize the differences between foods grown locally and those imported from other parts of the United States and the world.

GRADES K-8 | GARDEN TOOLS & EQUIPMENT		
TOPIC	**GRADE**	**GRADE 7**
GTE	K	**GTE.K.1** Name, identify, and safely use new tools. **GTE.K.2** Match new tools to tasks. **GTE.K.3** State how to properly care for new tools. **GTE.K.4** Describe the purpose of a new tool. **New Tools:** Hands, hand trowel, harvest basket and 5-gallon bucket
GTE	1	**GTE.1.1** Use tools introduced in previous grades independently. **GTE.1.2** Name, identify, and safely use new tools. **GTE.1.3** Match tools to tasks. **GTE.1.4** State how to properly care for tools. **New Tools:** Garden string, hand weeding tool, cleaning brush, and watering can
GTE	2	**GTE.2.1** Use tools introduced in previous grades independently. **GTE.2.2** Name, identify, and safely use new tools. **GTE.2.3** Select the correct tool to perform and complete a task with minimal instructor input. **GTE.2.4** Explain the reason for selecting a tool for a task. **New Tools:** Spading fork, hand fork, rain gauge, and air thermometer
GTE	3	**GTE.3.1** Use tools introduced in previous grades independently. **GTE.3.2** Name, identify, and safely use new tools. **GTE.3.3** Select the correct tool to perform and complete a task with minimal instructor input. **GTE.3.4** Explain form and function of tools in garden environment. **GTE.3.5** Apply skills to solutions in garden environment. **New Tools:** Staking and trellising equipment, hoe, measuring tape

TOPIC	GRADE 6	TOOLS & EQUIPMENT
GTE	4	GTE.4.1 Use tools introduced in previous grades independently. GTE.4.2 Name, identify, and safely use new tools. GTE.4.3 Demonstrate proper care and storage of tools. GTE.4.4 Practice various tool techniques with increasing independence. New Tools: Round point shovel, worm box
GTE	5	GTE.5.1 Use tools introduced in previous grades independently. GTE.5.2 Name, identify, and safely use new tools. GTE.5.3 Investigate different uses and techniques of tools to complete various tasks. GTE.5.4 Practice various tool techniques with increasing independence. New Tools: Wheelbarrow, hose and nozzle, drip watering systems
GTE	6	GTE.6.1 Use tools introduced in previous grades independently. GTE.6.2 Name, identify, and safely use new tools. GTE.6.3 Match tools to tasks and explain selection process. GTE.6.4 Demonstrate proper and safe use of tools and equipment with independence. New Tools: Stirrup hoe, four-tined cultivator, digging fork, rake, leaf rake, pruning shears/scissors
GTE	7	GTE.7.1 Use tools introduced in previous grades independently. GTE.7.2 Name, identify, and safely use new tools. GTE.7.3 Match tools to tasks and explain selection process. GTE.7.4 Determine different uses and techniques of tools to complete various tasks. GTE.7.5 Model gardening independently. New Tools: Grafting and propagation tools, soil thermometer
GTE	8	GTE.8.1 Use tools introduced in previous grades independently. GTE.8.2 Correlate measuring tools and mathematical functions. GTE.8.3 Investigate different uses and techniques of garden tools to complete various tasks and solve problems.

GRADES K-8 | GARDEN BEHAVIORS		
TOPIC	**GRADE**	**BEHAVIORS**
GB.1	K-8	Identify where the garden is located, how to enter and exit the garden respectfully and safely.
GB.2	K-8	Recognize the garden is a learning environment.
GB.3	K-8	Use the five senses and when present in the garden environment.
GB.4	K-8	Apply best food safety practices when harvesting, washing, and preparing fruits and vegetables from the garden.
GB.5	K-8	Manage garden waste (weeds, end of season plants, etc.)

LEARNING OBJECTIVES *Kitchen*

GRADES K-2			
TOPIC	**KINDERGARTEN**	**GRADE 1**	**GRADE 2**
Culinary Flavors and Textures (CFT)	CFT.K.1 Name the five senses. CFT.K.2 Identify a variety of tastes and textures.	CFT.1.1 Describe the differences between a number of same fruits or vegetables. CFT.1.2 Name and describe taste sensations. CFT.1.3 Demonstrate an understanding of the flavors of various world cultures.	CFT.2.1 Identify and describe basic textures. CFT.2.2 Categorize familiar and unfamiliar foods by flavor and texture.
Food Preparation (FP)	FP.K.1 Demonstrate ability to properly handle, wash and prepare fruits and vegetables.	FP.1.1 Demonstrate ability to properly handle, wash and prepare fruits and vegetables.	FP.2.1 Demonstrate ability to properly handle, wash and prepare fruits and vegetables.
Kitchen Tools and Equipment (KTE)	KTE.K.1 Name, identify, and safely use new tools. KTE.K.2 Select the correct tool to perform a task. KTE.K.3 State how to properly care for tools. KTE.K.4 Describe the purpose of a tool. New Tools: Hands, colander, mixing bowls, mixing spoons, spatula, vegetable brush, pastry brush, juicer, compost bucket, and, with help from an adult, blender/Vitamix/food processor	KTE.1.1 Use tools introduced in previous grades independently. KTE.1.2 Name, identify, locate and safely use new tools. KTE.1.3 Select the correct tool to perform a task. KTE.1.4 State how to properly care for new tools. New Tools: Cutting board or mat, spatula, tasting spoons, small tongs, can opener, and measuring spoons and cups	KTE.2.1 Use tools introduced in previous grades independently. KTE.2.2 Name, identify, locate, and safely use new tools. KTE.2.3 List tools in recipes. KTE.2.4 Select the correct tool to perform and complete a task with minimal instructor input. KTE.2.5 Explain the reason for selecting a tool for a task. New Tools: Salad spinner, strainer, peeler, strawberry huller, whisk, scale, food mill, rolling pin, muffin pan, and sifter
Recipe Concepts (RC)	RC.K.1 Describe what a recipe is. RC.K.2 Recognize how families share and maintain food and cultural traditions.	RC.1.1 Demonstrate an understanding of recipes and how they reflect the people and cultures of their community.	RC.2.1 Describe how traditional foods and recipes function in social contexts of families and communities, and cultural traditions and celebrations.

TOPIC	KINDERGARTEN	GRADE 1	GRADE 2
Health Concepts (HC)	HC.K.1 Explain where fresh foods come from. HC.K.2 Explain what Eat a Rainbow means. HC.K.3 Name a food group. HC.K.4 Identify a food group in the garden. HC.K.5 Make healthy food choices.	HC.1.1 Create a healthy snack from the garden. HC.1.2 Harvest foods from the garden for taste and nutrition with guidance. HC.1.3 Describe the food groups. HC.1.4 Describe what a balanced meal is.	HC.2.1 Demonstrate the ability to design a garden that incorporates various world cultures. HC.2.2 Recognize local and seasonal foods. HC.2.3 Define whole fresh foods in each food group. HC.2.4 Create a healthy snack using whole fresh foods.
Home Economics (HE)	HE.K.1 Understand and describe a variety of food related professions. HE.K.2 Understand abundance in terms of seasonality.	HE.1.1 Understand what chefs and food producers do. HE.1.2 Understand scarcity in terms of seasonality.	HE.2.1 Manage garden scarcity and abundance with cooking techniques.

GRADES 3-5			
TOPIC	**GRADE 3**	**GRADE 4**	**GRADE 5**
Culinary Flavors and Textures (CFT)	CFT.3.1 Demonstrate an understanding of taste sensations. CFT.3.2 Describe foods and their flavor attributes. CFT.3.3 Describe what texture means; use examples. CFT.3.4 Identify flavors, foods, and dishes from other cultures	CFT.4.1 Review basic sensory attributes of flavors CFT.4.2 Create basic flavor combinations using international cuisines. CFT.4.3 Assess main ingredients, seasonings and dishes of other cultures.	CFT.5.1 Describe how other cultures use flavors in their cuisines. CFT.5.2 Explain food traditions of other cultures using sensory language to describe flavor and ingredients.
Food Preparation (FP)	FP.3.1 Describe how and when to harvest food from the garden. FP.3.2 Demonstrate an understanding of whole grain preparations. FP.3.3 Create a healthy snack using food from the garden or farmers market	FP.4.1 Demonstrate knowledge of how to wash and store fruits and vegetables. FP.4.2 Describe and perform food preservation processes such as drying, freezing, pickling. FP.4.3 Demonstrate ability to make simple recipes inspired by world cultures. FP.4.4 Explain cultural and historical significance of preservation methods.	FP5.1 Demonstrate understanding of how to handle, prepare, and process proteins using a variety of cultural traditions. FP.5.2 Design and/or create complete protein meal using a variety of cultural traditions.
Kitchen Tools and Equipment (KTE)	KTE.3.1. Use tools introduced in previous grades independently. KTE.3.2. Name, identify, locate and safely use new tools. KTE.3.3. Explain form and function of new tools/equipment. KTE.3.4 Select the correct tool to perform and complete a task with minimal instructor input. New Tools: Paring knife, mortar & pestle, potato masher, melon baller, apple-corer, garlic press, zester, box-grater, micro-planer	KTE.4.1. Use tools introduced in previous grades independently. KTE.4.2. Name, identify, locate, and safely use new tools. KTE.4.3. Demonstrate proper care and storage of tools/equipment. KTE.4.4 Practice various tool techniques with increasing independence. New Tools: Manual pasta machine, food mill, food dehydrator, airtight container, ladle, and with the assistance of an adult, the stove	KTE.5.1. Use tools introduced in previous grades independently. KTE.5.2. Name, identify, locate and safely use new tools. KTE.5.3. Select the correct tool and explain the reason for selecting the tool. KTE.5.4 Practice tool skills with increasing independence. New Tools: Small chef's knife, bread knife, spice grinder, pastry blender, blender/Vitamix/food processor, casserole/soufflé dish, roasting pan, and standing and hand-held mixers

TOPIC	GRADE 3	GRADE 4	GRADE 5
Recipe Concepts (RC)	RC.3.1 Describe the structure and function of a recipe. RC.3.2 Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. • Cut • Peel, zest, and grate • Core, hull, and pit • Mash and puree	RC.4.1 Relate the parts of recipe. RC.4.2 Demonstrate the ability to follow recipe instructions with increased independence.	RC.5.1 Summarize cultural and historical significance in recipes. RC.5.2 Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. • Cut, cube, rough chop, fine chop, dice, and slice. • Mix, stir, cream, puree, whip, fold, and toss. • Pulverize
Health Concepts (HC)	HC.3.1 Create a healthy snack plan to grow in the school garden. HC.3.2 Demonstrate an understanding of local and seasonal foods. HC.3.3 Define and describe grain based carbohydrates. HC.3.4 Compare and contrast processed and whole grains. HC.3.5 Identify where grains are sourced locally. HC.3.6 Read and interpret a food label.	HC.4.1 Create a calendar of seasonal menus that reflect local and seasonal foods. HC.4.2 Understand that nutrients in soil and plants are assimilated into the body. HC.4.3 Describe fruits and vegetables in relation to the food groups. HC.4.4 Identify where fruits and vegetables are sourced locally. HC.4.5 Compare and contrast fresh, canned, and frozen fruits and vegetables. HC.4.6 Collect and display data from weekly food purchases for family or community.	HC.5.1 Summarize seed to plate process. HC.5.2 Define and describe what a protein is. HC.5.3 Describe the benefits of a nutrient rich diet. HC.5.4 Identify where proteins are sourced locally.
Home Economics (HE)	HE.3.1 Apply critical thinking skills to budgeting in a home kitchen. HE.3.2 Compare and contrast cost of store bought processed foods, home processed foods, and foods grown in the garden. HE.3.3 Describe abundance and the causes of abundance in the garden	HE.4.1 Calculate expansion and contraction of volumes of foods. HE.4.2 Understand multiple uses of vegetable scraps and strategies to reduce waste.	HE.5.1 Demonstrate knowledge of shopping for groceries on a budget. HE.5.2 Understand the economic impact of growing your own food and using it in the kitchen.

GRADES 6-8			
TOPIC	**GRADE 6**	**GRADE 7**	**GRADE 8**
Culinary Flavors and Textures (CFT)	CFT.6.1 Utilize taste sensations to describe a series of breakfast items. CFT.6.2 Understand the relationship between smell and taste in culinary practices.	CFT.7.1 Utilize taste sensations to describe various hot and cold food items. CFT.7.2 Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples.	CFT.8.1 Demonstrate mastery of tasting skills to create a dinner menu. CFT.8.2 Create a menu that includes combinations of basic textures and taste sensations from a variety of cultures.
Food Preparation (FP)	FP.6.1 Demonstrate knowledge of safe food handling practices FP.6.2 Name and describe basic cooking techniques and use them as instructed to prepare recipes.	FP.7.1 Demonstrate knowledge of safe food handling practices with increased skill. FP.7.2 Use a variety of cooking techniques FP.7.3 Identify the right cooking technique to complete a task and articulate why it is the correct technique.	FP.8.1 Demonstrate mastery of skill and knowledge of safe food handling practices. FP.8.2 Demonstrate mastery of a variety of cooking techniques FP.8.3 Summarize benefits of different cooking techniques for retaining nutrients.
Kitchen Tools and Equipment (KTE)	KTE.6.1 Use tools introduced in previous grades independently. KTE.6.2 Name, identify, locate, and safely use new tools. KTE.6.3 Match tools to tasks and explain selection process. KTE.6.4 Demonstrate proper and safe use of tools and equipment with independence. New Tools: Oven, parchment, foil, plastic wrap, baking sheets, muffin pans, cooling rack, thermometers, and oven mitts and hot pads	KTE.7.1 Use tools introduced in previous grades independently. KTE.7.2 Name, identify, locate, and safely use new tools/equipment. KTE.7.3 Match tools to tasks and explain selection process. KTE.7.4 Demonstrate ability to use tools and equipment independently. New Tools: Stove, pots, pans, skillets, steamer insert, and griddle	KTE.8.1 Name, identify, locate, and safely use all tools and equipment. KTE.8.2 Recommend proper tool and equipment selection and match tool/equipment to task. KTE.8.3 Practice tool and equipment use independently. New Tools: Standing mixer and hand-held mixer, baking pans, instant read thermometer

TOPIC	GRADE 6	GRADE 7	GRADE 8
Recipe Concepts (RC)	RC.6.1 Understand the importance of and how to measure various food, storage and cooking temperatures RC.6.2 Demonstrate ability to decrease and increase portions using US customary standards. RC.6.3 Read and follow a recipe inferring whether it can be modified.	RC.7.1 Compare and contrast recipes from various world cultures RC.7.2 Perform entry-level culinary measurements using metric system measurements of volume, weight, and whole, decimal, and fractional numbers. RC.7.3 Follow a recipe with increased independence and make modifications with the ingredients.	RC.8.1 Convert recipes from US customary into metric standards and vice versa. RC.8.2 Follow and modify a recipe independently to include seasonal ingredients.
Menu Development (MD)	MD.6.1. Research and plan a menu using world culture theme. MD.6.2. Create recipes to scale. MD.6.3. Harvest, cook and serve food.	MD.7.1. Demonstrate ability to develop and plan large event using world culture theme.	MD.8.1. Create a menu using world culture theme. MD.8.2. Create a planting list for a farm or garden to grow.
Health Concepts (HC)	HC.6.1 Describe the health benefits of eating seasonal foods. HC.6.2 Identify ingredients by name HC.6.3 Describe how the body uses nutrients from food to function. HC.6.4 Identify where products from different food groups are sourced locally. HC.6.5 Understand how to create complete protein dishes with vegan, vegetarian, and/or animal proteins. HC.6.6 Demonstrate knowledge of whole foods, minimally processed foods and processed foods.	HC.7.1 Demonstrate an understanding of how seasonality influences traditional cultural dishes. HC.7.2 Identify and harvest foods from the garden when they are at their peak for preserving. HC.7.3 Relate seasonality to availability of ingredients. HC.7.4 Demonstrate understanding of how cooking techniques can alter nutrients in food. HC.7.5 Identify various ways cultures incorporate food groups into their diets. HC.7.6 Read and interpret food labels and terms.	HC.8.1 Design a seasonal menu plan that reflects the foods grown in your bio-region/state. HC.8.2 Understand and articulate the relationship between healthy soil, healthy foods, and healthy bodies. HC.8.3 Describe seasonality and name ingredients that are grown in different seasons. HC.8.4 Demonstrate understanding of how the body uses fats and carbohydrates. HC.8.5 Analyze a recipe for nutritional values. HC.8.6 Reflect on personal and communal eating in terms of daily habits and celebrations.

TOPIC	GRADE 6	GRADE 7	GRADE 8
Home Economics (HE)	HE.6.1 Compare and contrast economics of cooking from single ingredients at home, foods grown in the garden, and purchasing ready-made foods. HE.6.2 Demonstrate knowledge of planning and cooking healthy meals on a budget.	HE.7.1 Explore the economic impact of preserving foods (freezing, canning, and drying foods at the peak of their ripeness for winter use).	HE.8.1 Design and produce a week of healthy and seasonal recipes on a budget HE.8.2 Explain cost and health benefit of farm to table.
Business Planning (BP)	BP.6.1 Demonstrate ability to plan and stage a classroom event that promotes healthy eating, reflects a world culture, and includes family and community. BP.6.2 Create simple financial plan. BP.6.3 Balance the income and expenses. Plan for shortfall or excess.	BP.7.1 Demonstrate ability to plan and stage a school event that promotes healthy eating, reflects a world culture, and includes family and community. BP.7.2 Understand simple profit and loss balance sheet for event.	BP.8.1 Create a business plan to bring a food related product to market. BP.8.2 Create basic Profit/Loss for business.

GRADES K-8 | KITCHEN TOOLS & EQUIPMENT		
TOPIC	**GRADE**	**GRADE 7**
TE	K	KTE.K.1 Name, identify, and safely use new tools. KTE.K.2 Select the correct tool to perform a task. KTE.K.3 State how to properly care for tools. KTE.K.4 Describe the purpose of a tool. New Tools: Hands, colander, mixing bowls, mixing spoons, spatula, vegetable brush, pastry brush, juicer, compost bucket, and, with help from an adult, blender/Vitamix/food processor
TE	1	KTE.1.1 Use tools introduced in previous grades independently. KTE.1.2 Name, identify, locate and safely use new tools. KTE.1.3 Select the correct tool to perform a task. KTE.1.4 State how to properly care for new tools. New Tools: Cutting board or mat, spatula, tasting spoons, small tongs, can opener, and measuring spoons and cups
TE	2	KTE.2.1 Use tools introduced in previous grades independently. KTE.2.2 Name, identify, locate, and safely use new tools. KTE.2.3 List tools in recipes. KTE.2.4 Select the correct tool to perform and complete a task with minimal instructor input. KTE.2.5 Explain the reason for selecting a tool for a task. New Tools: Salad spinner, strainer, peeler, strawberry huller, whisk, scale, food mill, rolling pin, muffin pan, and sifter
TE	3	KTE.3.1 Use tools introduced in previous grades independently. KTE.3.2 Name, identify, locate and safely use new tools. KTE.3.3 Explain form and function of new tools/equipment. KTE.3.4 Select the correct tool to perform and complete a task with minimal instructor input. New Tools: Paring knife, mortar & pestle, potato masher, melon baller, apple-corer, garlic press, zester, box-grater, micro-planer

TOPIC	GRADE 6	TOOLS & EQUIPMENT
TE	4	KTE.4.1 Use tools introduced in previous grades independently. KTE.4.2 Name, identify, locate, and safely use new tools. KTE.4.3 Demonstrate proper care and storage of tools/equipment. KTE.4.4 Practice various tool techniques with increasing independence. New Tools: Manual pasta machine, food mill, food dehydrator, airtight container, ladle, and with the assistance of an adult, the stove
TE	5	KTE.5.1 Use tools introduced in previous grades independently. KTE.5.2 Name, identify, locate and safely use new tools. KTE.5.3 Select the correct tool and explain the reason for selecting the tool. KTE.5.4 Practice tool skills with increasing independence. New Tools: Small chef's knife, bread knife, spice grinder, pastry blender, blender/Vitamix/food processor, casserole/soufflé dish, roasting pan, and standing and hand-held mixers
TE	6	KTE.6.1 Use tools introduced in previous grades independently. KTE.6.2 Name, identify, locate, and safely use new tools. KTE.6.3 Match tools to tasks and explain selection process. KTE.6.4 Demonstrate proper and safe use of tools and equipment with independence. New Tools: Oven, parchment, foil, plastic wrap, baking sheets, muffin pans, cooling rack, thermometers, and oven mitts and hot pads
TE	7	KTE.7.1 Use tools introduced in previous grades independently. KTE.7.2 Name, identify, locate, and safely use new tools/equipment. KTE.7.3 Match tools to tasks and explain selection process. KTE.7.4 Demonstrate ability to use tools and equipment independently. New Tools: Stove, pots, pans, skillets, steamer insert, and griddle
TE	8	KTE.8.1 Name, identify, locate, and safely use all tools and equipment. KTE.8.2 Recommend proper tool and equipment selection and match tool/equipment to task. KTE.8.3 Practice tool and equipment use independently. New Tools: Standing mixer and hand-held mixer, baking pans, instant read thermometer

GRADES K-8 | KITCHEN BEHAVIORS		
TOPIC	**GRADE**	**BEHAVIORS**
KB.1	K-8	Recognize where the kitchen is located, how to move in it respectfully and safely, and understand the kitchen is a learning environment.
KB.2	K-8	Understand and practice proper safety and sanitation practices in the kitchen. Students wash hands and pull hair back. Gloves are used when applicable. Clothing is tucked in, tied, clean and covered with aprons.
KB.3	K-8	Students handle, wash, and prepare foods safely.
KB.4	K-8	Students clean up the kitchen after they use it, and know that the kitchen is a shared space to be left as it was found.
KB.5	K-8	Students use healthy practices and know how to avoid spreading bacteria and viruses.

ICON KEY *Garden*

HOUSE ICON

Indicates suggested lesson activities that work just as well indoors as out.

HOUSE WITH PLUS SIGN

Indicates suggested lesson activities that can be modified fairly easily to work indoors in the case of inclement weather.

WHEELBARROW

Indicates materials section of a garden lesson plan.

DIAMOND

Indicates to use extra caution.

PAPER

Indicates that this lesson has a full lesson plan developed for the instructor's use.

QUESTION(S)

Indicates the essential questions of the lesson.

CHECKMARK

Indicates opportunities to asses student learning and development.

ABC

Indicates vocabulary words used in the lesson.

ICON KEY *Kitchen*

CLOCK ICON

Indicates recipes that require more than 45 minutes to prepare and cook. Consider one of the following strategies:

1. Prepare the recipe together, and arrange with their classroom teacher to deliver (or have some student volunteers come pick up) the final product later in the day.
2. Pre-make one batch of dough or something similar. Then use the batch of dough made in class as the pre-made batch for the next group.
3. For some recipes, and particularly canning recipes it would be ideal to work with school staff to extend the students time in the kitchen to about 3 hours, because the preserves should be prepared and canned in the same day.

COOK'S NOTES ICON

Indicates that students elaborate and reflect skills from the lesson on a Cook's Notes worksheet. Suggested lesson activities in Grades 5-8 call for Cook's Notes, but instructors are encouraged to use this teaching tool at any grade level.

POT

Indicates materials section of a cooking or cooking concept lesson plan.

DIAMOND

Indicates to use extra caution.

PAPER

Indicates that this lesson has a full lesson plan developed for the instructor's use.

QUESTION(S)

Indicates the essential questions of the lesson.

CHECKMARK

Indicates opportunities to asses student learning and development.

ABC

Indicates vocabulary words used in the lesson.

SCOPE & SEQUENCE

Garden

GRADE K | *Garden*

Emeril's CULINARY GARDEN & TEACHING KITCHEN

SCOPE & SEQUENCE

GRADE K STANDARDS

At the end of Grade K, students will be able to:

- Locate the garden and recognize that it is a learning environment.
- Participate in school garden activities with safe and caring behaviors.
- Demonstrate understanding of what a plant is, recognize plant parts and identify soil.
- Demonstrate understanding through inquiry and observation about the life cycle of plants, plant parts and soil.
- Demonstrate understanding of what weather is and name the seasons.
- Identify living and nonliving things in the garden.
- Recognize and name what plants and a garden need to thrive.
- Demonstrate understanding of abundance (a lot/more) and scarcity (few/less) in the garden.

GRADE K | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(PLS and CLS)**		Engage students by leading them in a silent observation of the outdoor space then have them share their names and what they observed. Explore ideas about how we can be best for ourselves, our community, and our environment while we're in the outdoor learning space. Explain by modeling those behaviors for students. Have students elaborate by exhibiting those behaviors while completing a garden scavenger hunt. Evaluate their understanding by having them reflect on what it means to be the best for themselves, their community, and their environment, not only in the garden but at home or in school.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Compare group agreements for the garden with agreements students have in the kitchen. How are behavior expectations similar in both places? How are they different?	**Classroom:** Compare group agreements for the garden with agreements students have in the classroom. How are behavior expectations similar in both places? How are they different?	**CCSS.ELA-LITERACY.SL.K.6** Speak audibly and express thoughts, feelings, and ideas clearly. **CCSS.ELA-LITERACY.SL.K.1** Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups. **Social Studies:** Citizenship.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Rainbow Scavenger Hunt	Garden Planning and Maintenance **(GPM)**	**GPM.K.2** Understand how to be present in the garden with all five senses.	Hand out journals that students will use for reflection at the end of each lesson. Give students paint color samples or crayons of different colors, and challenge them to explore the garden to find natural objects that match those colors. Explain the value of diversity in the garden and also in our communities.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Have students prepare a dish with a variety of colors, such as in **Kitchen Lesson #3: Yummy Wake-Up Smoothie**.	**Community:** Have kids go on a rainbow scavenger hunt in their homes or neighborhoods.	**CCSS.ELA-LITERACY.L.K.5** With guidance and support from adults, explore word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.K.5.C** Identify real-life connections between words and their use (e.g., note places at school that are colorful). **CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Seasonal Planting	Garden Tools and Equipment **(GTE)**	**GTE.K.1-4** Garden Tools and Equipment	Demonstrate safe and proper use of hand trowels. Then have students use them to plant a seasonal item that will be useful in the kitchen this fall/winter, such as sugar snap peas or carrots. Explain that all of our food comes from plants and animals.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **CLS.2** Students cooperate and communicate well with each other.	Have students prepare a dish that incorporates carrots and peas, such as the dish prepared in **Kitchen Lesson #10: Herbed Mediterranean Yogurt Cheese Spread**.	**Cafeteria:** Ask if your food service director can incorporate your crop into a school lunch or salad bar.	**NGSS.K.LS1.C.** ***Organization for Matter and Energy Flow in Organisms*** All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Mystery Objects	Garden Planning and Maintenance **(GPM)**	**GPM.K.2** Understand how to be present in the garden with all 5 senses.	To engage students, have them pair up to find and feel "Mystery Objects" from the garden. Have one student in each pair close his/her eyes while the other student finds an object in the garden to give to his/her partner. Prompt them to focus on 1 sense at a time. Explain how to make arguments from evidence for what each object is before opening their eyes to see the object. Have them practice in pairs, trading roles each time. 	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **CLS.2** Students cooperate and communicate well with each other.	In **Kitchen Lesson #4: 5 Sense Tasting** students explore a food with all of their senses.	**BAM! Box:** Go on a 5 Senses Scavenger Hunt with a family or community member. **Classroom:** Have students pair up and do the same "Mystery Object" activity with objects in the classroom.	**CCSS.ELA-LITERACY.SL.K.4** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. **NGSS Science and Engineering Practice:** Engaging in Argument from Evidence. **VA:Cr1.1.Ka.** Engage in exploration and imaginative play with materials.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Living or Nonliving?	Garden Planning and Maintenance **(GPM)**	**GPM.K.1** Describe what lives in a garden and name what it needs to live. **GTE.K.1-4** Garden Tools and Equipment	Engage students by giving them a picture of the garden and asking them to circle 5 living things and 5 nonliving things. Discuss together which living things are plants and how they know. Then review safe tool use. Finally, have students work together with hands and hand trowels to plant transplants in the garden. Work together to explain what the plants need to grow, and have students elaborate by making a plan together for giving the plants everything they need.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	In the kitchen, before you eat a dish featuring fruits or vegetables, celebrate the sun, soil, water, air, and nutrients that made those fruits and vegetables grow.	**Community:** Draw a picture of your home or neighborhood and circle 5 living and 5 non-living things. **Cafeteria:** Look at a school lunch and discuss which foods came from plants and which came from animals.	**CCSS.ELA-LITERACY.SL.K.1** Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups. **NGSS.K.LS1.C *Organization for Matter and Energy Flow in Organisms*** All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants (P) need water and light to live and grow.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Mini Compost Piles	Soil **(S)**	**S.K.1** Identify the difference between brown (carbon) and green (nitrogen) in a compost system. **GTE.K.1-4** Garden Tools and Equipment	Have each student explore the components of compost by building a miniature compost pile. Layer browns, such as dry straw, with greens, such as food waste or garden clippings. Explain the importance of diversity for a healthy compost pile that will produce compost to feed plants. Elaborate by relating to the importance of diversity for a fun and interesting community. Incorporate mini-piles into a larger compost pile, and deliver finished compost (either from your garden or purchased from a garden store) to growing plants.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In **Kitchen Lesson #5: Edible "Compost Piles,"** students make miniature, edible "compost piles" by layering brown crackers with dip and green vegetables, such as rice crackers with hummus and sugar snap peas or alfalfa sprouts.	**Classroom:** Have students illustrate their compost pile once a month, depicting change over time. Working with an adult, students can label different parts of the pile.	**CCSS.ELA-LITERACY.SL.K.1** Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups. **NGSS.K.ESS2.C** ***Biogeology. Human Impacts on Earth Systems*** Plants and animals can change their environment **NGSS Science and Engineering Practice:** Develop and Use Models. **Social Studies:** Diversity and Community.	

GRADE K | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Tracking Garden Changes	Garden and Food Systems **(GFS)**	**GFS.K.2** Develop an understanding of abundance and scarcity in the garden.	Have student teams explore the garden, using data tracking sheets to count certain plants. Explain the value of tracking data for making predictions in the garden, and then have students tally and share their results. Keep data to track over time. Have students record changes in the garden at the end of each class for the remainder of the year, as time allows, using the data tracking sheets. Prepare the garden for winter if necessary.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely. **CLS.2** Students cooperate and communicate well with each other.	In the kitchen, prepare a dish highlighting the crops that are in abundance in your garden.	**Community:** Have students track similar data from home or community gardens.	**CCSS.MATH. CONTENT.K.CC.B.4** Understand the relationship between numbers and quantities; connect counting to cardinality. **NGSS Science and Engineering Practice:** Analyzing and Interpreting Data.	
8. Above and Below the Ground	Soil **(S)**	**S.K.4** Describe what lives and what does not live in soil.	Send students on a pictograph scavenger hunt to explore and find common garden objects. Include objects that would normally be found in soil, such as roots, worms, and dead sticks. Include others that would be above ground, such as a living leaf, a flower, and a flying insect. Then have students categorize found objects by whether they are found above or below the soil surface. Explain the importance of each of these garden ecosystems.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.2** Students cooperate and communicate well with each other.	In the kitchen, prepare a dish that includes root crops from below the ground and stem, leaf, flower, or fruit crops from above ground such as the dish prepared in **Kitchen Lesson #10: Herbed Mediterranean Yogurt Cheese Spread**.	**Classroom:** Read aloud *Tops and Bottoms* by Janet Stevens.	**CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent. **NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. What is Soil Made Of?	Soil **(S)**	**S.K.2** Identify living and nonliving components of soil.	Review safe use of hand trowels. Have students explore a scoop of soil under magnifying glasses. Then, have students pull out, name and list every soil "ingredient" they can find, such as rocks, dead plant material, and the like. Demonstrate how to treat living animals carefully. Have students work together to classify ingredients as living, once-living, and non-living. Share out, working with students to explain key characteristics of living things. Elaborate by connecting this idea with the greens and browns in the compost pile, which were once living plants.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.2** Students cooperate and communicate well with each other.	Prepare a dish that includes some fruits or vegetables, such as in **Kitchen Lesson #8: Sugar-and-Spice Acorn Squash**. Before eating, celebrate the different components of soil that helped grow the food by thanking out loud the worms, sticks, and rocks that helped make the soil, for example.	**Classroom:** Read aloud *Diary of a Worm* by Doreen Cronin. **Cafeteria:** Work with older students to create signage for the cafeteria tracing school lunch foods back to soil.	**NGSS.K.ESS3.A** ***Natural Resources*** Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. **CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. What Grows in our Garden?	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.K.2** Describe where you live and the foods that grow there.	Review the major food groups. Have students explore, looking for major food groups growing in the garden, such as grains, fruits, vegetables, and beans, nuts, or animal proteins. Together with your students, explain which food groups are not present in the garden. Discuss other examples of food from these groups grown in other parts of the world. Ask students what makes their region unique. Emphasize the role of climate in determining what you can grow in a region. Demonstrate how to harvest, then harvest and gather something to share.	**CLS.2** Students cooperate and communicate well with each other. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use the introduction to this garden lesson to review the concepts students learned in **Kitchen Lesson #9: Discovering Food Groups**.	**Cafeteria:** Discuss a school lunch in terms of food groups represented.	**CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent. **Social Studies:** Geography.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Season Collage	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.K.1** Name the four seasons and what foods grow in each season.	Engage students by reading aloud *Mama, Is it Summer, Yet?* by Nikki McClure. Create a large class poster showing each season. Have each student explore by illustrating and, with support, labeling a favorite activity for each season. Together with your students, define each season as you add these to your poster to make a class-wide collage. Elaborate by adding foods that are locally available in each season to the collage. 	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, prepare a recipe and highlight which ingredients were grown or sourced in the school garden and/or locally, and which were grown locally in a different season and preserved for later use.	**Classroom:** *A Simple Brown Leaf* by L.J. Davis. **Cafeteria:** Identify any seasonal ingredients that were grown locally, and any that were grown locally in a different season and preserved for later use.	**NGSS Crosscutting Concept: *Patterns*** Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. **CCSS.ELA-LITERACY.RL.K.1** With prompting and support, ask and answer questions about key details in a text. **CCSS.ELA-LITERACY.RL.K.7** With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts). **CCSS.ELA-LITERACY.SL.K.4** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. **VA:Cr2.1.Ka** Through experimentation, build skills in various media and approaches to artmaking.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Local Foods Collage	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.K.2** Describe where you live and the foods that grow there.	Help student teams engage with the concept of local foods by sorting pictures of familiar fruits and vegetables into categories: those that grow in our garden or community, and those that grow far away. Have teams explore seed catalogs and share out to make a class list or collage of fruits and vegetables to plant in their garden based on their region. 	**PLS.5** Students develop the ability to make informed and responsible decisions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In the kitchen, prepare a dish featuring only locally-grown foods. In the winter, this may center around storage crops and preserved foods, such as roasted root vegetables with dried herbs.	**Community:** Take a field trip to a local farm or farmers' market.	**CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent. **CCSS.MATH.CONTENT.K.MD.B.3** Classify objects into given categories; count the number of objects in each category and sort the categories by count. **Social Studies:** Geography. **VA:Cr2.1.Ka** Through experimentation, build skills in various media and approaches to artmaking.	

GRADE K | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Making Soil Mixes	Soil **(S)**	**S.K.3** Identify different types of soil in the garden. **GTE.K.1-4** Garden Tools and Equipment	Have students explore and compare and contrast soil from different spots in the garden—including the beds, pathways, compost bins, and anywhere else unique. Discuss and explain key components of healthy soil and how it helps us grow healthy food. Then have student teams elaborate by making their own soil mixes in 5-gallon buckets. Challenge them to make a mix that they think would best support plant growth. Then test by growing plants in various mixes.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Prepare a dish that includes fruits or vegetables, such as in **Kitchen Lesson #16: Mmmm-Hmmm Hummus**. Trace the ingredients back to the soil.	**Community:** Have students bring in soil samples from home to compare to those found at school.	**CCSS.ELA-LITERACY.SL.K.4** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. **NGSS.ETS1.B** ***Developing Possible Solutions***	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Insect Explorations	Garden and Food Systems **(GFS)**	**GFS.K.1** Identify insects in the garden.	Use magnifying bug boxes to explore, catch, observe, and diagram insects. Then use a simple, regional field guide to identify them. Have students share illustrations and explain why insects are critical in the garden ecosystem. Elaborate by harvesting and enjoying a fresh fruit or vegetable and giving thanks to the beneficial insects that helped it grow.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, prepare a dish featuring fresh fruits and vegetables, such as in **Kitchen Lesson #14: Fresh-and-Fruity Freeze Pops**. Before you eat, thank the insects which are a critical part of the garden ecosystem, and discuss a few ways insects help plants grow.	**Classroom:** Read aloud *Hey, Little Ant* by Phillip Hoose.	**NGSS Science and Engineering Practice:** Obtaining, Evaluating and Communicating Information **CCSS.ELA-LITERACY.SL.K.4** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. **VA:Cr2.1.Ka** Through experimentation, build skills in various media and approaches to artmaking.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. How Has Our Garden Changed?	Garden and Food Systems **(GFS)**	**GFS.K.2** Develop an understanding of abundance and scarcity in the garden.	Have each pair of students explore the garden and use data tracking sheets to find and count a specific plant or insect. Explain the value of collecting data for making predictions and understanding seasonal cycles. Then have pairs return to the larger group and share out the amounts they found, recording answers. Finally ask questions comparing quantities and asking students to elaborate, such as "Do we have more snails or butterflies? How many more? How did you figure that out?" Have students compare these to the data they collected in **Lesson #7: Tracking Garden Changes**, and predict how these numbers might change in different seasons. Repeat throughout the year to test hypotheses.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely. **CLS.2** Students cooperate and communicate well with each other.	In the kitchen, identify the most abundant crop in the garden, and prepare a dish that uses this crop.		**CCSS.MATH. CONTENT.K.OA.A.2** Solve addition and subtraction word problems, and add and subtract within 10, e.g. by using objects or drawings to represent the problem. **NGSS Crosscutting Concept: *Patterns*** Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Planting Root Crops	Plants **(P)** Garden Tools and Equipment **(GTE)**	**P.K.3** Understand what above ground and underground mean. **GTE.K.1-4** Garden Tools and Equipment	Review safe use of hand trowels. Have students dig holes in the garden, shine flashlights into them, explore, and describe what they see. Then explain what crops are root crops and have students observe and plant root crops in the garden.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	In the kitchen, give students produce or pictures of produce and have them sort based on where they grow: above ground or below.	**Cafeteria:** Identify vegetables served at lunch that are root crops grown below ground (carrots) and crops that are grown above ground (tomatoes).	**NGSS K.LS1.C** ***Organization for Matter and Energy Flow in Organisms*** All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. **CCSS.ELA-LITERACY.SL.K.1** Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Plant Life Cycles	Plants **(P)**	**P.K.1** Describe the life cycle of a plant. **GTE.K.1-4** Garden Tools and Equipment	Explain the life cycle of a plant to students by guiding them through a role play in which they are seeds: growing up, sprouting leaves, making flowers, and then making seeds to start over again. Then have students elaborate, using real garden objects to create an art piece that shows the life cycle of a plant. For example, have them glue a real seed, a sprout, and a larger plant with a flower to a piece of paper in a circle that connects the larger plant back to the seed. Share out. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, sprout garbanzo beans. Enjoy bean sprouts together with un-sprouted, cooked garbanzo beans from **Kitchen Lesson #16: Mmmm-Hmmm Hummus** (or store-bought) to highlight a particular crop at different stages of its life cycle (in this case, garbanzo bean seeds and sprouts).	**BAM! Box:** Plant seeds together in containers for students to take home, care for, and observe over time. Send students home with their plants and observation journals to record their plant's growth over time. Have students share out observations in class. **Community:** Discuss other life cycles that children may see in their communities, such as babies growing into kids, teenagers, and adults; chickens hatching from eggs; butterflies metamor-phosing, etc.	**NGSS Science and Engineering Practice:** Developing and Using Models. **CCSS.ELA-LITERACY.SL.K.1** Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups. **VA:Cr2.1.Ka** Through experimentation, build skills in various media and approaches to artmaking.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Edible vs. Toxic Plants	Plants **(P)**	**P.K.2** Identify edible and non-edible plants in the garden. **GTE.K.1-4** Garden Tools and Equipment	Engage students by having them identify food plants they recognize in the garden. Then explore, using harvest baskets to gather and enjoy a garden snack. Explain that some plants use poison as a defense against pests. Show students any toxic or dangerous plants. Give them a moment to study the dangerous plant, focusing on any defining characteristics that would help them recognize it. Then have them look away and quiz them on its characteristics. Evaluate their learning by having them look around the garden for more examples of that plant. Together, create signs labeling different edible and inedible plants, and brainstorm how to be safe around these plants. Remove any toxic plants you do not want in your garden.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	In the kitchen, prepare a dish that includes an edible plant that your students have harvested from the garden.	**Classroom, Community:** Use a children's plant field guide to identify various common, local plants. **Cafeteria:** Identify edible plants available in the lunch line.	**CCSS.ELA-LITERACY.SL.K.4** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. **NGSS.K.LS1.C** ***Organization for Matter and Energy Flow in Organisms*** All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	

GRADE 1 | *Garden*

SCOPE & SEQUENCE

GRADE 1 STANDARDS

At the end of Grade 1, students will be able to:

- Demonstrate knowledge of plant parts and name specific edible parts of plants in the garden.
- Demonstrate understanding of how seeds transport.
- Demonstrate understanding of the role a seed plays in the life cycle of a plant.
- Demonstrate knowledge of what forms a soil web.
- Demonstrate understanding of living and non-living organisms in the garden.
- Identify, count, and draw living organisms in the garden.
- Demonstrate ability to distinguish a variety of similar and different plants, and collaborate to select plants to grow in the garden.
- Demonstrate knowledge of what plants and gardens need to thrive, and explain how to provide those needs.

GRADE 1 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(CLS and PLS)**		Engage students in an age-appropriate name game. Explore teamwork through a teambuilding exercise. Explain teamwork by establishing garden agreements together. Introduce Personal and Community Life Skills. Then have students elaborate by practicing these agreements as you assign or give each pair of students an object to find together in the garden. When students have found their object, have them trade with a classmate and find a new object. Finally, review safe harvesting techniques before harvesting fresh produce together to enjoy.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Compare group agreements for the garden with agreements students have in the kitchen. How are behavior expectations similar in both places? How are they different?	**Classroom:** Compare group agreements for the garden with agreements students have in the classroom. How are behavior expectations similar in both places? How are they different?	**CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups. **CCSS.ELA-LITERACY.SL.1.6** Produce complete sentences when appropriate to task and situation.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Edible Seeds	Plants **(P)**	**P.1.4** Identify edible seeds in the garden.	Identify and photograph edible seeds in the garden ahead of the lesson. Give student teams each a photograph of an edible seed and have them find it in the garden. Look at the seeds together and discuss how they are all similar and different. Then harvest and enjoy some of the edible seeds. Finally, harvest more of the edible seeds to save for planting in the future. Toward the end of class, hand out journals for students to use BOTH for reflection at the end of each lesson this year and to record and track weather in the garden over time.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely. **CLS.2** Students cooperate and communicate well with each other.	Prepare a dish featuring edible seeds, such as in **Kitchen Lesson #3: Crispy-Crunchy Granola Munchies**.	**Community:** Together with an adult, look through your kitchen at home for foods made from edible seeds, such as wheat, corn, popcorn, rice, etc. Make a list to bring back to school.	**NGSS.1.LS1.A** Structure and Function—All organisms have external parts… Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. **CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. What's Living in Our Soil?	Soil **(S)**	**S.1.2** Describe how soil is living and how it is not living. **GTE.1.1-4** Garden Tools and Equipment	Collect soil samples from the garden and "dissect" the soil, making separate piles of each type of soil component. Categorize each component as living, once-living, or nonliving. Create a collective class list of soil components, which you'll add to over time. Add compost to a garden bed to amend the soil, and then plant seeds or transplants and water in.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.2** Students cooperate and communicate well with each other.	Collect compost in the kitchen to bring to the garden. As you do, ask students if the food scraps are living, once-living, or nonliving.	**Cafeteria:** Collect food scraps from the cafeteria to add to the compost pile in the garden.	**CCSS.MATH. CONTENT. 1.MD.C.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Cycles in the Garden	Soil **(S)**	**S.1.3** Describe the relationship between living and non-living things in soil.	Give each team of 3 students a living plant, a decaying plant, a picture of a decomposer, and a pile of soil. Ask them to sort their objects into a story with a beginning, middle, and an end. Have teams share their stories. As they share out, explain that fungus, bacteria and invertebrates (the Garden "FBI") are decomposers, and their role in the garden ecosystem is to turn once-living matter into soil to feed the plants.	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Take food scraps from the kitchen out to the garden and add to the compost pile. As you do, discuss what living things they have seen in the soil. Who will these food scraps feed? Why do we feed the small animals in the soil? How do they help feed us?	**Classroom:** Create a class book about the story they created with their garden objects. Each student can illustrate one object, and then the teacher can transcribe the words as they share their story.	**NGSS Science and Engineering Practice:** Developing and Using Models.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Soil Web 	Garden and Food Systems **(GFS)**	**GFS.1.2** Describe a soil web. Identify fungi, bacteria, and invertebrates.	Engage students by leading them in a brainstorm of what is growing and what is breaking down in the garden. Then sing the song "Decomposition." Allow students to explore decomposition by looking for evidence of decomposition in the garden. Explain to students that the main decomposers are the Garden FBI: fungus, bacteria, invertebrates. Allow students to elaborate that understanding by looking for decomposers in the garden. Evaluate their understanding by asking students to draw decomposers in their journal.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.2** Students cooperate and communicate well with each other.	In **Kitchen Lesson #8: Eat-a-Pita Pizzas**, add mushrooms to the pizzas, and highlight that mushrooms are fungi and serve as decomposers.	**Classroom:** Read aloud *Diary of a Worm* by Doreen Cronin.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence. **CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Insect Illustrations	Soil **(S)**	**S.1.1** Identify organisms living in various soil samples.	Have students collect soil samples from around the garden. With bug boxes, have students gently collect living organisms from the soil. Pass around so each student sees each insect. Then have students draw detailed illustrations of each organism found, and try to identify them using a kid-friendly field guide to identify common garden insects for your region.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	While enjoying a dish featuring fresh produce, give thanks together for the insects that helped make the soil which fed the plants which are feeding the students.	**Community:** Bring soil samples from home into the garden to dissect and compare with the garden soil.	**NGSS Science and Engineering Practice:** Obtaining, Evaluating and Communicating Information. **NGSS.LS3.B** ***Variation of Traits*** Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. **CCSS.ELA-LITERACY.RI.1.5** Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.	

GRADE 1 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Planning a Spring Garden	Garden Planning and Maintenance **(GPM)**	**GPM.1.1** Decide as a group what to plant in the garden.	Have students explore various herbs using all of their senses. Have them research which will grow well in your region. Then have students share which they would like to plant and why. Conduct a vote to determine which herbs to plant in shared beds.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	In the garden, conduct a comparative taste test between herbs, and have students use words learned in **Kitchen Lesson #5: Taste Sensations** to describe the flavors of each herb.	**Classroom:** Read aloud *How Groundhog's Garden Grew* by Lynne Cherry.	**CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups. **Social Studies:** Democracy/Voting	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Mapping Garden Beds	Garden Planning and Maintenance **(GPM)**	**GPM.1.2** Demonstrate knowledge of what plants need.	On butcher paper with the cardinal directions, draw a blank, life-size garden bed, including irrigation lines. Give each pair of students the name of a plant and its spacing requirements when full grown (from the seed packet). Give them a square with those dimensions and have them measure the edges and then draw and cut out a life size picture of their plant on their square. Review with students what plants need (sun, soil, water, air, and space) and then work together with students to place their plants on the paper bed, moving them around to maximize water (planting near irrigation lines); sunlight (tall plants on the north so they don't shade shorter plants); space (making sure squares don't overlap); and anything else important to consider in your garden. 	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Plan a bed that aligns specifically to a recipe you plan to prepare with this class, such as a salad bed for **Kitchen Lesson #14: You-Pick-the-Greens Salad**.	**Classroom:** Measure other common objects and compare to the length of their garden bed and/or to the width of their plant (i.e. a cabbage plant grows wider than this pencil).	**CCSS.MATH.CONTENT.1.MD.A.2** Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the same length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. **NGSS Science and Engineering Practice:** Constructing Explanations and Designing Solutions. **NGSS Science and Engineering Practice:** Developing and Using Models. **VA:Cr1.1.1a** Use observation and investigation in preparation for making a work of art.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Mapping Your Own Garden Bed	Garden Planning and Maintenance **(GPM)**	**GPM.1.3** Demonstrate ability to plan a garden that has a diversity of plants.	Using the group garden bed map from **Lesson #8: Mapping Garden Beds** as an example, have students map their own imaginary garden beds. Have them include 3 or more plants they would like to grow, and space them to maximize plants' abilities to meet their needs for sun, water, and space. Share out. 	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, have each student plan a dish that would use all of the crops growing in his/her imaginary beds.	**Community:** Draw a simple diagram of another space in the community showing how a plant gets what it needs to grow there.	**CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups. **CCSS.ELA-LITERACY.SL.1.6** Produce complete sentences when appropriate to task and situation. **NGSS Science and Engineering Practice:** Constructing Explanations and Designing Solutions. **NGSS Science and Engineering Practice:** Developing and Using Models.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Planning a Pizza Bed	Garden Planning and Maintenance **(GPM)**	**GPM.1.3** Demonstrate ability to plan a garden that has a diversity of plants.	Use the same method you used in **Lesson #9: Mapping Your Own Garden Bed** to plan out a Pizza Bed that you'll plant together in the spring. Include plants and herbs for tomato sauce and other good plants for toppings, like zucchini, peppers, eggplant, onions, and the like. Ideally, this bed can be in the shape of a pizza with wheat around the crust; tomatoes, basil and other vegetables in the "slices." It can include a statue of a cow placed inside somewhere for the cheese.	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Prepare pocket bread pizzas such as in **Kitchen Lesson #8: Eat-a-Pita Pizzas.**	**Classroom:** Read *Curious George and the Pizza* by H.A. and Margaret Rey.	**CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups. **CCSS.ELA-LITERACY.SL.1.6** Produce complete sentences when appropriate to task and situation. **NGSS Science and Engineering Practice:** Constructing Explanations and Designing Solutions **NGSS Science and Engineering Practice:** Developing and Using Models	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Weather Tracking	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.1.1** Describe weather.	Engage students by asking them to review weather tracking data from their journals. Look for and discuss patterns in the data. Is it getting colder or warmer? Sunnier or cloudier? etc. Then use thermometers to find the hottest and coldest places out in the garden. 	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.2** Students cooperate and communicate well with each other.	In the kitchen, discuss what was in season in the fall, what's in season now, and what you're looking forward to having in season in the spring and summer.	**Classroom:** Choose a sister city in a very different climatic region and compare your weather with theirs.	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. **CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Finding Food on a Map	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.1.2** Describe what foods grow nearby and what foods come from other places.	Engage students by recalling from fall what foods you grew together in the garden. Ask for examples of other foods students have seen growing locally. Bring in some foods or pictures of foods that can't be grown in your region, labeled with where they were grown. Have teams work together to locate where they were grown on a world map. Discuss how they might have ended up in a local store, and the advantages and disadvantages of shipping foods around the world. Read aloud *How to Make an Apple Pie and See the World* by Marjorie Priceman. 	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely. **CLS.2** Students cooperate and communicate well with each other.	In the kitchen, make a dish featuring locally grown foods (fresh or preserved).	**Community:** Take a field trip to a local farm or farmers market, or invite a farmer in to speak to the class.	**Social Studies:** Geography. **CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.	

GRADE 1 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. What is a Seed?	Plants **(P)**	**P.1.1** Understand what a seed is and what it does. **GTE.1.1-4** Garden Tools and Equipment	Discuss the function of a seed. Have students explore, sort,and count a variety of seeds. Then have them start seeds in containers. If possible, use the seeds you saved together in the fall. As you work together, review everything the seed will need to grow and thrive. Demonstrate how to water gently using a watering can, and then have students water.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	Prepare a dish featuring seeds such as in **Kitchen Lesson #13: Three Bean Salad.**	**Community:** Go on a seed scavenger hunt in a field or nature area.	**NGSS.1.LS1.A** ***Structure and Function*** All organisms have external parts… Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. **CCSS.MATH. CONTENT.1.MD.C.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Bean Babies	Plants **(P)**	**P.1.2** Understand that a plant produces another plant like itself.	Engage students by looking together at a variety of beans and sorting by similarities and differences. Then have each student make a "Bean Baby" by placing a bean and wet cotton ball in a small plastic bag. Tape them into the window of their classroom so students can watch them germinate over time. Have them notice similarities and differences in the plants as they observe and illustrate growth over time in their journals. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Prepare a dish featuring seeds such as in **Kitchen Lesson #18: Super-Stuffed Burritos**, and explain that beans are seeds.	**BAM! Box:** Take your Bean Baby home and care for it for 4 weeks. Then bring it back to class for a "reunion" to compare and contrast all the different seeds. Note: Make some extra Bean Babies for students who lose theirs or fail to care for them properly. **Classroom:** Read aloud *Ten Seeds* by Ruth Brown. Make predictions about what will happen next as you turn each page (this involves some simple math).	**NGSS.1.LS1.A** ***Structure and Function*** All organisms have external parts … Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Seed Dissection	Plants **(P)**	**P.1.3** Understand structure and function of seed design.	Read aloud *One Bean* by Anne Rockwell. Have students work in pairs to dissect pre-soaked bean seeds to find the baby plant (embryo), seed coat, and seed food (endosperm) inside. Then enjoy together a snack made from seeds, such as sunflower seeds or a trail mix featuring lots of seeds. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.2** Students cooperate and communicate well with each other.	In the kitchen, have students brainstorm all the seeds they eat.	**BAM! Box:** Make granola with seeds! **Community or Cafeteria:** Search for bread, tortillas, beans, nut butters, and other foods made from seeds in the cafeteria or at home.	**NGSS.1.LS1.A** ***Structure and Function*** All organisms have external parts… Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. **CCSS.ELA-LITERACY.RL.1.1** Ask and answer questions about key details in a text.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Plant a Pizza Bed	Garden Tools and Equipment **(GTE)**	**GTE.1.1-4** Garden Tools and Equipment	Have students share what they remember about proper use of hands, hand trowels, harvest baskets, and buckets. Then demonstrate proper use of garden string to mark beds and hand weeding tools. Next, have them use all of these tools to clear a bed, harvesting any edibles and collecting non-noxious weeds for the compost pile. Finally, have them plant a pizza bed using the plans students created in **Lesson #10: Planning a Pizza Bed**. You may also choose to add a salad bed next to the pizza bed. Show students how to clean tools with cleaning brushes before having them clean their tools.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	In the garden, discuss how to ensure that you get all of the food groups when you eat pizza by adding lots of vegetable toppings to your pizza bed, and/or adding a salad on the side of your pizza. Incorporate these ideas into your pizza bed.	**Classroom:** Make signs together for the pizza bed with the names and illustrations of various ingredients.	**CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Weeds vs. Cultivars	Garden Planning and Maintenance **(GPM)** Garden Tools and Equipment **(GTE)**	**GPM.1.4** Understand the difference between a weed and a cultivar. **GTE.1.1-4** Garden Tools and Equipment	Show students illustrations or photos of 5 common garden cultivars and 5 common weeds, each time letting them look for only 3 seconds. After each one, hide the picture and ask them for defining characteristics. Then show again and share the name of the plant. Send teams on a pictograph scavenger hunt looking for those same 10 plants. Then sort the pictures into cultivars and weeds, and discuss the difference. Finally, review safe use of hand weeding tools and have students mark all cultivars in a bed, and then weed that bed together. 	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **CLS.2** Students cooperate and communicate well with each other.	In the kitchen, prepare a dish featuring edible wild plants, which are sometimes considered weeds.	**Classroom:** Bring weeds indoors and look at them closely. Observe physical adaptations that help weeds survive and thrive despite humans trying to stop them.	**CCSS.ELA-LITERACY.L.1.5** With guidance and support from adults, explore word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.1.5.C** Identify real-life connections between words and their use (e.g., note places at home that are cozy). **CCSS.MATH.CONTENT.1.MD.C.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Sheet Shake	Garden and Food Systems **(GFS)**	**GFS.1.1** Identify the roles beneficial insects and pests play in the garden.	Do a "sheet shake" with your students. Put an old sheet on the ground under a bush. Shake the branches and let the insects fall out. (It can be useful to try this on a nearby bush ahead of time to ensure you have enough insects to work with). Give students bug boxes to collect insects. Have them compare and sort. Then have students work together with a kid-friendly field guide to identify the insects they found, looking up if they are pests that eat our plants or beneficial insects that pollinate our plants and/or eat our pests. Discuss the benefits of attracting a diverse set of beneficial insects into the garden. Together, plant some plants that attract beneficial insects in your region. You can find good options on the Pollinator Partnership website.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, prepare a dish featuring fruits and vegetables. Prior to eating, discuss how predatory insects helped protect these crops from pests, and how pollinators helped the plant produce the fruits in the dish.	**Cafeteria:** Look together at the salad bar or for plant-based foods on the school lunch tray. Discuss how predatory insects helped protect these crops from pests, and how pollinators helped the plant produce the fruits in the dish.	**CCSS.MATH. CONTENT.1.MD.C.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. **CCSS.ELA-LITERACY.RI.1.5** Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.	

GRADE 2 | *Garden*

SCOPE & SEQUENCE

GRADE 2 STANDARDS

At the end of Grade 2, students will be able to:

- Identify elements in a food web.
- Demonstrate understanding of the role of plants in the food web.
- Demonstrate knowledge of the structure and functions of plant parts, specifically stems and leaves.
- Demonstrate knowledge of planting seeds, transplanting seedlings and seed saving.
- Demonstrate knowledge of how soil is made.
- Demonstrate knowledge of how plant and other matter is broken down.
- Demonstrate ability to construct planting mediums.
- Demonstrate knowledge of beneficial and non-beneficial insects.
- Demonstrate understanding of how the environment and weather shape the garden and its inhabitants.
- Begin managing scarcity and abundance in the garden environment.

GRADE 2 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(PLS and CLS)**		Engage students by playing an age-appropriate name game. Explore teamwork by leading a team-building exercise. Explain teamwork by establishing garden agreements together Introduce the Community and Personal Life Skills. Then have students elaborate, practicing these agreements by exploring the garden and playing a game such as "meet a plant." Choose one edible plant to harvest and enjoy together.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	In the garden, review safe food harvesting and handling practices from the kitchen as you harvest and enjoy a snack together.	**Classroom:** Compare group agreements for the garden with those students have in the classroom. How are behavior expectations similar in both places? How are they different?	**CCSS.ELA-LITERACY.SL.2.** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Comparing Food Textures	Plants **(P)**	**P.2.2** Identify edible leaves and stems in the garden.	Hand out journals that students will use to reflect at the end of each lesson. Engage students by challenging them to find edible stems and leaves in the garden. Have them explore by sorting their findings based on plant structure (stems vs. leaves). Explain the function of stems (water and nutrient transport) and leaves (photosynthesis). Then conduct a comparative tasting between various edible leaves and stems. Focus especially on feeling and describing different food textures.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the garden, have students preview or review adjectives that describe texture from **Kitchen Lesson #2: Food Texture** as they describe the textures of each stem or leaf. In the kitchen, prepare a dip or dressing to enjoy with the edible stems and leaves in the garden.	**Cafeteria:** Identify edible stems and leaves in the school lunch or salad bar.	**CCSS.ELA-LITERACY.L.2.5.A** Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy). **CCSS.ELA-LITERACY.L.2.5.B** Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny). **NGSS Crosscutting Concept:** ***Structure and Function*** The shape and stability of natural and designed objects are related to their function(s).	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Building Compost	Soils **(S)** Garden Tools and Equipment **(GTE)**	**S.2.3** Balance carbon (browns) and nitrogen (greens) in compost. **GTE.2.1-4** Garden Tools and Equipment	Explain and demonstrate safe use of spading forks. Then have students practice these skills by building a compost pile together. Explain that we build healthy soil to grow healthy plants. To elaborate, ask teams to work together on developing systems to ensure that carbon and nitrogen are in balance in the compost pile. Demonstrate how to use a soil thermometer, and then stick one in the center of your pile. Together with students, check, record, and graph the temperature of your pile over time.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **CLS.2** Students cooperate and communicate well with each other.	Collect plant-based food scraps from the kitchen to build the compost pile in the garden.	**Cafeteria:** Collect plant-based food scraps from the cafeteria to build the compost pile in the garden.	**CCSS.MATH. CONTENT. 2.MD.A.1** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. ***NGSS.2.ETS1.B Developing Possible Solutions***	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Tending the Garden	Garden Planning and Maintenance **(GPM)** Garden Tools and Equipment **(GTE)**	**GPM.2.1** Understand how to prepare soil for planting in terms of weeding and cultivating. **GTE.2.1-4** Garden Tools and Equipment	Engage your students by having each student share one of his/her favorite fruits or vegetables growing in the school garden. Explain that preparing the soil is an essential step in growing healthy, tasty plants. Review safe use of spading forks and demonstrate safe use of hand forks. Divide your group in half. Have one half work with you to prepare beds by weeding and adding compost. With an adult volunteer, have the other half listen to and discuss *How Groundhog's Garden Grew* by Lynn Cherry, and then switch.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Prepare a recipe that involves stirring, such as in **Kitchen Lesson #3: Make-Yourself-Some-Applesauce**. Discuss how stirring is similar to preparing a bed for planting (mixing ingredients; stirring in air; using tools; etc).	**BAM! Box:** Plant an extra set of plants in containers to send home with students. Have them care for their plants over time and compare them to the ones planted in the garden.	**CCSS.ELA-LITERACY.RL.2.7** Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot. **CCSS.MATH.CONTENT.2.MD.A.1** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Planting Together	Garden Planning and Maintenance **(GPM)**	**GPM.2.2** Understand when to plant seeds and transplant seedlings into the garden. **GTE.2.1-4** Garden Tools and Equipment	Have your students explore a regional planting guide and local weather data (including your average last frost date) to determine particular seeds and/or transplants that can be planted at this time in your region. Review safe tool use. Then plant them together in the beds you prepared at the appropriate time.	**PLS.5** Students develop the ability to make informed and responsible decisions.	In the garden, use the "Days to Harvest" on your planting guide to determine when your crops will be ready to harvest. In the kitchen, plan a dish that includes that crop. Then mark your calendar for when you should be able to prepare it.	**Classroom:** Give teams a calendar, a planting guide, your average last frost date, and a list of 3 crops. Have them work together to calendar out when they could plant and harvest their crops.	**CCSS.MATH. CONTENT. 2.OA.A.1** Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. **CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Soil vs. Dirt	Soil **(S)**	**S.2.2** Describe characteristics and components of soil. **GTE.2.1-4** Garden Tools and Equipment	Provide groups of 4–6 students with a scoop of non-living dirt (such as you might find in a parking lot median) and a scoop of healthy garden soil. Have them explore with magnifying glasses, sort ingredients, and record differences in their journals. Discuss/explain soil components. Review safe tool use. Then elaborate by planting a crop in both kinds of soil and measuring and observing plant growth over time.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **CLS.2** Students cooperate and communicate well with each other.	In the garden, do a comparative taste test of the crop planted in the dirt and the one planted in the soil. Have students use concepts from **Kitchen Lesson #2: Food Texture** and **Grade 1 Kitchen Lesson #5: Taste Sensations** to describe each food.	**Community:** Have students gather dirt and soil from various locations around their communities. Bring them in and compare them all.	**NGSS Science and Engineering Practice:** Planning and Carrying Out Investigations **CCSS.MATH. CONTENT. 2.MD.A.1** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	

GRADE 2 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Making Soil	Soil **(S)**	**S.2.1** Explain how soil is made.	To engage students, brainstorm soil "ingredients" together, such as rocks, dead plant material, and the like. Have students explore and gather those ingredients and challenge them to make soil. Then, challenge teams to look around the garden for evidence that explains how this process happens naturally. Gather together to share findings and discuss natural processes, including weathering of rocks and decomposition of once-living materials over time.	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Prepare a dish that features fruits and vegetables, such as in **Grade 1 Kitchen Lesson #6: Salsas**. Before you eat, trace the food back to the plants, the soil, and discuss the ingredients and processes that made the soil.	**Classroom:** Sing "Dirt Made My Lunch" by the Banana Slug String Band.	**NGSS.2.ESS1.C** ***The History of Planet Earth*** Some events happen very quickly; others occur very slowly over a time period much longer than one can observe. **NGSS Science and Engineering Practice:** Engaging in Argument from Evidence	
8. Weather Station Creation	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.2.1** Name, describe, and collect data on local weather events. **GTE.2.1-4** Garden Tools and Equipment	Create a weather station with an air thermometer, rain gauge, visual cloud identification chart and the like. Explore these tools together. Explain how to make a wind sock, and then have students make their own wind socks. Then, teach students how to use all instruments. For the remainder of the year, have rotating student teams elaborate by visiting the station to record and report on the weather each time they visit the garden.	**CLS.2** Students cooperate and communicate well with each other.	In the garden, share dishes you crave on hot and cold days.	**Classroom:** Create a collage of favorite activities in each season (i.e. playing in the sprinklers in the summer, making snowmen in winter, etc).	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed. **CCSS.ELA-LITERACY.SL.2.6** Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Researching Regions	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.2.2** Describe how geographic place influences what grows in the garden.	Engage students by challenging them to find 3 different locations that you've pre-selected on a world map. Provide descriptions of the climate in all 3 places, and have students explore and discuss how this impacts what can grow there at a given time. Divide class into teams of 4. Assign each team a different location and a list of common crops in that region during this time of year. Have teams present their region and crops and discuss similarities and differences. If working in the garden, have students compare the list to the crops in their garden. 	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely. **CLS.2** Students cooperate and communicate well with each other	In the kitchen, prepare dishes from different regions, featuring foods grown in those regions.	**BAM! Box:** Find a class from another state or country with a different climate to be pen pals. Have students work at home with their community members to write to students in the other class. Have them ask about the food, culture, and weather in their pen pal's region, and elaborate on what foods they have growing near themselves, and what they are eating.	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed. **CCSS.ELA-LITERACY.SL.2.6** Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Finding Weather Patterns	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.2.3** Predict and apply weather patterns to the garden.	Elaborate on student understanding of weather and climate. Once they have logged the weather in their journals for a few months, have them look together for weather patterns, such as: • Is it raining now more or less than before? • Is it warmer or cooler? As a class, use these patterns, with historical weather data for your region, to make weather predictions and garden plans. 	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.2** Students cooperate and communicate well with each other.	Prepare a dish featuring storage crops, such as in **Kitchen Lesson #11: Maple-Buttery Corn Muffins**, highlighting that the grain corn was grown in summer, harvested in fall, and then stored for use in winter.	**Classroom:** Set up a weather log in the classroom where students can observe and record basic weather phenomena (temp, clouds, precipitation, wind direction) daily.	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed. **CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.	
11. Tracking the Seasons	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.2.3** Predict and apply weather patterns in the garden.	Give students a paper with each season labeled. Have them explore their ideas about each season by adding images (collage or illustrations) of favorite activities in each season. Have them share out and find commonalities and differences. Over time, have them elaborate by recording produce available in their garden in each season on their paper. 	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, prepare a dish featuring foods that are in season in the winter in your region, and/ or have been preserved or stored from the fall.	**Classroom:** Keep a calendar posted in the classroom and have students record first harvests onto the calendar.	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed. **CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Tracking Garden Data	Garden and Food Systems **(GFS)**	**GFS.2.3** Strategize solutions for abundance and scarcity in the garden.	Divide into teams and have each team explore, count, record, and share a type of an item in the garden. Have some teams focus on produce (i.e. the number of lemons on the lemon tree) and some on environmental factors (i.e. the number of pollinators seen in the pollinator bed or inches of rain collected in the rain gauge). Have students share findings and record. Continue this throughout the year and look for patterns. Have students discuss possible explanations for the abundance or scarcity of things in the garden and elaborate by brainstorming possible solutions (for example, making lemonade from a lot of lemons, or planting drought-resistant plants if it's a year in which water is scarce).	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely. **CLS.2** Students cooperate and communicate well with each other.	In the garden, brainstorm together good dishes for each season based on what is in abundance in your region in each season.	**Classroom:** Add notes on what is in abundance to the classroom garden calendar where students are recording first harvests.	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed. **CCSS.MATH. CONTENT.2.OA.A.1** Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	

GRADE 2 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Getting to Know Our Weeds	Plants **(P)**	**P.2.3** Identify weeds. **GTE.2.1-4** Garden Tools and Equipment	Give each pair of students a photograph of a common garden weed from your garden. Challenge them to explore and find that plant. Once students have found their weed, invite them to share it with the class, explaining to their peers how to identify it by pointing out any defining characteristics. Review why it is important to remove weeds from the garden. Then pass out hoola hoops or string circles and have pairs put them down in areas that need weeding. Have pairs work together to clear their entire circle. You can even host a weeding contest to see who can build the tallest pile of weeds.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In the kitchen, prepare a dish featuring some local edible wild plants or weeds.	**Classroom:** Measure and graph the piles of weeds from the garden to identify a winner for the weeding contest.	**NGSS.2.LS2.A** ***Interdependent Relationships in Ecosystems*** Plants depend on water and light to grow. **CCSS.MATH. CONTENT.2.MD.A.1** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Dissecting Weeds	Plants **(P)**	**P.2.1** Describe the structure and functions of plant parts.	Have student teams pull weeds and choose one to dissect. Challenge them to explore it by separating all the different parts they can find (i.e. roots, stems, leaves, etc). As you go through explaining each of the 6 plant parts, challenge them to look carefully at each structure and see if they can infer its function. Have them share out, clarifying the accurate function for each plant structure as you go. To elaborate, sing "Roots, Stems, Leaves," by the Banana Slug String Band. 	**CLS.2** Students cooperate and communicate well with each other. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the garden, review safe food harvesting and handling procedures learned in the kitchen. Then make a "6 plant part" salad, spring roll, or wrap. You can even use a large leaf to wrap everything together!	**Community:** Have students go on a "6 plant part" scavenger hunt and find and collect or photograph each of the 6 parts they find.	**NGSS Crosscutting Concept:** Structure and Function **CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Eating Stems and Leaves	Plants **(P)**	**P.2.2** Identify edible leaves and stems in the garden.	To engage students, have them identify and harvest edible leaves and stems in the garden. Have students explore each, asking what similarities and differences students observe between them. Review the function of stems (nutrient and water transport) and leaves (photosynthesis). Then have students wash and tear them up to make a garden salad with a simple dressing.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **CLS.2** Students cooperate and communicate well with each other.	In the kitchen, make a homemade dressing for the garden leaf and stem salad.	**Cafeteria:** Work with the food service director to incorporate harvested leaves and stems into the salad bar or school lunch menu.	**NGSS Crosscutting Concept:** Structure and Function. **CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Investigating Pollination	Garden and Food Systems **(GFS)**	**GFS.2.1** Identify pollinators in the garden, what service they perform, and how to increase the number of them living in the garden. **GTE.2.1-4** Garden Tools and Equipment	Explore the garden for insects landing on flowers and try to determine what they're doing. Explain the role of pollinators in plant reproduction. Have students elaborate by making "bees" by wrapping yellow and black pipe cleaners together in a ball. Then have them go around the garden moving pollen between flowers. Apply your learning by planting together some plants that attract pollinators. You can find regional guides at Pollinator.org.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.2** Students cooperate and communicate well with each other.	Make a dish that features fruits that require pollinators, such as in **Grade 1 Kitchen Lesson #16: Mixed Berry Crumble**. As you enjoy, thank the pollinators.	**Community:** Take a field trip to look for pollinators around the community, in parks, or in natural settings.	**NGSS 1.LS1.A** ***Structure and Function*** All organisms have external parts… Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. **NGSS.2.LS2.A** ***Interdependent Relationships in Ecosystems*** Plants depend on animals for pollination or to move their seeds around.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Insect Structures 	Garden and Food Systems **(GFS)**	**GFS.2.2** Describe structure and function of insect parts.	Engage students by discussing plant parts and how each part helps plants live, thrive, and contribute to the garden. Then ask students to consider what parts insects may have and how they help them live, thrive, and contribute to the garden. Explore this idea by allowing students to collect an insect from the garden in a magnifying bug box to observe. As students are observing their insects, explain that insects have 3 body parts—head, thorax, and abdomen (along with the features on each). Discuss how these structures help insects live, thrive, and contribute to the garden. Students can elaborate on their understanding by drawing a scientific model of their insect and labeling the parts in their journal. These journals can be used to evaluate student understanding of insect structures.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, research insects eaten around the world.	**Classroom:** Create imaginary insects in teams of 3. Give each team a blank piece of paper folded in thirds. Have each student draw an insect head on the top third, with the neck just passing the top fold. Fold to hide the head, then pass the papers, and have everyone add a thorax to their new paper. Pass one last time to add an abdomen. Open up to see your collective insect creations.	**NGSS Crosscutting Concept:** ***Structure and Function*** The shape and stability of natural and designed objects are related to their function(s). **VA:Cr2.1.2a** Experiment with various materials and tools to explore personal interests in a work of art or design.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Web of Life	Plants **(P)**	**P.2.4** Describe the role of plants in the food web.	Give each student a card representing a plant, animal, or other key feature in your garden ecosystem. Have them look for that object in the garden. Then give one student a ball of string. To explore the concept of interdependence, the first student's job is to hold one end of the string and then toss the ball to anyone he/she thinks the garden object interacts with. For example, "I'm a butterfly and I interact with the flowers because I drink nectar from flowers." Then have the next person continue, until you've created a web of yarn. Use the web to explain interdependence and the role of plants as producers, making food for themselves and the animals in the garden. 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, prepare a dish featuring fruits and vegetables and then create a web connecting the ingredients to other members of the garden ecosystem, such as pollinators, sunlight, earthworms, and the like.	**Classroom:** Do the same activity, but focused on human communities. Each student can play a community role such as a teacher, firefighter, mother, or farmer.	**NGSS.2.LS2.A** ***Interdependent Relationships in Ecosystems*** Plants depend on water and light to grow. **NGSS.2.LS2.A** ***Interdependent Relationships in Ecosystems*** Plants depend on animals for pollination or to move their seeds around. **Social Studies:** Diversity and Community	

GRADE 3 | *Garden*

SCOPE & SEQUENCE

GRADE 3 STANDARDS

At the end of Grade 3, students will be able to:

- Demonstrate increased understanding of the structure and function of plant parts, specifically of flowers.
- Demonstrate knowledge of germination, propagation, and plant growth.
- Demonstrate ability to design and conduct science experiments in the garden.
- Demonstrate knowledge of geographic and climate influences on food.
- Demonstrate knowledge of food systems.
- Demonstrate knowledge of beneficial insects in the garden.
- Demonstrate knowledge of pollinators and predators in the garden.
- Demonstrate knowledge of basic garden design using basic math.

GRADE 3 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(PLS and CLS)**		Engage students by having each student share their name and something interesting they notice in the garden. Explore teamwork by doing an age-appropriate team-building exercise. Explain how to work together as a team by establishing garden agreements together. Review Personal and Community Life Skills. Then have students elaborate, practicing these agreements as you explore the garden using a scavenger hunt.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Compare group agreements for the kitchen with agreements students have in the garden. How are behavior expectations similar in both places? How are they different?	Read *Chrysanthemum* by Kevin Henkes, a story about acceptance and appreciation for new friends on the first days of school.	**CCSS.ELA-LITERACY.SL.3.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Bread is for Eating	Garden and Food Systems **(GFS)**	**GFS.3.4** Define local food system.	Engage students by reading aloud *Bread is for Eating* by David and Phillis Gershator. When the book is finished, have each student explore wheat by picking a wheat seed from a wheat plant and chew it like gum. Explain how these seeds are ground to make flour and bread. Then have students prepare a snack with bread, such as avocado toast, together. As they enjoy, have them elaborate by discussing the elements of the food system that went into the bread. 	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	Students will process whole wheat into pretzels in **Kitchen Lesson #9: Threshing, Winnowing and Grinding Wheat** and **Kitchen Lesson #10: Old-Fashioned Pretzels**.	**Classroom:** Have each student write a story—each from a different perspective of someone or something along the same food system. **Community:** Visit the people in your community that interact along this food system towards baking bread. **Cafeteria:** Trace an item in the lunch line back to its source.	**NGSS Science and Engineering Practice:** Developing and Using Models. **CCSS.ELA-LITERACY.W.3.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Seed Starting Mix	Soil **(S)**	**S.3.1** Describe and/or create a planting medium for different types of gardens **GTE.3.1-5** Garden Tools and Equipment	Explain that seed starting mixes are important for giving seeds the best chance of sprouting by providing them with everything they need. Demonstrate how to follow a "recipe" to make a seed starting mix. Have students make and use the mix to fill containers and then plant seeds. Have them plant peas, sunflowers, or other plants with edible sprouts. Challenge teams to elaborate by modifying the "recipe" and make their own seed starting mixes that they think would be good for plants. Hand out journals that students will use to reflect at the end of each lesson, and have students record their own "recipes."	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In the garden, discuss how a "recipe" for seed starting mix compares to with a kitchen recipe.	**Classroom:** Describe the parts that make up the soil recipe as fractions of the whole.	**NGSS Science and Engineering Practice:** Constructing Explanations and Designing Solutions. **CCSS.MATH. CONTENT.3.NF.A.1** Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Seed Starting Mix Experiments	Plants **(P)**	**P.3.2** Create an experiment (inquiry, observe, collect data, and make conclusions) to test various growing environments for plants. **GTE.3.1-5** Garden Tools and Equipment	Using the soil mixes created by the teams of students in **Lesson #3: Seed Starting Mix**, have teams plant the same type of seed in all of their containers. Have them post their soil recipe in front of their container of seeds. Then have them explore, observe, and record the differences in each team's germination rates, plant growth, and the like in their journals over time. 	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Once their seeds germinate, have them harvest the sprouts and conduct a comparative taste test in the garden with sprouts of the same type grown in different soil mixes. Discuss any flavor or texture differences using Culinary Flavor and Texture concepts and terms learned in the kitchen.	**Classroom:** Create a line graph to chart and compare the growth of different plants.	**CCSS.MATH. CONTENT. 3.MD.B.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters. **NGSS Science and Engineering Practice:** Planning and Carrying Out Investigations	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Discovering Our Pests	Garden and Food Systems **(GFS)**	**GFS.3.1** Understand how to increase the beneficial insects in a garden environment.	Have student teams explore the garden looking for pests and evidence of pests. Use a garden field guide such as the one found at Dave's Garden online, to try to identify what types of pests are causing the damage. Then explain the role of predatory insects in keeping down pest populations in gardens. Have teams research which types of predatory insects reduce the populations of your most common pests using a resource such as Permaculture Research Institute's Guide to Plants that Attract Beneficial Insects.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	In the garden, discuss the "seconds" that farmers often sell at a reduced rate, which can include irregular or pest-damaged produce. Discuss culinary options for using cost-saving seconds, such as cutting off the damaged parts or using the produce in recipes where the damage will be less noticeable, such as in pies, smoothies, or casseroles.	**Classroom:** Tally the amount of each insect found in the garden. Compare and contrast the numbers of pests to predators. **Community:** Create informational flyers to distribute throughout the neighborhoods to home gardeners to present images and descriptions of beneficial insects to protect and harmful insects to beware of.	**NGSS Science and Engineering Practice:** Asking Questions and Defining Problems **CCSS.ELA-LITERACY.SL.3.2** Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Discovering Beneficial Insects	Garden and Food Systems **(GFS)**	**GFS.3.2** Design a plan to support and increase beneficial insects in the garden.	Have teams elaborate on their research by preparing and presenting a plan for increasing beneficial insects in their garden, for example by planting a particular perennial to attract them. Conduct a class vote on which plan to pursue. 	**CLS.2** Students cooperate and communicate well with each other.	Enjoy a farm fresh dish, such as that prepared in **Kitchen Lesson #6: Cooking with What's In Abundance**. As you enjoy it, give thanks to the predatory insects that ate the pests and allowed your crop to grow.	**Classroom:** Chart votes on a bar graph to compare.	**NGSS Science and Engineering Practice:** Constructing Explanations and Designing Solutions. **CCSS.MATH.CONTENT.3.MD.B.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.	

GRADE 3 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Planting for Beneficial Insects	Garden and Food Systems **(GFS)** Garden Tools and Equipment **(GTE)**	**GTE.3.1-5** Garden Tools and Equipment	Explain how to use measuring tape and garden string to measure, stake out, and mark a new bed. Then demonstrate safe and proper use of a hoe for weeding. Have students elaborate by preparing the bed for planting together. As a class, implement the plan that won votes in **Lesson #6: Discovering Beneficial Insects** (for example by strategically planting certain plants to attract predatory insects that will reduce the population of a specific pest). Have students create signs for the beneficial insect garden bed and include information about which insects the plants are meant to attract, pests they eat, and crops they're helping guard. For example, a sign might say: "This calendula attracts lady bugs which eat our aphids and protect our salad greens!"	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	As you enjoy any garden fresh produce in the kitchen, look for any evidence of crop damage by pests. Then review and celebrate the role of beneficial insects in protecting that crop from any more damage.	**Community:** Start seeds for perennials that attract beneficial insects in containers. Send seedlings home with students to plant at home or to give to others.	**CCSS.MATH. CONTENT.3.MD.B.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. **CCSS.ELA-LITERACY.SL.3.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Web of Life	Garden and Food Systems **(GFS)**	**GFS.3.3** Describe a food web.	Give each student a card with a plant or animal from your garden on it. Also include a card with a farmer or gardener on it, and one with a person who buys and eats food on it. Have students stand in a circle and give a ball of yarn to one student in the circle. Challenge them to explore interdependence by tossing the yarn to another student and suggesting how they are connected. For example, "I'm a sunflower and I'm connected to the worm because the worm made soil for me to grow in." Continue until you have a web. Discuss how everything in the garden is interconnected. Use this to explain the term food web. 	**CLS.2** Students cooperate and communicate well with each other.	In the garden, ask students to add cards representing different roles they know people play in kitchens (chefs, dishwashers, etc). Add these people to the web and discuss how they interact with the food web.	**Classroom:** Write a narrative in sequence in which each of the "characters" from the webbing activity in this garden lesson connects to the next. Instead of a plot of beginning, middle, and end it can be modeled as a "circular tale" like *If You Give a Mouse a Cookie* by Laura Numeroff.	**CCSS.ELA-LITERACY.W.3.3.A** Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally. **NGSS Science and Engineering Practice:** Developing and Using Models.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Mapping Magic Spaces	Garden and Food Systems **(GFS)**	**GFS.3.3** Describe a food web.	Give each student a string tied in a circle with about a 2-foot diameter. Have students find a "Magic Space" where they can sit alone in the garden and place their string circles. Once in their spots, have them explore, drawing maps showing everything they can see in their circles. Then have them draw arrows connecting as many things they can, labeling the arrows. For example, you might have an arrow from a bird to a bug to a plant that says "Bird eats bugs off plants." Challenge them to find as many arrows as they can. Come together, share out the connections, add your own ideas, and explain that all of these connections represent the food web in the garden. Have students look for arrows that would connect between their circles.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	When students work with wheat in **Kitchen Lesson #9: Threshing, Winnowing, and Grinding Wheat**, they will explore systems in a similar way to reinforce the idea that things work together. In the kitchen lesson, they will discuss or diagram connections between different elements of the wheat process, such as "Wheat goes into bread which goes into us; wheat stalks go into compost which goes out to the garden," etc.	**Classroom:** Write a narrative story with the "Magic Space" as the setting and the animal inhabitants as the characters. **Community:** Imagine "Magic Spaces" throughout your community and what connections may exist in them between the humans, the land, and the animals.	**NGSS Science and Engineering Practice:** Developing and Using Models. **Social Studies:** Geography.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Research-ing Biogerions	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.3.1** Define and map the bioregions of your state	Assign each team of students a bioregion from your state to explore via research. Provide them with key questions to answer, including ecology, elevation, climate, population centers, and the like. Have each team research and then elaborate by presenting their bioregion. As they share out, add their bioregion to a large, collective map of your state for the entire class to see. Save your map for future lessons. 	**CLS.2** Students cooperate and communicate well with each other.	In the garden, bring in a common item of produce from each bioregion and do a tasting of a regional food after each research team presents their findings on their region. Discuss the benefits of local, seasonal foods.	**Classroom:** Have each group write an informational paragraph about their bioregion including a main idea, detail sentences, and a conclusion sentence. **Community:** Interview people that live in each of the bioregions to learn about how the ecology of the region affects their lifestyle and livelihood.	**NGSS Science and Engineering Practice:** Analyzing and Interpreting Data. **Social Studies:** Geography **CCSS.ELA-LITERACY.SL.3.2** Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Tracing the Journey of Food	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.3.1** Define and map the bioregions of your state. **GFS.3.4** Define local food system.	Select one bioregion from your state and one crop that is grown there. Have student teams work together to trace the journey that crop would take to turn from a plant or animal in that region into a processed food in a store in another region. Discuss as a class how all of the bioregions interact in the food system as we grow crops in one place, process them in another, transport them for sale in another, and so on. 	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In the garden, have students contrast the journey of food they just researched with the journey of wheat from farm to table in **Kitchen Lesson #9: Threshing, Winnowing, and Grinding Wheat** and **Kitchen Lesson #10: Old-Fashioned Pretzels**.	**Classroom:** Write letters from a crop as it travels along its journey, similar to the model of *The Adventures of a Plastic Bottle* by Alison Inches. **Community:** Work with the local farmers market to highlight the journey of certain local products from the farm to the market.	**Social Studies:** Geography. **CCSS.ELA-LITERACY.W.3.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	**National Health Education Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Bioregions and Local Food Systems 	Garden and Food Systems **(GFS)**	**GFS.3.4** Define local food system. **WSCG.3.1** Define and map the bioregions of your state	Engage students by leading a kinesthetic activity reviewing the plant life cycle from seed to plant for a plant that grows in your bioregion. Explore how that food (oranges, for example) is harvested, then travels across the state to be juiced and frozen into popsicles before traveling to the farmers market to be sold to the community. Explain this process further by reading a text about local food systems and elaborate on student understanding by writing a letter to a local farmer showing gratitude for the work and care they contributed to every step from farm to market. Students can be evaluated based on the understanding of the local food system they express in their letter. 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Prepare a dish in the kitchen featuring key crops from your state. For each crop, highlight the region it was grown and discuss all of the people that got it to where it is now.	**Community:** Create a market stand and sell (or give away!) your food products, for example in front of the school at the end of the school day.	**Social Studies:** Economics. **CCSS.ELA-LITERACY.W.3.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	**Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 3 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Garden Caretakers	Garden Planning and Maintenance **(GPM)**	**GPM.3.2** Describe and/or demonstrate proper weeding techniques. **GTE.4.1-4** Garden Tools and Equipment	Review safe use of hoes, digging forks, hand forks, or any other relevant tools. Guide students in using division strategies to divide tasks and tools. Then rotate through a Garden Care Station Rotation: • Weed a bed together and prepare it for planting • Flip the compost pile • Plant a Healthy Snack Bed (designed in **Kitchen Lesson #12: Healthy Snack Plan**) or identify other necessary tasks at the time, such as harvesting something in abundance, picking snails off of plants, or removing dead flowers from a bush. If you made popsicles in **Lesson #12: Bioregions and Local Food Systems**, celebrate your hard work by enjoying them together.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	During this garden lesson, as you frame the student roles as garden caretakers, make the connection between the work they're doing in the garden, the food growing, and the dishes they're preparing in the kitchen.	**Community:** Plan workdays at other community gardens to weed, flip compost, and whatever else needs to be accomplished.	**CCSS.MATH. CONTENT.3.OA.A.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Preparing a Bed for Planting	Garden Planning and Maintenance **(GPM)**	**GPM.3.1** Calculate number of seeds and seed spacing for garden beds. **GTE.3.1-5** Garden Tools and Equipment	Review safe use of hand weeding tools, hand trowels, and any other relevant tools. Have students explore gardening by preparing a bed together where they will plant plants that require supports, such as sugar snap peas, pole beans, cane fruits, or tomatoes. Then have them use spacing information from a seed packet, transplant label, or planting guide to map out where in the bed you will plant each plant. Have them measure with rulers, and mark each planting area with a hand trowel, chopstick, or the like. Once spacing looks good, have them plant seeds or transplant plants that require support into each spot and water in.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Incorporate peas and/or beans into recipes such as in **Kitchen Lesson #18: Sesame Peanut Noodle Salad** or **Grade 4 Kitchen Lesson #6: Nutty Buttery Green Beans**.	**Classroom:** Write a poem about what is your support to help you climb higher to your fullest potential. **Community:** Teach others at a community garden how to use spacing information from seed packets and map out where to plant each seed.	**NGSS Science and Engineering Practice:** Using Mathematics and Computational Thinking. **CCSS.MATH. CONTENT.3.MD.B.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Designing Supports	Garden Planning and Maintenance **(GPM)**	**GPM.3.3** Identify needs and create support systems for various plants (beans, peas, tomatoes, cane fruit). **GTE.3.1-5** Garden Tools and Equipment	Have students explore various trellising equipment in the garden. Demonstrate how to safely and properly install trellising equipment. Assign a plant to each team of 4–6 students. Challenge teams to elaborate on their learning by designing and building their own support structure for their plant. Have them revisit to compare designs and modify as plants grow over time.	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Compare support structures in the garden with those in cooking (tiered cakes, braided pie tops, etc). Discuss how you might use climbing plants grown in the garden for cooking. In the kitchen, prepare a dish using the climbing plants students grew in the garden. For example, you can incporporate peas or beans into **Kitchen Lesson #18: Sesame Peanut Noodle Salad** or **Grade 4 Kitchen Lesson #6: Nutty Buttery Green Beans**.	**Classroom:** Write a "How to" Guide for the developed trellis design. **Community:** Build a bean teepee, tunnel, or other design for a local preschool or community garden.	**NGSS Science and Engineering Practice:** Constructing Explanations and Designing Solutions. **NGSS.3.ETS1.A** Defining and Delimiting Engineering Problems. **NGSS.3.ETS1.B** Developing Possible Solutions. **NGSS.3.ETS1.C** Optimizing the Design Solution. **CCSS.ELA-LITERACY.SL.3.4** Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Flower Dissection	Plants **(P)**	**P.3.1** Describe structures and functions of flowers.	Have students dissect flowers with easily visible structures, such as passion flowers, lilies, gladioli, tulips, or daffodils. Have them explore, looking at each part and guessing what its function is based on its structure. Have them share out and explain the scientific name for a few key parts: pistil, stamen, petals, and ovary. Then have them elaborate, finding another flower in the garden and look for those same structures, which they can draw and label in their journals. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	Garnish a salad or a dish such as in **Kitchen Lesson #14: Biscuits with Berries** with edible flowers from the garden.	**Classroom:** Read *The Reason for a Flower* by Ruth Heller. **Community:** Find flowers growing in your community and look closely to identify parts.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence. **CCSS.ELA-LITERACY.SL.3.1.D** Explain their own ideas and understanding in light of the discussion.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Build a Flower	Plants **(P)**	**P.3.1** Describe structures and functions of flowers.	Have students elaborate on what they learned from dissecting flowers to build their own model flowers, using recycled crafting materials such as cardboard, construction paper, etc. Each flower must include a structure for attracting pollinators, one for giving off pollen, and one for collecting pollen. 	**PLS.6** Students actively seek creative and resourceful solutions.	In the kitchen, use the concept of structure and function as you introduce or review kitchen tools in order to help students recognize how this concept cuts across disciplines. For example, the shape of a spatula is flat (structure) in order to slide under things (function).	**Classroom:** Write an informational paragraph to accompany the flower model describing each of the structures and their purpose. **Community:** Display models in a local library to inform patrons of the flower parts and the purpose of flowers.	**NGSS Science and Engineering Practice:** Developing and Using Models. **CCSS.MATH. CONTENT.3.G.A.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Planting Wheat for Next Year's Grade 3 Class	Garden Planning and Maintenance **(GPM)**	**GPM.3.1** Calculate number of seeds and seed spacing for garden beds. **GPM.3.2** Describe and/or demonstrate proper weeding techniques.	Have students explore and measure a garden bed that is prepared for planting. Guide them in calculating the number of wheat seeds needed to fill the bed. Explain that they are planting the wheat now for next year's Grade 3 class to harvest. Then plant that crop together.	**CLS.2** Students cooperate and communicate well with each other.	Remind students of their experience threshing, winnowing, and grinding wheat in **Kitchen Lesson #9: Threshing, Winnowing, and Grinding Wheat**. Review the anatomic and nutritional differences between whole wheat and white flour.	**Classroom:** Read *From Wheat to Bread* by Stacy Taus-Bolstad.	**NGSS Science and Engineering Practice:** Using Mathematics and Computational Thinking. **CCSS.MATH. CONTENT.3.OA.D.8** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	

GRADE 4 | *Garden*

SCOPE & SEQUENCE

GRADE 4 STANDARDS

At the end of Grade 4, students will be able to:

- Demonstrate knowledge of the structure and function of plant parts, specifically of seeds and seed parts.
- Demonstrate knowledge of photosynthesis.
- Demonstrate knowledge of soil management strategies in the garden.
- Demonstrate knowledge of how geographic place and climate influence the foods growing in a bioregion.
- Demonstrate knowledge of how latitude and altitude influence plant growth.
- Demonstrate knowledge of how to identify, assess, and resolve stress and/or poor health of plants.
- Demonstrate knowledge of a regional food system.
- Demonstrate knowledge of urban garden design.

GRADE 4 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(PLS and CLS)**		Engage students by having them share their names and something in the garden they think might have changed over the summer. Have them explore teamwork through an age-appropriate a teambuilding exercise. Explain behavior expectations by reviewing garden agreements established in **Grade 3 Lesson #1: Welcome to the Garden!** Review Personal and Community Life Skills. Then have students elaborate upon these agreements as they walk around the space and explore the garden in search of things that changed over the summer. Gather, share out, and record observations together.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Draw connections between garden agreements and kitchen agreements.	Draw connections between garden agreements and classroom agreements.	**CCSS.ELA 4.SL.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse patterns building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Dissecting Seeds	Plants **(P)**	**P.4.1** Describe structures and functions of seeds.	Give students pre-soaked bean seeds to dissect. Have them explore, looking closely with magnifying glasses and drawing each structure they can find. Challenge students to look at the structures for evidence of the function they serve, and write their best guesses. Then tell students the scientific name of each structure and explain the function each serves: Use an analogy of a baby plant (embryo) needing a coat (seed coat) for protection and a lunchbox (endosperm) to provide food while it's underground. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	As students dissect seeds and learn the names of each part in the garden, ask them to remind you of the difference between whole wheat and white wheat in terms of seed structures and functions (learned in **Grade 3 Kitchen Lesson #9: Threshing, Winnowing, and Grinding Wheat**). Both wheat flours contain the seed's endosperm, but in white wheat the germ (embryo) and bran (seed coat) have been removed. Review the nutritional benefits of whole wheat.	**Classroom:** Write a fictional descriptive paragraph about a baby seed that includes facts about its structure and features that prepare it for growth.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence. **CCSS.ELA-LITERACY.SL.4.1.D** Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Planting Seeds	Plants **(P)**	**P.4.1** Describe structures and functions of seeds. **GTE.4.1-4** Garden Tools and Equipment	Review safe tool use, and then have students explore seed planting by planting some cool weather crops from seed, such as radishes or greens. After they plant, review the structures inside those seeds (from **Lesson #2: Dissecting Seeds**) and explain how the baby plants will get food while they're underground. Then explain how they will get food once their sprouts come up above the ground by making their own food through a process called photosynthesis.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments. **PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	If possible, incorporate the radishes and greens planted in this lesson into **Kitchen Lesson #7: Green Salad with French Dressing**.	**Classroom:** Create a timeline of a seed's life showing how the structures develop and where the energy comes from to stimulate their growth. **Community:** Plant similar plants in a community garden to compare their growth, and therefore how they are able to make their own food in each location.	**NGSS Science and Engineering Practice:** Planning and Carrying Out Investigations. **CCSS.ELA-LITERACY.SL.4.1.C** Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Identifying Pests	Garden and Food Systems **(GFS)**	**GFS.4.1** Identify pests in the garden.	Provide students with a field guide to common garden pests and the evidence they leave. (Make sure your guide includes examples of specific pest damage that are common in your garden.) Have teams explore the garden for as many examples of pest damage as they can find. For each example, have them use their field guide to try to identify the culprit. Then have them elaborate by sharing their findings with one another.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	In the garden, research insects eaten in various cultures and identify which food group insects fall into (protein).	**Classroom:** Use rhyming words to write limericks to connect visible pest damage in the garden to the name of the pest. **Community:** Create informational flyers to distribute throughout neighborhoods to home gardeners to present images and descriptions of pests and pest damage.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence. **CCSS.ELA-LITERACY.SL.4.4** Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Garden Trouble-shooting	Plants **(P)**	**P.4.4** Understand signs of distress or poor health in plants and create solutions.	Have students go on a scavenger hunt in the garden, exploring for specific signs of distress or deficiency in plants such as wilting from lack of water, holes in leaves from snails, yellowing leaves from nutrient deficiency, etc. Once students have found evidence of distress in plants, assign each team a type of distress and challenge teams to research and come up with a solution (i.e. a barrier against snails or adding compost for a nutrient deficiency). Have students record their plans in their journals for **Lesson #6: Preventing Pest Activity**.	**PLS.6** Students actively seek creative and resourceful solutions.	Discuss the role of nutrients and phytonutrients in keeping plants healthy, and also in keeping us healthy. In the garden, enjoy a fresh fruit or vegetable and then thank the plant for the nutrients it gives you.	**Classroom:** Create charts to show findings, modeled either as cause/effect or problem/ solution. **Community:** Take photos to share with community of common signs of distress and tested solutions to them.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence. **NGSS Science and Engineering Practice:** Asking Questions and Defining Problems. **NGSS Science and Engineering Practice:** Constructing Explanations and Designing Solutions. **CCSS.ELA-LITERACY.SL.4.1.C** Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Preventing Pest Activity	Garden and Food Systems **(GFS)**	**GFS.4.2** Create a plan to mitigate pests in the garden. **GTE.4.1-4** Garden Tools and Equipment	Have each team from **Lesson #5: Garden Troubleshooting** elaborate on their research, presenting a plan for mitigating damage. Once you've approved their plan, have teams implement their plans (for example, by placing floating row cover over a crop or planting a plant that attracts a predatory insect near a plant that has a lot of pest damage).	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In the garden, have students write letters to the pests explaining what crops are growing, what dishes they plan to cook in the kitchen using those crops, and why they want to protect them.	**Community:** Create a podcast describing ways that have been researched or tested to prevent pest damage in the garden.	**NGSS Science and Engineering Practice:** Constructing Explanations and Designing Solutions. **CCSS.ELA-LITERACY.SL.4.4** Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.	

GRADE 4 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Photo-synthesis	Plants **(P)**	**P.4.2** Explain photosynthesis.	Remind students that once a seed germinates, the sprout above the ground begins to make its own food. Use a role play to explain photosynthesis. Assign roles of a plant gathering sunlight, carbon dioxide (from a human or other animal exhaling), and water from the soil to create more plant material, including new food for us. Then harvest something you planted in the fall, such as lettuce and radishes, to make a salad. As you enjoy the salad, have students elaborate by sharing how the plant used the sun's energy to make food that now gives us energy. Collect food scraps for your worm bin to be created in **Lesson #8: Building a Worm Bin**.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Prepare a salad, such as prepared in **Lesson #7: Green Salad with French Dressing**. As you prepare and enjoy, discuss the function of the leaves in gathering sunlight for photosynthesis.	**Community:** Create a game for younger students that models photosynthesis and the process of collecting all plant needs.	**NGSS Science and Engineering Practice:** Constructing Explanations.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Building a Worm Bin	Soil **(S)**	**S.4.1** Identify and describe structure and function of organisms living in soil. **GTE.4.1-4** Garden Tools and Equipment	Explain to students why and how to build a worm bin. Have them elaborate by building one together. Have students work together to shred and moisten newspaper for bedding, collect food scraps to feed the worms, and then add some red wriggler worms. For more information on building a worm bin, visit Life Lab's Resource Page. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment. **CLS.2** Students cooperate and communicate well with each other.	Add food scraps from the kitchen into the worm bin.	**Classroom:** Read *Wiggling Worms at Work* by Wendy Pfeffer. **Community:** Create a "How to" Guide about building a worm bin to share with your community.	**NGSS Science and Engineering Practice:** Planning and Carrying Out Investigations. **CCSS.ELA-LITERACY.W.4.2.D** Use precise language and domain-specific vocabulary to inform about or explain the topic.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Geography and Food, Part 1	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.4.1** Understand and describe how geographic place and cultural significance might influences what and when foods grow in your location.	Assign each team of about 4 students a country and have them explore and research the most common fruits grown there and one of the most common dishes eaten there. Include in your list of countries 2 countries located at similar latitudes, such as, France and Japan; Iraq and Mexico; Senegal and Nicaragua; Kenya and Ecuador; Northern Australia and Mozambique; Southern Australia and Argentina; and New Zealand and Chile. Also include your location in the US and a country at a similar latitude, which you can find online, such as available at Wikipedia's List of Countries by Latitude. Have teams elaborate, sharing out their key crops and dishes. As they do, mark on a collective world map. 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the garden, prepare and enjoy a few of the common crops researched by the students. Discuss the cultural and nutritional significance of each crop.	**Classroom:** Read sections of *What the World Eats* by Faith D'Aluisio and Peter Menzel. **Community:** Interview members of the community who have roots in other countries on the common fruits and common dishes from the area.	**Social Studies:** Geography. **Social Studies:** Diversity and Community.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Geography and Food, Part 2	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.4.2** Understand the effect of latitude on foods from various places around the world.	Look at the map from **Lesson #9: Geography and Food, Part 1** together. Introduce and define the term "latitude." Have students explore and identify countries with similar latitudes. Notice if their fruits or dishes are similar or different. Explain that having a similar latitude means they have a similar climate, meaning they can often grow similar crops. Then brainstorm with students reasons why they might still have different key crops and dishes. If they don't mention the following factors, add geographical conditions such as elevation, oceans, etc. and also cultural traditions to the list. Read aloud *Bread Bread Bread* by Ann Morris and discuss how culture impacts food preparation and traditions. 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Hang a world map in the kitchen and stick on pictures of common foods grown in various regions.	**Classroom:** Research one crop and how it's prepared differently in a variety of different world cultures. **Community:** Visit local restaurants that represent different world cultures, and compare and contrast the menu items for the crops that they feature.	**NGSS Science and Engineering Practice:** Analyzing and Interpreting Data. **CCSS.ELA-LITERACY.W.4.7** Conduct short research projects that build knowledge through investigation of different aspects of a topic.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. The World Travels of a Fruit	Garden and Food Systems **(GFS)**	**GFS.4.3** Define a regional food system. **WSCG.4.1** Understand and describe how geographic place and cultural significance might influences what and when foods grow in your location.	Bring in a fruit grown somewhere out of your state but within your region of the US (i.e. Pacific Northwest, the South, the Northeast, etc) for students to explore. Tell students where it was grown, and ask them to brainstorm all the steps to get it to where you are now (a farmer, a packer, a transporter). Then have students elaborate on this concept by using the produce to create a simple snack in 2 ways, following 2 different cultural traditions, such as orange slices with and without dried chile de arbol sprinkled on top (a Mexican tradition). Remind students that cultural traditions are influenced by what can grow in a region. 	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Have students write thank you letters to farmers in their region for a particular food the farmer grew and that the students prepared in the kitchen recently.	**Classroom:** Read the book *Before We Eat* by Pat Brisson. **Community:** Interview community members that work along the food system (farmer, packer, transporter, etc).	**CCSS.ELA-LITERACY.W.4.3.C** Use a variety of transitional words and phrases to manage the sequence of events. **NGSS Science and Engineering Practice:** Obtaining, Evaluating and Communicating Information.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health. **National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Exploring our Worm Habitat	Soil **(S)**	**S.4.2** Describe the role of fungi, bacteria, and invertebrates in soil.	Give pairs of students a scoop of worm castings from the worm bin. Have them use magnifiers and tweezers to explore, looking for every type of item they can find in there. Then have them sort into living and nonliving objects. If they don't mention fungus, have them look for thin little hairs going through the castings and explain that these are parts of fungus. Explain that the fungus, the worms, and other insects (also known as invertebrates), and something so small we can't see it (called bacteria) are all doing the work of decomposing the food scraps in the bin. We call these "The Garden FBI." 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	Prior to exploring the worm bin, ask students to recall some of the foods they put in there from the kitchen and when they put them in. Then have them predict what they'll see before they open the bin.	**Classroom:** Further research fungus, bacteria, and invertebrates to build understanding of all of the decomposers at work that may be too small to see. **Community:** Visit other active worm bins in the community to compare and contrast what decomposers can be found.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence **CCSS.ELA-LITERACY.W.4.2.C** Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).	

GRADE 4 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Mapping a Bed	Garden Planning and Maintenance **(GPM)**	**GPM.4.3** Calculate square footage of garden beds and paths. **GTE.4.1-4** Garden Tools and Equipment	Assign a garden bed or section of garden path to each team of 3-4 students. Have them use rulers or measuring tape to measure the edges of the bed. Explain how to calculate the surface area in square feet. Then have students elaborate, calculating how many of a particular crop, such as tomatoes (approx 1 per 2 square feet) or corn (approx. 1 per 1 square foot), will fit in each bed. Have them record in their journals for **Lesson #14: Garden and Kitchen Math**.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team. **CLS.2** Students cooperate and communicate well with each other.	When the students are using baking sheets in the kitchen (such as prepared in **Kitchen Lesson #14: Ooey Gooey Blueberry French Toast**), have students use rulers to measure and calculate the volume of rectangular kitchen objects such as baking sheets, bread baking tins, and the like. Discuss how this inform-ation is used by chefs.	**Community:** Engage students in leading a workshop for lower grades around the effectiveness of square foot gardening and how to implement it in home gardens.	**CCSS.MATH. CONTENT.4.MD.A.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. **NGSS Science and Engineering Practice:** Developing and Using Models	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Garden and Kitchen Math 	Garden Planning and Maintenance **(GPM)**	**GPM.4.2** Calculate amounts of produce to grow in school garden.	Engage students by reading aloud *Minnie's Diner: A Multiplying Menu* by Dayle Ann Dodds. Then allow students to explore how to determine a multiplier for their salsa recipe to serve all of the students in their class. Explain to students how to use that multiplier to determine the amount of ingredients they will need for their multiplied menu. Then elaborate by determining exactly how much produce would need to be planted to make this recipe for the whole class. Student work can be evaluated with the worksheet students use to make their calculations. 	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In **Lesson #16: Planting for a Feast**, students will plant the produce planned for in this lesson. Then in **Grade 5 Kitchen Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole** students will use the produce they planted together. At this time, they can reflect on how accurately they estimated the yields when they planted.	**Classroom:** Have students write word problems about farmers and chefs calculating produce amounts. **Cafeteria:** Use an item in the lunch line or salad bar to estimate how many plants were required to supply that amount of produce.	**CCSS.MATH. CONTENT.4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. **CCSS.ELA-LITERACY.W.4.2.D** Use precise language and domain-specific vocabulary to inform about or explain the topic.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Planning for a Feast	Garden Planning and Maintenance **(GPM)**	**GPM.4.1** Demonstrate ability to create a planting map for the garden.	Have students use their findings about how many of each type of plant they'll need from **Lesson #14: Garden and Kitchen Math** to plan what to plant in their garden and where. Have them explore the garden and create a blank map of it, featuring the cardinal directions, as well as empty beds where they can plant and any other key garden landmarks. Explain the importance of placing tall plants along the north end of the beds so that they don't shade the shorter plants. Have student teams use seed packets or a planting guide to find the spacing requirements for each plant, and then have them elaborate by mapping where each plant could go in the garden in their journals. 	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In **Lesson #16: Planting for a Feast**, students will plant the produce planned for in this lesson. Then in **Grade 5 Kitchen Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole** students will use the produce they planted together.	**Community:** Offer garden planning services, requesting bed size and plant preferences and allowing students to develop a garden plan for community members.	**Social Studies:** Geography. **NGSS Science and Engineering Practice:** Developing and Using Models.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Planting for a Feast	Plants **(P)**	**P.4.3** Know how and when to plant seeds. **GTE.4.1-4** Garden Tools and Equipment	Using the life-sized maps they created (and you've evaluated and approved) in **Lesson #15: Planning for a Feast**, have students plant available beds to grow the produce for the dishes they will be preparing in the fall, such as **Simple Salsa, *There's a Chef in My Soup!***. Review tool safety, and explain how to use a round point shovel to collect finished compost to add to a bed. Have students elaborate by preparing the beds for planting and then use hand trowels to mark in the bed where they will plant each plant. Finally, they may plant and water in their crops.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	In **Grade 5 Kitchen Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole** students will use the produce they planted together.	**Community:** Invite members of the community to join you for this planting day.	**NGSS Science and Engineering Practice:** Planning and Carrying Out Investigations. **CCSS.ELA-LITERACY.SL.4.1.B** Follow agreed-upon rules for discussions and carry out assigned roles.	
17. Planting Beans	Garden Tools and Equipment **(GTE)**	**GTE.4.1-4** Garden Tools and Equipment	Review safe tool use. Have students elaborate on their garden skills learning by working as independently as possible to prepare beds and then plant a variety of beans into them for harvest in the fall, including green, red, black and cannellini beans.	**PLS.1.** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Have students harvest, store, and use the beans grown in this lesson in **Grade 5 Kitchen Lesson #10: Cooking Beans**, and **Grade 5 Kitchen Lesson #11: Beans Galore Salad**.	**Community:** Invite members of the community to join you for this planting day.	**CCSS.ELA-LITERACY.SL.4.1.B** Follow agreed-upon rules for discussions and carry out assigned roles.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Garden Caretaker Station Rotation	Garden Tools and Equipment **(GTE)**	**GTE.4.1-4** Garden Tools and Equipment **P.4.4** Understand signs of distress or poor health in plants and create solutions.	Review safe tool use. Divide class into 3 groups. Have each group spend 10-15 minutes elaborating on their garden learning at each of the following stations: (1) Sign-Making: Have students paint signs for their garden beds, naming the crops and possible recipes, such as "Salad Bed: Lettuce, Carrots and Cucumbers." (2) Weeding: Select an area and clear it completely of weeds; and (3) Looking for damage: Check all around the garden for signs of damage or disease and implement solutions learned in **Lesson #5: Garden Troubleshooting** (such as removing snails, spraying a crop with a cayenne pepper spray, or covering a bed with floating row cover) to improve growing conditions.	**CLS.2** Students cooperate and communicate well with each other.	As you frame the student roles as garden caretakers, make the connection between the work they're doing in the garden, the food growing, and the dishes they're preparing in the kitchen.	**Classroom:** Have students write directions for a garden caretaking task, such as "How to Weed" or "How to Paint a Sign."	**VA:Cr2.2.4a** When making works of art, utilize and care for materials, tools, and equipment in a manner that prevents danger to oneself and others.	

GRADE 5 | *Garden*

Emeril's CULINARY GARDEN & TEACHING KITCHEN

SCOPE & SEQUENCE

GRADE 5 STANDARDS

At the end of Grade 5, students will be able to:

- Demonstrate knowledge of genetic traits in plants.
- Demonstrate knowledge of geographic and geologic factors that shape soil.
- Demonstrate knowledge of how to make soil for seed germination and garden beds.
- Demonstrate knowledge of the cultural origin of food.
- Demonstrate knowledge of how plants have migrated around the world.
- Demonstrate knowledge of seed to plate process.
- Demonstrate understanding of how food systems are connected to social, economic, political, and environmental systems.

GRADE 5 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(PLS and CLS)**		Engage students by having them share their names. Have them explore teamwork through an age-appropriate teambuilding exercise. Explain behavior expectations by reviewing garden agreements established in **Grade 4 Lesson #1: Welcome to the Garden!** Review Personal and Community Life Skills. Then put students into teams of 3. Have them elaborate on teamwork by giving each team a word, such as "shiny" or "fuzzy." Have them collect objects that share that particular attribute, and then bring their collections back to the other groups. Have the other groups try to guess their word. Hand out journals that students will use to reflect at the end of each lesson.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Make connections between garden agreements and kitchen agreements.	**Classroom:** Make connections between garden agreements and classroom agreements.	**CCSS.ELA-LITERACY.SL.4.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Mapping Influences on What is Grown	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.5.2** Map the geographic, cultural, and historical influences that shape what is grown (maritime climate, altitude, soil composition, climate) in your bioregion.	Bring in a food that is truly unique to your region, such as steamed okra, fried green tomatoes, or the like. Explore with students through a group brainstorm. Then have them elaborate, recording independently in their journals the geographic, cultural, and historical influences represented in that food. Brainstorm together and have students independently map all of the influences that shape what is grown in your bioregion. 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In this lesson, call upon examples of crops grown in the garden that reflect the geography, culture, and history of your region.	**Classroom:** Research any historical relevance of the crop in other parts of the world using books such as *How Carrots Won the Trojan War* by Rebecca Rupp. **Community:** Interview members of your community on their memories and experiences of the dish.	**Social Studies:** Geography. **Social Studies:** Cultural Traditions.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Saving Bean Seeds 	Plants **(P)**	**P.5.1** Understand how to identify and cultivate genetic traits in plants.	Engage students by discussing the benefits of saving seeds. Have students explore dry beans planted last spring. Have each student look for about 4 of the very healthiest, best looking bean pods to save for next year. Explain how to harvest and shell beans together and place into a bowl. Use coin envelopes or have students make origami seed envelopes. Have them elaborate, labeling with bean type and relevant planting information. Have students present the seeds to the new Grade 4 class to plant in spring. 	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use the rest of the beans in **Kitchen Lesson #10: Cooking Beans** and **Kitchen Lesson #11: Beans Galore Salad.**	**Classroom:** Create a class card to give to the Grade 4 students along with the beans telling them what they have to look forward to in garden class this year.	**CCSS.ELA-LITERACY.W.4.2** Write informative/ explanatory texts to examine a topic and convey ideas and information clearly. **Social Studies:** Citizenship, Cultural Traditions	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Seed Movers	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.5.1** Describe the effect of human migration on seeds and plants.	Engage students by reading *Miss Rumphius* by Barbara Cooney to students. Explore real seeds and the structures that help them travel on the wind, on water, on animal's fur, etc. Explain the ways seeds travel. Then focus on human migration, and discuss examples of seeds being transported by humans for agriculture.	**PLS.4** Students are active and engaged learners who show up on time, prepared to learn and participate, and able to manage their time.	In the garden, enjoy okra or black eyed peas together, and discuss how these seeds and others were originally brought to the Americas by enslaved Africans.	**Classroom:** In contrast to the fictional text of *Miss Rumphius,* write an informational text about seeds traveling. **Community:** Research restrictions around traveling with seeds, fruits, or vegetables and develop understanding of positive and negative impacts.	**Social Studies:** Geography. **Social Studies:** Cultural Traditions. **NGSS Science and Engineering Practice:** Constructing Explanations.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Contributing to the Community	Garden Planning and Maintenance **(GPM)**	**GPM.5.4** Identify a need in the school or community and create a garden plan to address it.	Engage students in a discussion of how to contribute to the school community. Explore ideas by brainstorming people from the school (for example, the food service director, secretary, or custodian) you could invite to class to interview about how they could use the garden to address a school need (for example by growing something for the salad bar, or planting flowers for the classrooms). For each person students mention, brainstorm questions you could ask them. Have students elaborate on their learning, practicing asking their interview questions. Then help students invite those people in for **Lesson #6: Contributing to the School Community.** 	**PLS.4** Students are active and engaged learners who show up on time, prepared to learn and participate, and able to manage their time.	In this lesson, consider with students how they also might use their cooking skills to address a need in the school or community.	**Classroom:** Create and conduct a written survey of members of the school community to gather ideas of how the garden could best meet their needs.	**CCSS.ELA-LITERACY.SL.5.1.A** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.	**National Health Education Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Contributing to the School Community	Garden Planning and Maintenance **(GPM)**	**GPM.5.4** Identify a need in the school or community and create a garden plan to address it.	Have students interview members of the school community to get ideas about how they could use their garden to contribute to the school. Following the interviews, lead students in a discussion to choose a project they would like to pursue. 	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	Work with the food service director to identify a dish, such as **Pasta Primavera,** ***There's a Chef in My Family!,*** that students could make and contribute to a school lunch.	**Classroom:** Practice letter writing skills, writing thank you letters to the people you interviewed.	**CCSS.ELA-LITERACY.SL.5.1.A** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.	**National Health Education Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health. **National Health Education Standard 8:** Students will demonstrate the ability to advocate for personal, family, and community health.

GRADE 5 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Rain Gauges	Garden and Food Systems **(GFS)**	**GFS.5.2** Understand the relationship between weather patterns and watering in garden.	Explore the garden for wetter and drier areas. Explain how to make rain gauges. Have students make gauges, and place them in the garden. Check gauges with students regularly and record rainfall. Explain how to judge whether or not plants need water based on rainfall and soil moisture. Have students elaborate by checking gauges and soil, and making arguments based on evidence for the need to water. Demonstrate a proper watering technique to minimize soil erosion, and then have students water plants. Discuss the importance of water in the human diet, and compare our need for hydration to the hydration needs of plants.	**CLS.2** Students cooperate and communicate well with each other.	In the kitchen, when you use water (as an ingredient, or to cook something such as in **Kitchen Lesson #8: Miso Soup),** discuss where the water came from. Review the connection between our need for water and plant needs for water.	**Classroom:** Read *Water Dance* by Thomas Locker. **Community:** Collect rain gauge data at student homes, and compare accumulations at multiple sites.	**NGSS Science and Engineering Practice:** Developing and Using Models. **CCSS.MATH. CONTENT.4.MD.A.1** Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Splash Boards	Soil **(S)**	**GFS.3.3** Describe a food web.	Engage students by having them make splash boards to measure soil erosion patterns. Explain how to create splash boards. Have students elaborate, making splash boards and using them to measure soil erosion patterns from water in various locations around the garden. Have them continue to elaborate and share out their findings.	**PLS.6** Students actively seek creative and resourceful solutions.	As you enjoy a dish featuring fresh produce such as in **Kitchen Lesson #9: Layered Black Bean Chili Dip,** acknowledge the part erosion played in creating the soil that grew the food you are eating.	**Community:** Compare patterns found in the garden to larger scale patterns for rain flow around the city or state.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence. **Social Studies:** Geography	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Impacts of Human Activity on Soil	Soil **(S)**	**S.5.1** Describe the various activities that create soil.	Explore ways human activity (mulching, cover cropping, leaving ground bare, trampling plants, watering, etc.) impacts erosion. Have teams elaborate, choosing activities to test. Then, using splash boards they created in **Lesson #8: Splash Boards**, conduct experiments to test impacts of such activities.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In this lesson, discuss the connection between healthy soil, healthy food, and healthy bodies.	**Classroom:** Write a narrative story with the "Magic Space" introduced in **Grade 3 Lesson #9: Mapping Magic Spaces** as the setting and the animal inhabitants as the characters. **Community:** Imagine a "Magic Space" in your community and what connections may exist there between the humans, the land, and the animals.	**NGSS Science and Engineering Practice:** Developing and Using Models. **Social Studies:** Geography.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Garden Caretaker Station Rotation	Garden and Food Systems **(GFS)** Garden Tools and Equipment **(GTE)**	**GFS.5.1** Describe the roles beneficial insects and pests play in the garden. **GTE.5.1-4** Garden Tools and Equipment	Garden Caretakers Station Rotation: Explain relevant tool safety, and then divide students into teams to rotate through the following stations: • Removing snails or other pests by hand • Removing dead flowers from plants that attract beneficial insects in order to promote new growth • Mulching, terracing a slope, making a sign about where to walk, or doing something else to decrease erosion	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	As you frame the student roles as garden caretakers, make the connection between the work they are doing in the garden, the food they are growing, and the dishes they are preparing in the kitchen.	**Community:** Offer to lead a workday for a community garden to help with similar tasks.		
11. Farm to Table Stories	Garden and Food Systems **(GFS)**	**GFS.5.3** Demonstrate ability to identify and map a food system; include a historical or cultural perspective.	Have students map the food system by tracing a food item from the farm to the table. Divide the class into teams of about 6 students. Assign each team a different food item to explore the process form production to consumption (for example corn to tortillas and soy beans to miso soup). Then have each team sort themselves into an order to tell a story and elaborate by sharing out and discussing. 	**CLS.2** Students cooperate and communicate well with each other.	When making a dish featuring produce grown by students, such as in **Kitchen Lesson #11: Beans Galore Salad**, have students tell and illustrate a similar story to the ones described in this suggested activity, showing the process from garden to bean salad.	**Community:** Interview community members who work in different steps of the journey for a particular dish local to your region.	**CCSS.ELA-LITERACY.W.5.3.C** Use a variety of transitional words, phrases, and clauses to manage the sequence of events. **NGSS Science and Engineering Practice:** Developing and Using Models.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Mapping a Dish	Garden and Food Systems **(GFS)**	**GFS.5.3** Demonstrate ability to identify and map a food system; include a historical or cultural perspective.	Assign each student a dish, or have them select a dish that interests them. Have them explore, researching the history and culture represented by the dish and the plants that must be grown to prepare it. Then have them elaborate, creating a visual map in their journals representing the journey of that dish from farm to table. 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, help students prepare some of the dishes they've researched.	**Community:** Interview community members on their personal history with a dish that represents their culture.	**Social Studies:** Cultural Traditions. **NGSS Science and Engineering Practice:** Developing and Using Models.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

GRADE 5 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Sharing a Dish	Garden and Food Systems **(GFS)**	**GFS.5.3** Demonstrate ability to identify and map a food system; include a historical or cultural perspective.	Have students elaborate on their learning from **Lesson #12: Mapping a Dish** by hosting a poster presentation or share out in which students share about the dishes they researched. 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the kitchen, help students prepare some of the dishes they've researched.	**Community:** Invite experts from the community to be guest speakers for the poster presentation or share out.	**Social Studies:** Cultural Traditions.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
14. Planting for Ka-Bam Kabobs	Garden Tools and Equipment **(GTE)**	**GTE.5.1-4** Garden Tools and Equipment	Review tool safety. Explain how and why we read seed packets. Then have students elaborate, reading seed packets and planting onions, bell peppers, and any other produce you would like to include in **Grade 6 Kitchen Lesson #4: Ka-Bam Kabobs.**	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	In **Grade 6 Kitchen Lesson #4: Ka-Bam Kabobs,** students will prepare kabobs using the produce planted here.	**Classroom:** Write a narrative modeled after *The Carrot Seed* by Ruth Krauss, with the students as the main characters and using dialogue to move the story line. **Community:** Compare the varieties of onions and bell peppers available in the grocery store to the ones you planted in your garden.	**NGSS Science and Engineering Practice:** Planning and Carrying Out Investigations.	**National Health Education Standard 6:** Students will demonstrate the ability to use goal-setting skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Garden Calculations	Garden Planning and Maintenance **(GPM)**	**GPM.5.1** Calculate volumes of soil, compost, and/or amendments for garden beds.	Explore different sized garden beds with students, looking for which they think holds the most soil. Discuss why this is important. Explain to students how to calculate the area of a garden bed, and then the volume of soil and compost needed to fill them. Then have them elaborate, using these calculations to fill and prepare the bed.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In **Lesson #16: Planting Seeds for Saving,** students will plant popcorn into this bed. Then, in **Grade 6 Lesson #4: Saving Seeds with Popcorn,** students will prepare popcorn to flavor and enjoy using Culinary Flavor concepts learned in their kitchen lessons.	**Community:** Offer calculation services to members of the community, requesting the length, width, and depth of their bed.	**CCSS.MATH. CONTENT.5.MD.C.5** Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. **NGSS Science and Engineering Practice:** Using Mathematics and Computational Thinking.	
16. Planting Seeds for Saving	Garden Tools and Equipment **(GTE)** Weather, Seasons, Climate and Geography **(WSCG)**	**GTE.5.1-4.** Garden Tools and Equipment **WSCG.5.1** Describe the effect of human migration on seeds and plants.	Review safe tool use, and demonstrate the new skill of using a wheelbarrow to move compost from the compost pile to a garden bed. Then have students work together to elaborate on their learning by preparing a bed for planting, using their calculations from **Lesson #15: Garden Calculations**. If all of your garden beds are full, have students clear and add compost to prepare. Then have students plant popcorn (or anotehr crop that can be used to save seeds) for **Grade 6 Lesson #4: Saving Seeds with Popcorn.** Discuss the connection between human migration and seed migration.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	In **Grade 6 Lesson #4: Saving Seeds with Popcorn,** students will prepare popcorn to flavor and enjoy using Culinary Flavor concepts learned in their kitchen lessons.	**Cafeteria:** Find out if there is something you can grow for the cafeteria.	**CCSS.MATH. CONTENT.5.MD.C.5** Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.	**National Health Education Standard 8:** Students will demonstrate the ability to advocate for personal, family, and community health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Discovering Drip Irrigation	Garden Planning and Maintenance **(GPM)**	**GPM.5.3** Demonstrate ability to create watering system for plants.	Engage students in a conversation about water conservation and why it is important. Give teams of 4 students different components from a drip system, such as an on/off valve, a piece of mainline tubing, a hole punch, a few fittings, a piece of emitter tubing, and an end cap. Have students explore each component and guess what its function is based on its structure. As students share out, explain the accurate function. Have students elaborate, working together to build a small sample system using the pieces they have. Then go out to the garden beds and have each team work together with a small set of predetermined materials to lay out a simple drip system (i.e. for one plant, or for one bed). Once you have approved their system, provide them with a hole punch for tubing and a tubing cutter, and let them work together to assemble and install the system.	**PLS.6** Students actively seek creative and resourceful solutions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In this lesson, as you frame the student roles as irrigators, make the connection between the work they are doing in the garden, the food growing, and the dishes they are preparing in the kitchen. Also make the connection between plant needs for hydration and our own needs for hydration.	**Community:** Create a "How to" Guide for setting up a drip system including a list of tools and supplies (with specific measurements when necessary) and directions clearly written in sequence.	**NGSS Science and Engineering Practice:** Developing and Using Models. **CCSS.MATH.CONTENT.5.MD.A.1** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Garden Caretaker Station Rotation	Garden Planning and Maintenance **(GPM)**	**GPM.5.2** Demonstrate understanding of when to water by observing plants and soil for signs of no or low moisture.	**Garden Care Station Rotation:** Review safe tool use, and demonstrate how to use a hose with a nozzle to water. Then have students elaborate on their garden learning by rotating students through the following stations: • Watering: Check all drip irrigation to make sure it is working; use the hose and nozzle to water a designated area. • Compost: Flip the compost. • Weeding: Clear a designated area or bed of weeds.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	In this lesson, as you frame the student roles as garden caretakers, make the connection between the work they are doing in the garden, the food growing, and the dishes they are preparing in the kitchen.	**Community:** Volunteer at a local community garden to weed, water, and tend to the compost.		

GRADE 6 | *Garden*

SCOPE & SEQUENCE

GRADE 6 STANDARDS

At the end of Grade 6, students will be able to:

- Demonstrate knowledge of garden design and installation.
- Demonstrate understanding of the relationship between weather and seasonality.
- Demonstrate understanding and proper use of soil amendments.
- Demonstrate knowledge of various propagation methods.
- Demonstrate knowledge of basic business skills to plan a garden project.

GRADE 6 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(PLS and CLS)**		Engage students by leading them in an observation of the garden, recognizing how peaceful the space is without our interaction. Then consider how we can interact with the space in a way that enhances it. Explore these ideas as you establish garden agreements together, reviewing the Personal and Community Life Skills. Then elaborate on these understandings by practicing the agreements as students explore the garden and find a crop that is ripe and ready to harvest. Have students share what they remember about safe food handling techniques, and then choose a crop to harvest and enjoy together. Toward the end of class, introduce a poster-size calendar to record all planting, germination and first harvest dates for crops planted throughout the year. Have students record the foods that are ready to harvest on the calendar. Then, at the end of each garden class throughout the year, provide students time to add things they have planted or harvested to the classwide garden calendar.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Compare agreements created in **Kitchen Lesson #1: Welcome to the Kitchen!** to those created in the garden.	**Community:** Compare planting and harvesting calendars with those of local farmers. Volunteer at a local farm to help harvest or glean their crops.	**NGSS.6.LS1.B** Growth and Development of Organisms **CCSS.ELA-LITERACY.SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Producers and Consumers	Garden and Food Systems **(GFS)**	**GFS.6.4** Describe producer and consumer in the garden environment.	Engage each student in creating an index card with an illustration and name of a specific garden plant or animal. Gather together and shuffle the cards. Redistribute and have students explore the garden, looking for the plant or animal on their card. Once they find it, have students trade cards with one another and try to find the new plant or animal. Regroup and explain the terms "producer" (plant that produces food through photosynthesis) and "consumer" (animal that eats plants or other animals for food). Then have students elaborate, arranging themselves into 2 large groups based on the cards: producers and consumers. Hand out journals that students will use to reflect at the end of each lesson.	**CLS.2** Students cooperate and communicate well with each other.	In the garden, make the connection between producers (i.e. farmers) and consumers in the food system with producers and consumers in an ecosystem.	**Classroom:** On the back of the index card, write researched facts about the plant or animal then combine all cards into a "field guide" to the school garden divided by producers and consumers.	**NGSS Science and Engineering Practice:** Developing and Using Models. **CCSS.ELA-LITERACY.SL.6.1.C** Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.	
3. How to Harvest	Plants **(P)**	**P.6.3** Understand best harvest practices for food grown in garden. **GTE.6.1-4** Garden Tools and Equipment	Review safe food handling techniques. Have students explore this skill by harvesting, washing and preparing something fresh from the garden together. Then have students elaborate, creating short skits or videos on safe and proper harvest techniques to share with a younger grade. Note your harvest on the class wide garden calendar.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	Ask the kitchen educator if there is anything your class can harvest for **Kitchen Lesson #4: Ka-Bam Kabobs**, or another recipe they are cooking this week.	**Classroom:** Have students write scripts for their skits, including text and stage directions for the actors.	**CCSS.ELA-LITERACY.SL.6.5** Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.	**National Health Education Standard 8:** Students will demonstrate the ability to advocate for personal, family, and community health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Saving Seeds with Popcorn	Plants **(P)**	**P.6.2** Describe seed germination.	Engage students by having them harvest seeds from the crop you planted in **Grade 5 Lesson #16: Planting Seeds for Saving**. Then gather around the harvest and explore, having the class work together to select seeds from the 5 healthiest plants to save for planting in the spring. Explain the seed-plant-seed cycle. Set aside the selected seeds for saving. Note: If you planted corn, have students harvest the healthiest ears of corn and show them how to use the remaining cobs to prepare popcorn. Pop the popcorn. Have students make origami seed envelopes and elaborate on their learning by referencing store-bought seed packets or a planting guide to write information on them about when and where to plant, spacing, days to germination and harvest, and the like. Then have students place seeds they selected to save into the origami seed envelopes, and present these seeds to the new Grade 5 students to plant in the spring and harvest in the fall. Ask them to explain the benefits of saving your own seeds. Note your harvest on the class wide garden calendar. Enjoy popcorn together. 	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In the garden, provide student teams with salt, spices, and other possible toppings for popcorn. Have students season their popcorn, and as they do, reflect on the flavor combinations in each one (i.e. salty and sweet, or spicy and sweet, etc).	**Classroom:** As students study early humans—Mesopotamians, Egyptians, Kush, Hebrews, Greeks, Indians, and Romans, for example—research what seeds were in their diets. A good reference is *Food Civilization: How History has been Affected by Human Tastes* by Carson Ritchie and A Handful of Seeds by the Occidental Art and Ecology Center.	**CCSS.ELA-LITERACY.W.6.2** Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Why Do We Have the Foods We Do?	Garden and Food Systems **(GFS)**	**GFS.6.2** Understand what foods grow best in your specific geographic location and why. **GFS.6.5** Define local and seasonal eating.	Have students explore the USDA's National Agricultural Statistics Service to identify the top three crops grown in your state. Have students research the climate of your state such as: • What is the average lowest temperature? • Average highest? • Average days of frost? • Average humidity? Discuss the effect weather has on farming. Have students elaborate by researching and drawing conclusions about additional factors that could influence farming in the region (soil types, rainfall, etc). Have students record conclusions in journals. 	**PLS.6** Students actively seek creative and resourceful solutions.	In the garden, discuss common meals in your state that include the top 3 crops. Contrast with common meals in a state with a very different climate.	**Community:** Take a look at local weather reports to discuss the weather and the climate (and the difference between the two). Invite local farmers in to discuss how the climate affects their decision making on the farm.	**NGSS.6.ESS2.D** Weather and Climate - Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. **CCSS.ELA-LITERACY.RI.6.7** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Recruiting Farmers to Our Region	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.6.1** Describe the growing climate and seasons of your region.	In order to help students recognize what is unique about agriculture in their area, have them imagine that they are trying to recruit farmers to their region. Have them explore, using their research and images gathered in **Lesson #5: Why Do We Have the Foods We Do?,** to create pamphlets that they think would convince farmers to come to their regions. Pamphlets must include information on temperature highs and lows and what can be grown in each season. 	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	In the garden or for homework, have students create similar recruiting materials for chefs to encourage them to come and cook with the produce available.	**Community:** Create a version of the pamphlet for home gardeners to distribute at your city's welcome center or to give to local real estate agents to share with new residents.	**CCSS.ELA-LITERACY.W.6.2.A** Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/ contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. **VA:Cr3.1.6a** Reflect on whether personal artwork conveys the intended meaning and revise accordingly.	

GRADE 6 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Garden Design Challenge, Part 1: Designing a Garden Bed	Garden Planning and Maintenance **(GPM)**	**GPM.6.1** Understand and apply basic garden math skills to the design of a garden. **BP.6.1** Compare and contrast a home garden to a school garden. **BP.6.2** Create a garden planting list. **BP.6.3** Create project expense list.	Engage students by giving teams of 4-6 students a challenge: To create a garden plan using knowledge they have gained about seasonality, nutrition, and growing climates. Provide each team with a blank template for a garden bed with measurements included. Have them explore, designing a garden that fits specific requirements, such as: grows a favorite crop of every team member; includes enough of a particular crop for a specific dish selected by team; grows crops with specific nutritional benefits; etc. Have student teams use these designs to create planting and expense lists for their garden beds.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In the garden, give students nutrition-related challenges for their beds, such as growing food from each food group or growing plants that provide a variety of vitamins and minerals.	**Classroom:** Use measurements from the garden design activity to have teams calculate the area and volume of their planting areas.	**CCSS.ELA-LITERACY.SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Garden Design Challenge, Part 2: Planting a Garden Bed	Garden Planning and Maintenance **(GPM)**	**GPM.6.1** Understand and apply basic garden math skills to the design of a garden. **P.6.1** Interpret directions on seed packets. **GTE.6.1-4** Garden Tools and Equipment	Have student teams elaborate on the plans they made in **Lesson #7: Garden Design Challenge, Part 1: Designing a Garden Bed**, by following their plans to make measurements (of the area of the bed; of the space between seeds or plants; etc.). Have teams stake out planting areas, and then plant their garden beds. Have students label each crop planted and include a nutrition fact on each label, such as "Kale: High in Vitamins A and C." Add fish emulsion as a natural fertilizer to beds.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In the garden, have students add cooking suggestions or dishes to the labels on each crop, such as "Kale: Cut into strips, drizzle with olive oil, sprinkle with salt, bake until crispy, and enjoy!"	**Community:** Take students on field trips to visit other home or community gardens and have them compare and contrast the different types of gardens in their community.	**CCSS.MATH. CONTENT.6.G.A.1** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Garden Design Challenge, Part 3: Incorporating Beneficial Insectary Plants	Garden and Food Systems **(GFS)**	**GFS.6.1** Identify and create attraction strategies for beneficial insects in the home or school garden. **BP.6.2** Create a garden planting list.	Have student teams explore, researching local beneficial insects. Then explain how to create a plan and planting list for attracting beneficial insects to the garden. Have student teams elaborate on this, mapping where they can plant beneficial insectary plants, which are plants that attract beneficial insects; listing the insects they hope to attract; and explaining why those particular insects will be important in the garden. Students will use these plans in **Lesson #10: Garden Design Challenge, Part 4: Planting Beneficial Insectary Plants**. 	**PLS.6** Students actively seek creative and resourceful solutions.	In the garden, discuss the seasonality of beneficial insectary plants and compare with the seasonality of local crops.	**Community:** Prepare a poster or other visual informational guide for a local community center or library about beneficial insects.	**NGSS.6.LS2.A** Interdependent Relationships in Ecosystems. **CCSS.MATH.CONTENT.6.RP.A.3.C** Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	
10. Garden Design Challenge, Part 4: Planting Beneficial Insectary Plants	Garden and Food Systems **(GFS)**	**GFS.6.1** Identify and create attraction strategies for beneficial insects in the home or school garden. **P.6.1** Interpret directions on seed packets.	Have students elaborate on their learning in **Lesson #9: Garden Design Challenge, Part 3: Incorporating Beneficial Insectary Plants** by planting seeds for crops that attract beneficial insects and labeling each plant with its name and the reason it is beneficial to the edible crops.	**CLS.2** Students cooperate and communicate well with each other.	If possible in your region, include a few beneficial insectary plants that are also edible in your garden, so that you can incorporate them into salads and the like.	**Community:** Ask local landscape or garden designers to share how they create planting lists for how much and what to plant for their clients.	**NGSS.6.LS2.A** Interdependent Relationships in Ecosystems. **Social Studies:** Economics.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Garden Design Challenge, Part 5: Presenting Garden Beds	Garden Planning and Maintenance **(GPM)**	**GPM.6.1** Understand and apply basic garden math skills to the design of a garden. **BP.6.1** Compare and contrast a home garden to a school garden. **GFS.6.1** Identify and create attraction strategies for beneficial insects in the home or school garden.	Have each student team present the garden design created and planted in **Lessons #7 - #10** to the class, including information on why they chose various plants; the nutritional and culinary benefits of their planting choices; how they decided upon the spacing they used; how they are attracting beneficial insects; and the like. Have class discuss ideas from these gardens that could be relevant and useful in home gardens as well. 	**PLS.5** Students develop the ability to make informed and responsible decisions.	After each garden bed presentation, have entire class brain-storm dishes students could make, and discuss the nutritional benefits they could gain from the produce in that garden bed.	**Classroom:** Create a table to compare prices of materials from different local retailers.	**NGSS.6.LS2.A** Interdependent Relationships in Ecosystems. **Social Studies:** Economics.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Garden Design Challenge, Part 6: Adding Compost	Garden Planning and Maintenance **(GPM)**	**GPM.6.2** Demonstrate understanding of compost and/or vermi-culture system.	Explain all of the garden beds created by the various teams will need a regular supply of nutrients. Ask students to explain how they can get this from compost. Have students discuss and determine together what type of compost system to create for the garden beds they designed. Then have them elaborate, building the compost system together and making a plan for incorporating finished compost regularly into the new beds. If you already have active compost systems in your garden, students can add a new system or simply make improvements upon an existing system. You can find more information with references on composting in Getting Started— Garden Best Practices.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	In the garden, have students explain and/or make visual representations to post near the compost systems showing the cycle of nutrients from food into compost, from compost into soil, from soil into plants, and from plants into our bodies.	**Cafeteria:** Collect plant-based food scraps from the cafeteria to start the compost system.	**CCSS.ELA-LITERACY.SL.6.6** Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3 for specific expectations.) **VA:Cr3.1.6a** Reflect on whether personal artwork conveys the intended meaning and revise accordingly.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 6 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Compost Caretakers	Garden Planning and Maintenance **(GPM)**	**GPM.6.2** Demonstrate understanding of compost and/or vermi-culture system.	Explain to students how to work together to maintain compost systems. Depending on what you have in your garden this might include: flipping an existing compost pile (built in **Grade 2 Lesson #3: Building Compost** and/or **Grade 6 Lesson #12: Garden Design Challenge Part 6: Adding Compost**), adding and covering food scraps in a compost pile or worm bin (built in **Grade 4 Lesson #8: Building a Worm Bin**), or building a new compost bin. Have students elaborate, working together to take care of the compost systems.	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	Use food scraps from the kitchen in compost systems in the garden.	**Classroom:** Create a "how to compost" guide for the school community. This could be a pamphlet, a video, a sign, or something else, but it must include the fundamentals of why and how we compost.	**NGSS.6.LS2.A** Interdependent Relationships in Ecosystems. **CCSS.ELA-LITERACY.SL.6.5** Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Soil Samples	Soil **(S)**	**S.6.1** Identify soil compositions.	Have students bring soil samples from their homes or neighborhoods. Explain and demonstrate how to use soil shake jars and soil test kits to identify soil composition and soil health. Have students elaborate, using shake jars to learn about soil composition. NOTE: In areas where lead in soils may be an issue, bring in safe soil for students rather than having them collect it. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	In **Kitchen Lesson #14: Breakfast Business** have students plan and then, in **Kitchen Lesson #16: Breakfast Business Implementation**, have them prepare seasonal breakfast dishes. As they sell and enjoy these dishes, have them acknowledge the connection between healthy soil, healthy crops and the food they are seeing/enjoying.	**Community:** Compare the variety of soil samples to soil samples from local organic farmers that have been building their soil composition and health for years.	**NGSS.LS2.B:** Cycle of Matter and Energy Transfer in Ecosystems. **CCSS.MATH.CONTENT.6.RP.A.3** Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Preparing a Bed for Planting	Soil **(S)**	**S.6.2** Understand how to assess and mitigate soil. **S.6.3** Build a balanced soil medium. **GTE.6.1-4** Garden Tools and Equipment	Explain strategies for improving soil quality for gardening, and have students review why this is important. Then demonstrate safe and proper use of a stirrup hoe for weeding, a four-tined cultivator and digging fork for turning soil and adding in amendments, and a rake for evening out the soil surface. Give each team of up to 8 students a plot of land not yet ready for gardening and have them use the new tools, in addition to their familiar tools, to amend and prepare the soil for planting seeds (in **Lesson #16: Teaching Each Other How to Plant Seeds**).	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	As you prepare the bed, focus students' attention on the crops they'll be planting there, and the dishes they'll be able to create with those crops.	**Classroom:** Research primitive tools and tools from around the world for weeding, cultivating, raking, etc. Describe them using knowledge of simple machines and natural resources.	**NGSS.6.LS2.B** Cycle of Matter and Energy Transfer in Ecosystems.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Teaching Each Other How to Plant Seeds 	Plants **(P)**	**P.6.1** Interpret directions on seed packets.	Engage students by providing each team of up to 8 (same teams as in **Lesson #15: Preparing a Bed for Planting**) seed packets for a seasonal plant. Make sure the plant can be sown directly from seed, such as beans, carrots, beets, or sunflowers. Have each team explore their packets preparing to explain to the other students in the class how to plant them into the bed they prepared in **Lesson #15: Preparing a Bed for Planting**. Then rotate through the planting areas. At each bed or area, have representatives from one team demonstrate how to plant the seeds, and then have students work together to plant them before moving on to the next bed. Have students note on the classwide calendar together what was planted on today's date. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	Plant crops that will be useful in the fall of Grade 7, such as herbs, to include in **Grade 7 Kitchen Lesson #2: Making Preserves**.	**Community:** Organize a garden workday at another community garden or at another school garden to teach a group of volunteers (or students) to plant in the same way.	**NGSS.6.LS2.A** Interdependent Relationships in Ecosystems. **CCSS.ELA-LITERACY.SL.6.6** Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Seasonal Patterns in the Garden	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.6.2** Compare and contrast your climate and a climate in a different geographic location in terms of growing food. **WSCG.6.3** Describe the impact of seasonal weather patterns on edible gardens.	Refer back to classwide garden calendar created in the fall. Engage students, having them match each crop to its edible plant part(s) (i.e. carrot=root). Have students explore, looking for patterns of what is planted and harvested in each season. Explain how these patterns influence farmers, chefs, and consumers. Then assign each student team a region of the world. Have them elaborate on this idea, researching the climate and seasonal growing options there and present to their classmates on how this region differs from their own region. 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	As part of this project, have student teams research traditional dishes from the region they are assigned.	**Community:** Interview local chefs on how the patterns of what is planted and harvested influence them throughout the year.	**Social Studies:** Geography. **CCSS.ELA-LITERACY.RI.6.7** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Connecting Climate to Crops to Traditional Foods Around the World	Garden and Food Systems **(GFS)**	**GFS.6.3** Compare and contrast your geographic location to various locations around the world and understand how seasonality influences foods in other cultures.	Have students share the regions of the world they researched in **Lesson #17: Seasonal Patterns in the Garden**. Then have students research and add traditional dishes from that region to the map and discuss the connection between traditional dishes, available crops, and geography and climate (for example, sushi being a traditional dish in Japan which is surrounded on all sides by oceans and has a good climate and geography for growing rice). 	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Make sure students are researching regions that they will be representing with dishes in **Kitchen Lesson #18: Cook for the Feast Around the World**.	**Community:** Interview members of the community that have moved to the region from another place. Discuss the dishes and ideas they brought with them to their new geography, climate, and crops.	**Social Studies:** Geography. **CCSS.ELA-LITERACY.RI.6.7** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.	

GRADE 7 | *Garden*

SCOPE & SEQUENCE

GRADE 7 STANDARDS

At the end of Grade 7, students will be able to:

- Demonstrate knowledge of microclimates and seasonal planting.
- Demonstrate increased understanding of basic business skills to create a budget with income and expenses.
- Demonstrate knowledge of various soils types and soil composition.
- Demonstrate increased knowledge of photosynthesis.
- Demonstrate understanding of the relationship between producers and consumers in the garden food system.
- Evaluate the interdependence of organisms in the garden environment.

GRADE 7 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(PLS and CLS)**		Have students share their names. Explore Garden Agreements established in **Grade 6 Lesson #1: Welcome to the Garden** together and ask if anyone would like to suggest any updates. Review Personal and Community Life Skills. Then have students elaborate, practicing these agreements as they look around the garden using a leaf scavenger hunt (for example, find the largest leaf; the darkest green leaf; a fuzzy leaf; a leaf that is not green; etc).	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Compare agreements from **Kitchen Lesson #1: Welcome to the Kitchen** with the garden agreements.	**Classroom:** Write a poem comparing the uniqueness of leaves on the school campus to the uniqueness of students in the school community.	**NGSS.7.LS1.A** Structure and Function. **CCSS.ELA-LITERACY.SL.7.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Discovering Microclimates and Testing Soils	Soil **(S)**	**S.7.1** Identify soil compositions in the school environment. **S.7.2** Recognize and classify various soil types. **WSCG.7.1** Understand and identify microclimates around your school, what foods grow best in each one, and why. **GTE.7.1-5** Garden Tools and Equipment	Review how to use shake jars, soil test kits, and air thermometers. Explain how to use a soil thermometer. Then have student teams explore soil, collecting soil samples and soil and air temperatures from various areas around the school. Help them use shake jars and soil test kits to identify soil composition, type, and health. Read soil and air thermometers to record temperatures. Hand out garden journals, and have students record comparisons between different locations on the grounds. Explain the concept of microclimates.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	In **Kitchen Lesson #2: Making Preserves**, discuss "microclimates" in the kitchen, including the refrigerator, freezer, oven, etc. Explain how canning is a process of making a microclimate that is inhospitable for bacteria and microbes.	**Community:** Visit a local farmer to discuss microclimates that exist on their farm land and how they make decisions based around them.	**NGSS.7.LS2.B** Cycle of Matter and Energy Transfer in Ecosystems. **CCSS.MATH.CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Micro-climates	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.7.1** Understand and identify microclimates around your school, what foods grow best in each one, and why. **GTE.7.1-5** Garden Tools and Equipment	Have student teams elaborate on their understanding of microclimates from **Lesson #2: Discovering Microclimates and Testing Soils** by reading seed packets and planting guides, and then selecting a crop to plant in a particular microclimate in the school garden (for example, bush beans against a sunny, hot wall or lettuce in a more shaded area). Then have them prepare the area for planting, including amending the soil.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Work with the kitchen educator to identify crops you will be using this year that can be planted in various microclimates around the school.	**Classroom:** Create a sun map showing where the shadow hits the school grounds at multiple times during the day in that season to inform decision making.	**NGSS.7.LS2.A** Interdependent Relationships in Ecosystems **CCSS.ELA-LITERACY.RI.7.1** Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Planting in Micro-climates	Garden and Food Systems **(GFS)**	**GFS.7.3** Describe the relationship between producers and consumers in the human world. **WSCG.7.1** Understand and identify microclimates around your school, what foods grow best in each one, and why. **GTE.7.1-5** Garden Tools and Equipment	Have students explain why plants are essential to our survival (they can make food, we can't!). Then have student teams plant the crops they selected in **Lesson #3: Microclimates,** and make plans to care for them.	**CLS.2** Students cooperate and communicate well with each other.	In the kitchen, harvest, cook, and enjoy the crops you planted throughout the year.	**Classroom:** Create an interactive, rhythmic play or rhyme for elementary students that tracks all levels of the food chain back to plants using a song like "Green Grass Grows All Around" as a model.	**NGSS.7.LS2.A** Interdependent Relationships in Ecosystems. **CCSS.ELA-LITERACY.W.7.2** Write informative/ explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Photo-synthesis, Part 1	Plants **(P)**	**P.7.2** Explain photosynthesis.	Have students explore plant material, such as a heavy log, and discuss their ideas about where plant matter comes from. Then, have them observe the chemical reaction described in Life Lab's "Photosythesis Revealed" lesson to allow them to see evidence of carbon being released by our breath (the chemical will change colors). Hand out journals and have students draw the test tubes, and use arrows and labels to show what happened and why they think it happened. Then explain that you are going to put an aquatic plant in one of the tubes. Have students record predictions of what impact they think the plant will have on the chemical and why. 	**PLS.6** Students actively seek creative and resourceful solutions.	In **Kitchen Lesson #5: Seared Pork Chops with Hoisin BBQ Sauce and Pineapple Asian Slaw**, highlight that when we eat cabbage we are eating leaves, or the parts of the plants that gather sunlight for photosynthesis to occur.	**Classroom:** Create a stop motion video with paper cutouts to show where plant matter comes from.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence. **CCSS.ELA-LITERACY.SL.7.1.C** Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Photo-synthesis, Part 2	Plants **(P)**	**P.7.2** Explain photosynthesis.	Have students revisit the chemical reaction from **Lesson #5: Photosynthesis, Part 1** to observe changes since the plant has been added to the bottle. Give teams 6 cards that say "Carbon," 12 that say "Hydrogen," and 6 that say "Oxygen." Explain and demonstrate how to arrange them into carbon dioxide molecules (2 Carbons, 1 Oxygen) and water molecules (2 Hydrogen, 1 Oxygen). Explain that these represent the carbon dioxide in the air and water in the soil. Now have them rearrange them into C6H12O6 and explain that this represents a carbohydrate, or sugar. This is what plants do! They make food out of thin air! Have students revisit their original conceptions from **Lesson #5: Photosynthesis, Part 1** to come up with a revised theory of where plant material comes from. 	**CLS.2** Students cooperate and communicate well with each other.	In the garden, make a salad and highlight that the leaves of the plants gather sunlight for photosynthesis to occur.	**Classroom:** Create a video of the carbon, hydrogen, and oxygen rearranging in a choreography with a popular song, modeled after "The Electric Slide." Add lyrics or a repeated phrase.	**NGSS Science and Engineering Practice:** Developing and Using Models. **CCSS.ELA-LITERACY.SL.7.1.C** Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.	

GRADE 7 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Brain-storming Products	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.7.2** Demonstrate knowledge of seasonal gardening.	Engage students by walking through the garden together. Brainstorm possible products they might harvest from their garden, prepare in the kitchen, and sell to raise funds for a gift to the garden when they are in Grade 8. Explore possible products they could make for each season, and discuss benefits of each. A few possibilities include fruit preserves, pickles, baked goods, breakfast or lunch items, and the like.	**PLS.6** Students actively seek creative and resourceful solutions.	In this garden lesson, discuss the environmental, economic and nutritional benefits of seasonal foods, and discuss how their business contributes to the local food system.	**Community:** Visit a local farmers market to explore the different products that are available in your area.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Considering Customers	Business Planning **(BP)**	**BP.7.1** Demonstrate the ability to create a food business project.	As a class, explore possible customers for the student business, such as other students, school staff, families, or farmers market customers (if they can go sell at a local farmers market). Explain how to design a survey. Help students design a survey to conduct with potential customers to help them decide what to sell, where and when to sell it, and the like. For more guidance on running a garden business with students, read *Growing Ventures* by the National Gardening Association. 	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In this garden lesson, discuss nutrient loss when foods are stored, processed, and shipped. Discuss the health benefits of local foods.	**Community:** At a local farmers market, conduct a "dot survey" displaying multiple choice questions, each on a piece of poster board. Request that customers put a sticker dot on the choice that matches their opinion most. Ask strategic questions to inform business decisions.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Planning Our Business, Part 1	Business Planning **(BP)**	**BP.7.1** Demonstrate the ability to create a food business project.	Explore together the customer survey results from **Lesson #8: Considering Customers**. Review what you have in abundance in the garden, discuss what you could plant now for a fall harvest, and decide together via discussion and vote what product(s) to sell. Start with something you can plant this spring and harvest, prepare, and start selling in the fall of Grade 8. Then have students self-select a team to work on. Each team will explore one of the 4 P's for this product: Pricing (What do similar products cost?), Production (Make a prototype), Packaging (How can we make our product visually appealing to our customers?), and Placement (Where are we most likely to reach our customers?). 	**CLS.2** Students cooperate and communicate well with each other.	In this garden lesson, review the health benefits of eating local foods, discussed in **Lesson #8: Considering Customers**. Have students discuss how they might convey these benefits to customers in the packaging and/or marketing of their product.	**Community:** Interview a food business in your community about how they make decisions based on the 4 P's.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Planning Our Business, Part 2	Business Planning **(BP)**	**BP.7.1** Demonstrate the ability to create a food business project.	Together with students, explain the benefits of running a business, including contributing to the local food system; making something healthy available to customers; raising funds to give back to the garden program; and learning business skills. Then have teams elaborate on their research, presenting their findings on the 4P's from **Lesson #9: Planning Our Business, Part 1**, give and receive feedback from the rest of the class, and finalize plans for pricing, production, packaging and placement. 	**PLS.6** Students actively seek creative and resourceful solutions.	Students will make the product for the business planned here in **Grade 8 Kitchen Lesson #2: Preparing the Product for Our Business**.	**Community:** Visit a local art critique at a university or museum noticing how constructive criticism can be given to improve a current work.	**Social Studies:** Economics. **CCSS.ELA-LITERACY.SL.7.4** Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Planting Fruit Trees	Gardening Tools and Equipment **(GTE)**	**GTE.7.1-5** Garden Tools and Equipment	Have students explore local fruit, consulting with a local gardening guide, horticulturalist, or orchardist about when to plant fruit trees in your region, and which varieties will do the best. Explain and demonstrate how to plant a fruit tree and then work together with your students to plant a stone fruit (plum, peach, etc) or a pome fruit (apple, pear, etc) tree. 	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	Harvest fruit and incorporate it into dishes in the kitchen throughout the year.	**Classroom:** Research the work of Johnny Appleseed, using many different sources to compare facts and accounts.	**NGSS.7.LS2.A** Interdependent Relationships in Ecosystems. **CCSS.ELA-LITERACY.SL.7.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Grafting	Plants **(P)**	**P.7.1** Describe and perform grafting, slips, and cutting propagation methods. **GTE.7.1-5** Garden Tools and Equipment	Demonstrate, or invite an orchardist to demonstrate, how to graft fruit stock onto root stock on a fruit tree. Demonstrate knife safety and discuss how this is both similar and different from using knives in the kitchen. Then have students do practice cuts on sticks (but not on the tree itself). 	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	Have students incorporate these fruits into dishes they plan in the dinner menus they make in **Grade 8 Kitchen Lesson #1: Welcome to the Kitchen!**	**Community:** Teach elementary school students how to graft fruit stock onto root stock on a fruit tree. Practice clear communication and appropriate vocabulary to clear up any misconceptions students may have.	**NGSS.7.LS2.A** Interdependent Relationships in Ecosystems. **CCSS.ELA-LITERACY.SL.7.1.A** Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.	

GRADE 7 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Crop Planning for the Business	Business Planning **(BP)**	**BP.7.2** Create a garden planting list. **GPM.7.1** Understand and apply basic garden math skills to the design and planning of school/ community gardens.	As a class, have students explore what type of crop, and the quantity they will need, to plant in the spring in order to have enough produce for their food business that begins in the fall of Grade 8 (for example, berries for berry jam). Then have students measure and map an area in the school garden where they can grow all of the produce needed for their business.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Students will make the product for the business planned here in **Grade 8 Kitchen Lesson #2: Preparing the Product for Our Business**.	**Community:** Interview local food businesses about how they make decisions on where they source produce or the experience of growing it themselves.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Planting for Our Business	Garden Planning and Maintenance **(GPM)**	**GPM.7.1** Understand and apply basic garden math skills to the design and planning of school/ community gardens. **BP.7.1** Demonstrate the ability to create a food business project. **GTE.7.1-5** Garden Tools and Equipment	Review safe tool use and the importance of following best practices for harvesting and handling food from the garden. Have students elaborate on their garden skills to date by working together to prepare the bed(s) where they will plant produce for their business. Then have them use spacing information from a seed packet, transplant label, or planting guide to map out where in the bed they will plant each plant. Have them measure with rulers, and mark each planting area with a hand trowel, chopstick, or the like. Once spacing looks good, have students transplant plants into each spot and water them in.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Students will make the product for the business planned here in **Grade 8 Kitchen Lesson #2: Preparing the Product for Our Business**.	**Community:** Visit a local community garden or school garden to lead a planting. Use information from seed packets to guide decisions.	**CCSS.MATH. CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers. **NGSS.7.LS2.A** Interdependent Relationships in Ecosystems.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Managing Insects	Garden and Food Systems **(GFS)**	**GFS.7.1** Identify beneficial and non-beneficial insects in the soil and garden environments and create management strategies. **P.7.1** Describe and perform grafting, slips, and cutting propagation methods. **GTE.7.1-5** Garden Tools and Equipment	Have students recall the role of beneficial insects in a garden ecosystem and methods of attracting them. If no one mentions it, explain to students that planting perennials is an effective way to attract more beneficial insects who, in turn, will reduce the population of non-beneficial insects. Demonstrate how to take a cutting from a perennial plant such as a Salvia and place it in water to propagate. Have each student elaborate, taking two cuttings to propagate.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	As you build a habitat for beneficial insects, have students make signs explaining how these insects help us grow produce for our kitchen.	**Community:** Create an infographic or chart showing photos or scientific drawings of insects categorizing them as beneficial or harmful. Distribute at a local library or community organization.	**NGSS.7.LS4.D** Biodiversity and Humans. **CCSS.ELA-LITERACY.RI.7.2** Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Business Income and Expenses 	Business Planning **(BP)**	**BP.7.3** Create basic income/expense model.	Engage students by revisiting the business plans they created in **Lesson #9: Planning Our Business, Part 1**. Then, have students explore their planting list and other projected purchases (such as mason jars or art supplies) to tally expenses for their business. Explain to students how to use their suggested product price to determine how much they would have to sell to break even; to make a profit; etc. Elaborate by discussing feasibility of selling that number and adjust plans accordingly. 	**PLS.5** Students develop the ability to make informed and responsible decisions.	Students will make the product for the business planned here in **Grade 8 Kitchen Lesson #2: Preparing the Product for Our Business**.	**Community:** Interview value-added product vendors about the decisions they have made to lower their expenses so their business can be more profitable.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Interde-pendence	Garden and Food Systems **(GFS)**	**GFS.7.2** Evaluate the in-terdependence of organisms in the garden environment.	Explore interdependence by having students plant 3 crops that intercrop well together, such as the 3 Sisters: corn, beans and squash. Explain how each crop supports the others (i.e. beans fix nitrogen for corn and squash, corn provides climbing structure for beans, etc). Share the history of the 3 Sisters Garden. Have students elaborate by representing intercrop visually, such as by creating a labeled diagram illustrating the interdependence between each crop. Note: For a crop that you can harvest in the fall after summer vacation, plant popcorn, winter squash, and dry beans.	**PLS.6** Students actively seek creative and resourceful solutions.	In this lesson, have students add the kitchen to their diagrams and draw and label arrows connecting it with the garden ecosystem (i.e. produce into kitchen, compost from kitchen to garden, etc). If you planted the 3 Sisters, describe the unique nutritional benefits of the 3 Sisters: Carbohydrates in corn; Proteins in beans; and vitamins and minerals in squash. Then cook the beans in **Grade 8 Kitchen Lesson #6: Cooking Beans**.	**Community:** With the help of a local artist, turn this concept into a mural that can be painted in the community.	**NGSS.7.LS2.A** Interdependent Relationships in Ecosystems **VA:Cr2.3.7a** Apply visual organizational strategies to design and produce a work of art, design, or media that clearly communicates information or ideas. **Social Studies:** Native American Culture and History.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Cuttings and Slips	Plants **(P)**	**P.7.1** Describe and perform grafting, slips, and cutting propagation methods. **GTE.7.1-5** Garden Tools and Equipment	Review safe tool use. Divide class into 2 groups. Have each group elaborate on their garden learning to date by spending about 20 minutes at each of the following stations: • Planting perennials propogated in **Lesson #15: Managing Insects** (once roots are about ¾" long, cuttings are ready to be planted. If perennials are not ready, make this station about bringing the cuttings home and writing directions for how to plant them at home.) • Start sweet potato slips to take home and observe over time.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	In the kitchen, have students discuss the propagation methods used for any of the ingredients they use in their dishes for the Feast Around the World.	**BAM Box!:** Have students prepare sweet potato slips to take home, grow out, and document over time in their journals. If you live where sweet potatoes grow, they can return these to the garden when they're ready to plant out.	**NGSS.7.LS2.A** Interdependent Relationships in Ecosystems. **CCSS.ELA-LITERACY.SL.7.1.C** Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.	

GRADE 8 | *Garden*

SCOPE & SEQUENCE

GRADE 8 STANDARDS

At the end of Grade 8, students will be able to:

- Demonstrate mastery of garden planning and maintenance, seasonal planting, post-harvest techniques, basic business skills, and plant identification.
- Demonstrate ability to resolve watering, weeding, harvest, and distribution challenges that exist in a garden.
- Demonstrate knowledge of and explain the proportional relationship of soil components.
- Demonstrate understanding of weather, seasonality, and succession planting.
- Demonstrate ability to analyze differences between locally grown and imported food.
- Demonstrate knowledge of urban garden design.

GRADE 8 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
START THE YEAR *Schoolwide Garden Work Party with Families/Local Community*								
1. Welcome to the Garden!	Personal and Community Life Skills **(PLS and CLS)**	**GFS.8.1** Understand physical changes in the garden environment.	Have students share their names. Explore Garden Agreements established in **Grade 7 Lesson #1: Welcome to the Garden!** together and ask if anyone would like to suggest any updates. Review Personal and Community Life Skills. Then have students elaborate, practicing these agreements as they walk through the garden reviewing the plans they made last year for a food business, and checking on the crops they planted in **Grade 7 Lesson #14: Planting for Our Business**.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Students will make the product for the business planned here in **Kitchen Lesson #2: Preparing the Product for Our Business**.	**Classroom:** Illustrate the life cycle of the plants that you have seen in the garden so far (include dates).	**Social Studies:** Economics. **NGSS.7.LS1.B** Growth and Development of Organisms.	
2. Harvesting for Our Business	Business Planning **(BP)**	**BP.8.1** Demonstrate the ability to run a food business project. **GTE.8.1-3** Garden Tools and Equipment	Review safe tool use and proper harvesting and handling techniques and why these are so important. Have students calculate the amount of produce they need in order to make their first batch of the product for their food business. Then harvest produce for the business project and bring to the kitchen to store for use in **Kitchen Lesson #2: Preparing the Product for Our Business**.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Students will make the product for the business planned here in **Kitchen Lesson #2: Preparing the Product for Our Business**.	**Community:** Interview local chefs on how they calculate how much produce they'll need for their menu each day.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.8.EE.C.8.C** Solve real-world and mathematical problems leading to two linear equations in two variables.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Community Support for Our Business	Garden Planning and Maintenance **(GPM)**	**GPM.8.1** Identify and utilize community resources available to support business project.	Have students brainstorm, exploring all the possible ways the community could support their project, such as through donations of goods or services; promoting the business; and the like. Have students explore the pros and cons of each strategy, and then select a few strategies to pursue as a team. Hand out journals that students will use to reflect at the end of each lesson. Have students elaborate, recording 3 action steps for inviting community involvement in their business project. 	**PLS.6** Students actively seek creative and resourceful solutions.	In their outreach to community members, have students highlight skills they have learned in the garden or the kitchen to explain the value of the program to potential supporters.	**BAM! Box:** Have students survey family or community members about their business plan to gather feedback on the concept, pricing, packaging, etc., before launching.	**Social Studies:** Economics. **CCSS.ELA-LITERACY.W.8.4** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Promoting Our Business	Business Planning **(BP)**	**BP.8.1** Demonstrate the ability to run a food business project. **BP.8.3** Create a marketing, outreach, communications plan for project.	Have student teams work together to promote their product. Have them explore through discussion how to attract customers attention; how to convince customers to purchase; how to convey the nutritional benefits of the product; how to distinguish the product from others; and the like. Have students elaborate by using these ideas to create an advertisement for their product, either on paper or online. 	**CLS.2** Students cooperate and communicate well with each other.	In their marketing materials, highlight both kitchen and garden connections, with phrases such as "Featuring tomatoes grown in the Middle School Garden and prepared in small batches by Grade 8 Students at Mesa Middle School."	**Community:** Explore other advertisements for food products in your community. Discuss what elements make them effective or ineffective for your audience.	**Social Studies:** Economics.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Launching Our Business	Business Planning **(BP)**	**BP.8.1** Demonstrate the ability to run a food business project.	Have each student choose a department for which they will share in the responsibilities, such as packaging, delivery, marketing, sales, etc. Then have them work together to elaborate on their learning by launching the project, for example by hosting a farm stand in the school garden or selling preserves at pick up time. Ensure they track records of expenses and profit each time they make and sell their product. 	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	As students launch their business, reflect together on how the kitchen and the garden are interdependent, and both were essential to make this business happen.	**Community:** Interview people in the community that work in these lines of production (packaging, delivery, marketing, sales) preferably in a food business. Ask them for their top three best practices that you should consider in your work.	**Social Studies:** Economics. **NGSS Science and Engineering Practice:** Developing and Using Models.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Life Cycle of a Plant	Plants **(P)**	**P.8.1** Identify and describe structure and function of edible plants. **P.8.2** Identify and describe full cycle of a diversity of plants in the garden.	Have students elaborate on their learning about life cycles in plants by tracing the entire cycle of the life of a plant they featured in their product. Have them create posters depicting the life cycle from seed to plant to seed, with scientific illustrations of each phase. Have them label each plant part in their illustration, showing how it grows and changes over time. Alternatively, have students take photos of their plants throughout their life cycles and then use these photos to tell a story of the plant from seed to plant to seed again. 	**PLS.6** Students actively seek creative and resourceful solutions.	In the garden, have students identify and enjoy edible seeds, sprouts, full grown plants, and flowers. Work with them to connect these edible foods to the life cycle of the plant itself.	**Classroom:** Write and illustrate a narrative story of your plant growing up with your plant as the main character, to read to students at the elementary school.	**NGSS.7.LS1.B** Growth and Development of Organisms. **VA:Cr2.3.8a** Select, organize and design images and words to make visually clear and compelling presentations.	

GRADE 8 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Making Six Plant Part Snacks	Plants **(P)**	**P.8.1** Identify and describe structure and function of edible plants.	Engage students by having them review in pairs what they know about the 6 plant structures (roots, stems, leaves, flowers, fruits, and seeds). Have students review safe food harvesting and handling practices. Then elaborate by challenging them, in teams, to harvest, design, and prepare simple snacks including each of the plant parts. Explain that they might make a salad, a wrap (using a lettuce leaf), a kabob, or the like. You can provide a dressing or dip, although it's not necessary. Have students make enough for the class to taste. Then rotate through, having students present and then taste each snack item. This can be a competition, with each student voting for their favorite snack (not made by their team).	**PLS.6** Students actively seek creative and resourceful solutions.	Ask students to describe the flavors and textures of their snacks using Culinary Flavor and Texture concepts and terms learned in their tasting activities in the kitchen lessons (sour, sweet, salty, bitter, crunchy, mealy, etc.)	**Classroom:** Have students compare the structures of plants to those of the human body. How are they similar? (Sample answer: We have have bones to hold us upright, and plants have stems to hold them upright). How are they different? (Sample answer: Plants have leaves that photosynthesize to create food; we have mouths to eat food from plants and animals, because we can't photosynthesize to produce our own food).	**NGSS Crosscutting Concept:** Structure and Function.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Improving the Business	Business Planning **(BP)**	**BP.8.1** Demonstrate the ability to run a food business project. **BP.8.2** Understand Profit/Loss for project.	Look at records of expenses and sales for business project together, and discuss why record keeping and analysis is important to business. Compare with projections from Grade 7. Challenge students to make explanations for discrepancies. To elaborate, have them brainstorm how to improve the business and maximize profit, for example by expanding the customer base, securing more donations, tweaking the recipe for the product, etc. 	**PLS.5** Students develop the ability to make informed and responsible decisions.	In this garden lesson, discuss expenses in both the garden and the kitchen for this project. Compare time spent growing the produce with preparing it. Discuss the role of farmers and chefs in preparing a product for market.	**Community:** Ask local farmers how they determine their expenses —how do they account for their time, energy, and natural resources. Further, ask what options they have for increasing their income (markets, restaurants, wholesale, etc).	**Social Studies:** Economics. **CCSS.MATH. CONTENT.8.EE.C.8.C** Solve real-world and mathematical problems leading to two linear equations in two variables.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Garden Caretaker Station Rotation	Garden Planning and Maintenance **(GPM)**	**GPM.8.2** Resolve watering, weeding, harvest and distribution challenges that exist in a garden. **S.8.1** Describe soil components and explain the proportional relationships. **GTE.8.1-3** Garden Tools and Equipment	Have students elaborate on their garden and business learning by dividing into teams to implement next steps to keep their garden growing and business going. For example they may choose to prune back berries, test and amend soil, order new seeds, or the like.	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	In this garden lesson, discuss how to modify the business from what they launched in the fall to reflect produce that is in season now, and/or will be in season in the spring.	**Community:** Recruit members of the community to assist with next steps.	**Social Studies:** Economics. **NGSS.8.LS1.B** Growth and Development of Organisms.	
10. Year Round Garden Planning	Weather and Seasons, Climate and Geography **(WSCG)**	**WSCG.8.1** Utilize knowledge of weather and seasonal changes to create a 12 month planting calendar.	Provide student teams with blank calendars and guide them in elaborating on what they have learned over their years in the garden and kitchen to make a plan for what to plant and harvest in each month or season throughout the year.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In this garden lesson, make connections between the year round garden calendar they made and the seasonal menu they designed in **Kitchen Lesson #10: My Food Cart, Part 3**.	**Cafeteria:** Present calendar to the cafeteria staff and explore options to taste test harvested produce in the cafeteria each month.	**NGSS.8.LS1.B** Growth and Development of Organisms. **VA:Cr2.3.8a** Select, organize, and design images and words to make visually clear and compelling presentations.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Observing Plant Life Cycles	Plants **(P)**	**P.8.2** Identify and describe full cycle of a diversity of plants in the garden.	Have pairs of students each select a plant. Have them explore its growth, tracking the development of that plant over time in their journals. For this first time, have them draw a scientific illustration of the plant, including the date. Have them label each structure present, and record 3 predictions about how it will look different in a month.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	In the garden, have students identify and prepare a snack that incorporates plants at different stages of their life cycles, such as a salad with seeds and sprouts.	**Community:** Have students look for and illustrate or photograph plants at different stages of their life cycles (seeds, sprouts, dead leaves, etc).	**Social Studies:** Economics. **CCSS.MATH. CONTENT.8.EE.C.8.C** Solve real-world and mathematical problems leading to two linear equations in two variables.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Local versus Imported Foods 	Garden and Food Systems **(GFS)**	**GFS.8.3** Describe and characterize the differences between foods grown locally and those imported from other parts of the United States and the world.	Engage students by introducing different journeys foods can take to get to the plate. Explore and explain the differences together by researching the differences in appearance, freshness, nutrition, and the environmental impact between foods grown locally and those imported from other parts of the United States and the world. Then elaborate on the ideas researched by conducting a comparative taste test between a food grown locally; another sample of the same crop imported from another part of the United States; and a third sample imported from another country. 	**PLS.5** Students develop the ability to make informed and responsible decisions.	As students prepare foods in the kitchen, have them identify which ingredients are local and which are imported.	**Community:** Interview farmers market customers about why they choose to buy locally.	**Social Studies:** Economics.	**National Health Education Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health.

GRADE 8 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Planning Our Gift to the Garden	Garden and Food Systems **(GFS)**	**GFS.8.1** Understand physical changes in the garden environment.	Each class in Grade 8 will decide upon and install a parting gift to the garden. They will use profit generated from their student-run business to purchase materials for the gift. Have students explore options, such as a bean teepee, a shaded gathering area, or a worm bin. If necessary have students assess the soil in the areas they are considering. Explain how to assess the physical impact of their installation (shade it may cast; impacts on drainage, etc.) Then have students elaborate, assessing these elements for various potential gifts to the garden.	**PLS.6** Students actively seek creative and resourceful solutions.	For each proposed gift to the garden, discuss not only benefits in the garden, but also benefits in the kitchen (i.e. a bean teepee will provide a good source of beans for when the students study proteins).	**Classroom:** Practice engineering and design skills by drafting models of potential gifts and where they will exist in the garden space.	**VA:Cr2.1.8a** Demonstrate willingness to experiment, innovate, and take risks to pursue ideas, forms, and meanings that emerge in the process of artmaking or designing. **CCSS.MATH. CONTENT.8.EE.C.8.C** Solve real-world and mathematical problems leading to two linear equations in two variables.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Our Gift to the Garden	Garden and Food Systems **(GFS)**	**GFS.8.1** Understand physical changes in the garden environment. **S.8.1** Describe soil components and explain the proportional relationships.	Have student teams share the ideas they generated in **Lesson #13: Planning Our Gift to the Garden**. Have them elaborate on their learning by discussing pros and cons of each one. Then have them vote to identify the best gift to the garden and a good location for it. 	**PLS.6** Students actively seek creative and resourceful solutions.	The funds used to purchase this gift were generated by students by selling a product they made in **Kitchen Lesson #2: Preparing the Product for Our Business**.	**Classroom:** Collect data on votes from each Grade 8 class to combine into a bar graph to show the overall vote.	**CCSS.ELA-LITERACY.SL.8.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly. **CCSS.MATH.CONTENT.8.EE.C.8.C** Solve real-world and mathematical problems leading to two linear equations in two variables.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Garden Caretaker Station Rotation	Garden Planning and Maintenance **(GPM)**	**GPM.8.2** Resolve watering, weeding, harvest and distribution challenges that exist in a garden.	Divide into 3 teams. Have each team elaborate on their garden learning to date by doing each of the following for 10-15 minutes and then rotate: • Put down mulch or another form of weed prevention. • Check the plants to determine what is ready for a succession planting and plant that. • Work together to identify other garden needs, such as crops that need to be covered to protect from pests, fences or irrigation that need mending, etc.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	As students complete garden tasks, reflect on how this caretaking supports the kitchen and their garden/ kitchen business.	**Community:** Offer to visit a local community garden to implement the same tasks for their garden.	**NGSS.8.LS2.A** Interdependent Relationships in Ecosystems. **CCSS.ELA-LITERACY.SL.8.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Installing Our Gift to the Garden	Garden and Food Systems **(GFS)**	**GFS.8.1** Understand physical changes in the garden environment. **GTE.8.1-3** Garden Tools and Equipment	Review safe and proper use of any relevant tools and demonstrate use of any new tools. Then have them elaborate upon their learning by building and installing the garden gift together. You can convert measurements into metric units to reinforce metric conversions they did in **Kitchen Lesson #16: Egg Drop Soup**. If there's time, work with your students to prepare to present their garden gift to younger grades in **Lesson #17: Presenting Our Gift to the Garden**.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Have students discuss how their work in the kitchen (making the product to sell in their food business) allowed them to generate the funds for this garden gift. Using this as a jumping off point, brainstorm all the ways the garden and kitchen activities support one another.	**Community:** Invite community volunteers in to help build and install the garden gift, if relevant. **Classroom:** Take photos of the building process, and then have students create a book to accompany the gift with photos and a description of their garden gift, the intentions behind it, and the process of building and installing it.	**CCSS.ELA-LITERACY.SL.8.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly. **VA:Cr1.1.8a** Document early stages of the creative process visually and/or verbally in traditional or new media.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Kitchen Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Presenting Our Gift to the Garden	Garden and Food Systems **(GFS)**	**GFS.8.1** Understand physical changes in the garden environment.	Invite younger classes to the garden and have the Grade 8 class elaborate upon their learning by presenting their gift, explaining why they chose it, how it changes the garden landscape, and how they suggest it be cared for over time.	**CLS.2** Students cooperate and communicate well with each other.	In presenting the garden gift to younger grades, make any relevant connections to the kitchen, such as "This is a teepee where you can grow beans to cook and use in burritos, hummus, bean salads and more!"	**Community:** Invite families and other community members in for a "ribbon-cutting" ceremony to celebrate this new addition to the garden.	**CCSS.ELA-LITERACY.SL.8.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.	
18. Garden Reflections	Community and Personal Life Skills **(CLS and PLS)**		Guide students in finding a Magic Space and reflecting on what they have learned in their garden and kitchen classes. Lead a closing circle in which each student can elaborate on their learning by sharing something they have learned that they hope to bring with them into their lives. Then ask them to share something about working together for which they are grateful.	**CLS.2** Students cooperate and communicate well with each other.	At the end of **Kitchen Lesson #18: Preparing Food for the Feast Around the World**, have students conduct a similar reflection, guiding students to consider life lessons they have learned in the kitchen.	**Classroom:** Write a letter to the rising Grade 8 class presenting the gift and reflecting on what they can look forward to next year	**NGSS.8.LS1.A** Structure and Function. **CCSS.ELA-LITERACY.SL.8.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.	

SCOPE & SEQUENCE

Kitchen

GRADE K | *Kitchen*

SCOPE & SEQUENCE

GRADE K STANDARDS

At the end of Grade K, students will be able to:

- Locate the teaching kitchen and recognize that it is a learning environment.
- Demonstrate an understanding of the five senses.
- Demonstrate knowledge of flavor and texture.
- Name and identify basic kitchen tools.
- Perform basic food preparation tasks.
- Recognize what a healthy food option is.
- Perform basic safety and sanitary practices.
- Demonstrate understanding of the basic concepts of abundance (a lot/more) and scarcity (few/less) as it relates to the kitchen.

GRADE K | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen!	Personal and Community Life Skills **(PLS and CLS)**	**FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables	**Cooking Concept Lesson:** Engage students by reading a book about fruits and vegetables and then playing a name game with each student choosing a fruit or vegetable that begins with the same letter as their name. Explore teamwork by establishing kitchen agreements together. Explain the Personal and Community Life Skills. Then explain how to wash hands well, and discuss the importance of this. Have students elaborate upon these agreements as you wash hands, and enjoy a simple snack together, such as pre-cut carrot sticks or apple slices. Demonstrate how to collect food scraps in the compost bucket, and have students compost their food scraps.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Compare group agreements for the kitchen with agreements students have in the garden. How are behavior expectations similar in both places? How are they different?	**Classroom:** Compare group agreements for the kitchen with agreements students have in the classroom. How are behavior expectations similar in both places? How are they different?	**CCSS.ELA-LITERACY.SL.K.6** Speak audibly and express thoughts, feelings, and ideas clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Eat a Rainbow 	Health Concepts **(HC)**	**HC.K.2** Explain what Eat a Rainbow means.	**Cooking Concept Lesson:** Engage students by sending them on a color scavenger hunt to find all the colors of the rainbow in the kitchen. Then have them explore by sorting fruits and vegetables (or pictures of fruits and vegetables) by colors, count them, and make a collage of fresh healthy foods in the shape of a rainbow to hang on the wall. Explain the value of eating a rainbow of fruits and vegetables to support overall health. Hand out journals that students will use to reflect at the end of each lesson for the rest of the year.	**CLS.2** Students cooperate and communicate well with each other.	In **Garden Lesson #2: Rainbow Scavenger Hunt**, students look through the garden for fruits and vegetables of every color.	**Cafeteria:** Go on a rainbow scavenger hunt in the lunchroom or at the salad bar, finding fruits and vegetables of every color.	**CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent **CCSS.MATH.CONTENT.K.MD.B.3** Classify objects into given categories; count the number of objects in each category and sort the categories by count.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Yummy Wake-Up Smoothies	Health Concepts **(HC)**	**HC.K.2** Explain what Eat a Rainbow means. **FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **KTE.K.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review importance of eating a rainbow of fruits and vegetables. Demonstrate how to use a blender/Vitamix. Then help students prepare **Yummy Wake-Up Smoothie, *There's a Chef in My Soup!*** (with adult support using the blender). As students add ingredients, note the colors of each.	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	Add garden-fresh fruits to your smoothie. Garnish with mint or other garden-fresh herbs. As students enjoy, trace ingredients back to their source. Bring compost out to the garden.	**Classroom:** Read aloud *Rainbow Stew* by Cathryn Falwell or *Planting a Rainbow* by Lois Ehlert. **BAM! Box:** Together with your caregivers, make a rainbow smoothie or other dish that has at least 3 colors of the rainbow in fruits and vegetables.	**CCSS.ELA-LITERACY.L.K.5** With guidance and support from adults, explore word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.K.5.C** Identify real-life connections between words and their use (e.g., note places at school that are colorful).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. 5 Senses Tasting	Culinary Flavors and Textures **(CFT)**	**CFT.K.1** Name the five senses. **CFT.K.2** Identify a variety of tastes and textures.	**Cooking Concept Lesson:** Conduct a 5 Senses Tasting. Harvest something from abundance in the garden, such as apples, cherry tomatoes or herbs. Teach how to wash produce using a colander, and then have students wash produce. Cut the produce into bite-size pieces for students, if necessary. Guide students through a sensory exploration of the food. Starting with their eyes closed, have them feel the food and describe its texture; smell and describe its scent. Then have them open their eyes to look at the food and describe its appearance. Next, have them take a bite and listen to the sound it makes. Finally, have them taste the food and describe the taste. Record the adjectives as students share them out. Finally, have students write simple poems using the name of the food and 5 sensory words to describe it.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use produce from the garden. As students enjoy, trace ingredients back to their source. Bring compost out to the garden.	**Classroom:** As a class, count the number of adjectives students used to describe the food.	**CCSS.ELA-LITERACY.SL.K.6** Speak audibly and express thoughts, feelings, and ideas clearly. **CCSS.ELA-LITERACY.L.K.5.C** Identify real-life connections between words and their use (e.g., note places at school that are colorful).	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Edible "Compost Piles"	Food Preparation **(FP)**	**FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **HC.K.5** Make healthy food choices. **KTE.K.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review how to properly handle and wash produce. Have students harvest and wash any green vegetables needed for the lesson. Then guide students through making miniature edible "compost piles" by layering brown crackers, such as rice crackers, with dip, such as hummus, and green vegetables, such as sugar snap peas or alfalfa sprouts. Discuss how compost ties the kitchen to the garden: we can take food scraps from the kitchen and turn them into nutrient-rich fertilizer for growing new plants!	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Visit the garden compost pile to compare your edible models to the life-size version. Compost your food scraps.	**Cafeteria:** Have students identify food items in the cafeteria that can be composted in the garden.	**CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent. **NGSS.K.LS1.C** Organization for Matter and Energy Flow in Organisms (H3A) All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. My First Watermelon Granita	Recipe Concepts **(RC)**	**RC.K.1** Describe what a recipe is. **FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **CFT.K.1** Name the five senses. **CFT.K.2** Identify a variety of tastes and textures. **KTE.K.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Watermelon Math: Look with students at the recipe for **My First Watermelon Granita, *There's a Chef in My Family!***. Discuss the key elements of a recipe, including ingredient lists and preparation steps. Estimate and then measure watermelon weight. Then review how to use the blender, demonstrate how to stir using a mixing spoon in a mixing bowl, and have students prepare the granita. As you enjoy, discuss the 5 senses (how it feels, smells, tastes, etc).	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use watermelon from the garden if you have it. Garnish with mint or other garden herbs. Enjoy Granita together out in the garden. Bring compost out to the garden.	**Classroom:** More Watermelon Math: Estimate then count seeds inside a watermelon. Compare number of black and white seeds.	**CCSS.MATH.CONTENT.K.CC.C.6** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. **NGSS K.LS1.C *Organization for Matter and Energy Flow in Organisms*** All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE K | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Our Special Dishes	Recipe Concepts **(RC)**	**RC.K.2** Recognize how families share and maintain food and cultural traditions.	**Cooking Concept Lesson:** Explain the connection between recipes, culture, and traditions. Have students elaborate by drawing a dish their family eats on special occasions. Then have them share, making it exciting by announcing it ahead of time, decorating a special presenter's chair, and/or providing a snack to enjoy at the end of the share outs.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Bring students to the garden to look for crops they recognize from eating them at home.	**Community, Classroom:** Have students work with caregivers to write and bring to class a recipe for something they eat at home. Photocopy all recipes to create a class recipe book for each student.	**Social Studies:** Culture.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Sugar-and-Spice Acorn Squash 	Recipe Concepts **(RC)** Food Preparation **(FP)**	**RC.K.1** Describe what a recipe is. **FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **KTE.K.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Pre-cut acorn squash and pre-bake for 45 minutes. Look together at the recipe for **Sugar-and-Spice Acorn Squash, *There's a Chef in My Family!*,** and discuss what a recipe is and why chefs use them. Then review how to use a mixing bowl and mixing spoon. Follow the recipe, reading each step aloud and then guiding students through the process, one step at a time. While the squash is baking for the remaining 20 minutes, clean up. Remove the squash from the oven for students, serve and enjoy.	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	Harvest acorn squash from the garden, if you have it. Garnish with herbs from the garden. Bring compost out to the garden. Discuss the components of the soil that made it possible to grow the squash, such as the worms, the dead leaves, the rocks, etc.	**Community:** Prepare enough to share, and invite caregivers in to share in the acorn squash dish.	**CCSS.ELA-LITERACY.L.K.5** With guidance and support from adults, explore word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.K.5.C** Identify real-life connections between words and their use (e.g., note places at school that are colorful).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Discovering Food Groups	Health Concepts **(HC)**	**HC.K.3** Name a food group. **HC.K.4** Identify a food group in the garden.	**Cooking Concept Lesson:** Introduce the major food groups: Grains, Proteins, Fruits, Vegetables, and Dairy. Have students explore by sorting example foods (or pictures of foods) into food group categories. Have them name examples from the garden. Have students elaborate by describing their favorite meals in terms of food groups represented.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In **Garden Lesson #10: What Grows in Our Garden?**, look for food groups growing in the garden.	**Cafeteria:** Identify the food groups in a school lunch.	**CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent. **CCSS.MATH.CONTENT.K.MD.B.3** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Herbed Mediterranean Yogurt Cheese Spread	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.K.4** Identify a food group in the garden. **FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **KTE.K.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Explain why people prepare dips (to make fruits and vegetables even more delicious and to add another food group to a fruit or vegetable snack). Review how to use a mixing bowl and mixing spoon, and then help students prepare **Herbed Mediterranean Yogurt Cheese Spread,** ***There's a Chef in My World!.*** Incorporate herbs from the garden or otherwise available. As you enjoy together, reflect on food groups represented by pita, vegetables, and dip, and which ones came from the garden.	**CLS.2** Students cooperate and communicate well with each other.	Harvest vegetables from the garden and taste with the dip. Incorporate other garden herbs. Bring compost out to the garden.	**BAM! Box:** Prepare Yogurt Cheese Spread at home and enjoy with your favorite vegetable.	**CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent. **CCSS.MATH.CONTENT.K.MD.B.3** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Who Grows and Prepares our Food?	Home Economics **(HE)**	**HE.K.1** Understand and describe a variety of food related professions.	**Cooking Concept Lesson:** Engage students by reading aloud *Before We Eat: From Farm to Table* by Pat Brisson and Mary Azarian. Before you begin to read, tell students to put their hands on their head every time they hear about a new food profession. As you read, stop every time a new food profession is mentioned to have students discuss and explain what those people do to help us get our food. Next, ask students if they know anyone who does any of the things mentioned. When the book is finished, discuss our role in the food system, as consumers. Have students elaborate by drawing pictures or writing thank you letters to local farmers, bakers, or the like.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	As you harvest and/or prepare food together, discuss with your students: "How are we being farmers, bakers, chefs, etc., right now?"	**Community:** Send student drawings and letters to local farmers, chefs and the like.	**CCSS.ELA LITERACY.SL.K.4** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Straight from the Garden	Food Preparation **(FP)**	**FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **KTE.K.1-4** Kitchen Tools and Equipment **HC.K.5** Make healthy food choices.	**Cooking Lesson:** Discuss the benefits of eating local, seasonal foods (economic, flavor, environmental, etc). Select and prepare a recipe featuring ingredients grown in the school garden. In the winter, this may center around storage crops and preserved foods, such as roasted root vegetables with dried herbs. Before you eat, highlight which ingredients were grown or sourced from the school garden and/or locally; and which were grown locally in a different season and preserved or stored for later use.	**CLS.2** Students cooperate and communicate well with each other.	Visit the garden or pantry with students to count and then list produce that's in abundance (in the winter, this may center around storage crops and preserved foods). Then suggest a recipe that you've selected featuring produce you have. Look for options to garnish or substitute with abundant produce. After cooking, bring compost out to the garden.	**Classroom:** Count the types of produce you have growing in your garden in different seasons. Record each time, and then compare to find patterns of abundance and scarcity.	**CCSS.MATH. CONTENT.K.CC.B.4** Understand the relationship between numbers and quantities; connect counting to cardinality.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE K | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Mystery Produce	Culinary Flavors and Textures **(CFT)**	**CFT.K.1** Name the five senses. **CFT.K.2** Identify a variety of tastes and textures.	**Cooking Concept Lesson:** Engage students by hiding one fruit or vegetable at a time under a clean kitchen towel or in a bag. Have students feel the produce and guess what it is. Ask them to support their ideas with evidence before opening their eyes to see it. Then have them use all 5 senses to explore the food and then taste it.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Use produce from the garden. Go on a sensory scavenger hunt of the garden (see **Garden Lesson #2: Rainbow Scavenger Hunt** for ideas). Bring compost out to the garden.	**Community:** Conduct a 5 Senses Scavenger Hunt at home, giving students challenges to find things that smell sweet, look colorful, sound loud, etc.	**CCSS.ELA-LITERACY.SL.K.4** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. **NGSS Science and Engineering Practice:** Engaging in Argument from Evidence	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Fresh-and-Fruity Freeze Pops 		**FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **HC.K.5** Make healthy food choices. **CFT.K.1** Name the five senses. **CFT.K.2** Identify a variety of tastes and textures. **KTE.K.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review how to wash produce with colanders, and then help students prepare **Fresh-and-Fruity Freeze Pops, *There's a Chef in My Soup!*,** using whatever fruits you have in season. Discuss the idea of dessert as a sweet treat for special occasions, and explain why this recipe is a healthy option for a dessert. Freeze and then enjoy during your next class, or deliver to students the next day. If you have enough time, play "What do you think has more sugar?" with students by showing a series of photos that contain 2 food items at a time. Ask students to point to the one they think has the most sugar, and then reveal the answers. While enjoying popsicles, develop together a word bank of adjectives for the flavors and textures.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use produce from the garden, if possible. Bring compost out to the garden.	**Community:** Take a field trip to a local grocer or farmers market to choose local, seasonal fruits for these popsicles.	**CCSS.ELA-LITERACY.L.K.5** With guidance and support from adults, explore word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.K.5.C** Identify real-life connections between words and their use (e.g., note places at school that are colorful).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Where Does Food Come From?	Health Concepts **(HC)**	**HC.K.1.** Explain where fresh foods come from.	**Cooking Concept Lesson:** Have students explore the source of food by matching pictures of common dishes (i.e. French fries) with their sources (i.e. potatoes). Then challenge them to elaborate with more complex dishes, for example by tracing a common dish (i.e. pizza) back to its sources: plants and animals.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In **Grade 1 Garden Lesson #16: Plant a Pizza Bed**, students will plant their own Pizza Bed in the garden. If you have a Pizza Bed growing in your garden, reference it as you help students connect common dishes with their sources.	**Cafeteria:** Trace some ingredients from a school lunch back to their sources.	**NGSS.K.LS1.C** ***Organization for Matter and Energy Flow in Organisms*** All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. **CCSS.ELA-LITERACY.L.K.5.A** Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Mmmm-Hmmm Hummus	Home Economics **(HE)** Food Preparation **(FP)**	**HE.K.2** Understand abundance in terms of seasonality. **FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **KTE.K.1-4** Kitchen Tools and Equipment **HC.K.5** Make healthy food choices.	**Cooking Lesson:** Introduce hummus and vegetables as a healthy, well-rounded snack. Review how to use colanders, and then have students wash and scrub carrots, or other vegetables you'll be dipping in hummus. Have students prepare **Mmmm-Hmmm Hummus,** ***There's a Chef in My Family!,*** and serve with carrot sticks (cut by an adult), or any other vegetable that you have in abundance in the garden. As you eat, trace each ingredient back to its source. Discuss what other vegetables would be good with hummus, and how you could vary this dish by season.	**CLS.2** Students cooperate and communicate well with each other.	Use produce from the garden, if possible. Garnish hummus with fresh garden herbs. Try hummus with other produce growing in the garden. Bring compost out to the garden. Sprout garbanzo bean seeds in containers and observe their growth over time.	**Classroom:** As a class, draw a picture of each step in the journey to this dish: produce growing, being harvested, being prepared, and then being eaten.	**NGSS.K.LS1.C** ***Organization for Matter and Energy Flow in Organisms*** All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
17. Research-ing Vietnam	Recipe Concepts **(RC)**	**RC.K.2** Recognize how families share and maintain food and cultural traditions.	**Cooking Concept Lesson:** In preparation for the Feast Around the World, have students explore aspects of life in Vietnam. Have them locate Vietnam on a map, and use videos and/or leveled readers to research different aspects of life in Vietnam, including celebrations, customs, and the like. Have them elaborate by preparing to present on their country in the Feast Around the World.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the garden, plant a bed with crops that can thrive in your region that are typical in an Asian diet, such as bok choy, yardlong beans, or shiso leaf.	**Community:** Ask students if they have family members from Asia. If so, invite them in to share a favorite recipe from their region.	**Social Studies:** Diversity and Culture. **Social Studies:** Geography.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Shrimp and Veggie Summer Rolls	Recipe Concepts **(RC)**	**RC.K.2** Recognize how families share and maintain food and cultural traditions. **FP.K.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables. **KTE.K.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Explain to students that the Feast Around the World is an opportunity to experience international foods and learn about different cultures. Check for food allergies before beginning this activity. Harvest any produce you can use from the garden. Pre-soak, cook, and chop all ingredients ahead of time. With students, demonstrate how to fill a summer roll. Then have students fill and help them wrap **Shrimp and Veggie Summer Rolls,** ***There's a Chef in My World!***, and prepare them for presentation at the Feast Around the World. **Caution** NOTE: This recipe contains shellfish and should be modified for individuals with shellfish allergies. Because shellfish allergies are common, make a label to put in front of the rolls at the feast saying "Contains Shellfish".	**CLS.4.** Students appreciate and are respectful of differences and diversity in their communities.	Use produce from the garden, if possible. Garnish with cilantro, lemongrass or other Asian herbs growing in your garden. Try with other produce growing in the garden. Bring compost out to the garden.	**Community:** Invite families and community members in to enjoy this dish at the Festival Around the World.	**Social Studies:** Diversity and Culture. **Social Studies:** Geography.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Elementary School Feast Around the World!

GRADE 1 | *Kitchen*

SCOPE & SEQUENCE

GRADE 1 STANDARDS

At the end of Grade 1, students will be able to:

- Demonstrate understanding that one food item can have a variety of flavors and textures.
- Demonstrate knowledge of basic flavor sensations.
- Demonstrate understanding of basic food preparation.
- Demonstrate understanding of a recipe.
- Begin to understand abundance and seasonality.
- Demonstrate the ability to recognize and provide examples of whole foods, a balanced meal, and a healthy snack.
- Demonstrate understanding of food traditions in their community.
- Demonstrate knowledge of food related professions.

GRADE 1 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen!	Personal and Community Life Skills **(PLS and CLS)** Food Preparation **(FP)**	**FP.1.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables.	Engage students in a name game and team building exercise. Explore teamwork by establishing kitchen agreements together. Review Personal and Community Life Skills. Explain and demonstrate how to wash produce and tear herb leaves. Then have students elaborate, practicing these agreements and skills as you wash hands, prepare, and enjoy a very simple snack together, such as pre-cut carrot sticks with an herbed cream cheese dip featuring herbs from the garden.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Compare group agreements for the kitchen with agreements students have in the garden. How are behavior expectations similar in both places? How are they different?	**Classroom:** Compare group agreements for the kitchen with agreements students have in the classroom. How are behavior expectations similar in both places? How are they different?	**CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.	
2. Comparative Taste Tests	Culinary Flavors and Textures **(CFT)**	**CFT.1.1** Describe the differences between a number of same fruits or vegetables. **CFT.1.2** Name and describe taste sensations.	**Cooking Concept Lesson:** Engage students by asking them to describe their favorite foods (including the look, taste, texture, and their opinion). Then, explore 4 of the 5 main taste adjectives (sweet, bitter, sour, salty) by tasting foods that represent them. Elaborate on this understanding by conducting a comparative taste test with different varieties of the same food (such as 2 varieties of apples). Use the Food Observation Tool handout provided with the lesson plan to record their observations.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use produce from the garden, if possible. Conduct the tasting in the garden, right where the crop is growing (for example, conduct an tomato tasting near a bed of tomatoes). Bring compost out to the garden.	**Classroom:** Use the descriptive language on the Food Observation Tool to create poems or sentences describing the foods together.	**CCSS.ELA-LITERACY.L.1.5** With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.1.5.C** Identify real-life connections between words and their use (e.g., note places at home that are cozy).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Crispy-Crunchy Granola Munchies	Food Preparation **(FP)**	**KTE.1.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate how to measure with measuring cups and spoons. Then prepare **Crispy-Crunchy Granola Munchies, *There's a Chef in My Soup!*.** Emphasize that the oats, nuts, and many other ingredients are seeds. As you prepare, have students count ingredients aloud, adding whole numbers as you go. Discuss seeds as a part of a plant, and also a great source of natural energy and nutrition for us.	**CLS.1.** Students demonstrate problem solving and resolve conflict as a team.	Highlight which granola ingredients are seeds, and have students compare to the seeds they found in **Garden Lesson #2: Edible Seeds**. Discuss the seed-to-plant-to-table connection.	**Cafeteria:** Look for as many seeds as you can find in the school lunch line (remember to include bread, pasta, and other things made from flour, which comes from seeds). **BAM! Box:** Find and list 10 items in your home that contain seeds (i.e. tortillas, pasta, bread, etc).	**CCSS.MATH. CONTENT.1.OA.A.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. **NGSS.1.LS1.A** ***Structure and Function*** All organisms have external parts… Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Your Favorite Fruit Salad	Health Concepts **(HC)**	**HC.1.1** Create a healthy snack from the garden. **HC.1.2** Harvest foods from the garden for taste and nutrition with guidance. **FP.1.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables using tools and equipment **KTE.1.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate how and when to identify and harvest ripe fruit. Discuss why this is important (if we pick it when it's green, it'll be sour and then we won't get sweet fruit later!). Then, harvest fruit together and guide students to modify the fruit salad recipe by incorporating fruits from the garden or otherwise available. Cut the harvested fruit into smaller pieces for students to cook with. Demonstrate safe food handling skills and point out to students that you are using a cutting board appropriate for fruits and vegetables. Review how to use measuring cups and spoons. Then help students prepare **Your Favorite Fruit Salad, *There's a Chef in My Soup!*,** together. Have students count, measure, and add ingredients one at a time. Demonstrate how to serve using small tongs, and then have students serve themselves and enjoy.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Visit the garden with students to harvest fruits that they have growing. Look for mint or other herbs you might use as a garnish. After preparing fruit salad, bring compost out to the garden.	**Classroom:** Read aloud *End of the Rainbow Fruit Salad* by Marianne Welsh, Eluka Moore, and Larry Puzniak.	**CCSS.MATH. CONTENT.1.OA.A.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Taste Sensations	Culinary Flavors and Textures **(CFT)**	**CFT.1.2** Name and describe taste sensations.	**Cooking Concept Lesson:** Engage students in a discussion around how chefs work with flavors to create delicious meals. Have students explore flavors. Give each student a glass of water and then a pinch of sea salt to taste. After they taste, discuss the flavor. In addition to the words they share, explain that one term for this flavor is "salty" and discuss other salty foods they eat. Invite them to use the water to cleanse their palates. Then follow the same procedure with a small slice of lemon (sour); cacao nibs (bitter); and brown sugar (sweet). Use brown sugar to distinguish visually sugar from salt.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	If available in the garden, taste arugula or kale or other raw leafy greens as examples of bitter vegetables. Contrast with carrots or corn or other sweet vegetables.	**Cafeteria** Discuss flavor sensations of the school lunch.	**CCSS.ELA-LITERACY.SL.1.4** Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Salsas	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.1.1** Create a healthy snack from the garden. **KTE.1.1-4.** Kitchen Tools and Equipment	**Cooking Lesson:** Explain to students that they'll be creating and comparing different variations of a recipe today, which is something chefs do all the time. One benefit is that this allows them to modify recipes to use local, seasonal produce. Harvest all available produce for recipe with students, and chop for them. Review how to use a food processor, blender, or Vitamix. Have student teams prepare different variations of **Salsa, *There's a Chef in My Family!*.** Explain to students that salsa can be made with other fruits instead of tomatoes, such as mango, peach, or apple. Divide into teams and give each team a different fruit to use as the base for their salsa. Have them combine the pre-chopped ingredients in food processors, blenders, or Vitamixes to prepare their salsas. Once all salsas are ready, conduct a comparative tasting together. As students taste each salsa, have them describe the unique flavors. Record the answers on chart paper. Then, have teams write a few sentences about the salsa they made, using some of the adjectives that others used to describe their salsa.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use produce from the garden, if possible. Modify salsa recipe to incorporate other produce growing in the garden. Bring compost out to the garden. If space allows, in the spring, you can have students plant a salsa bed full of produce to be used for salsa.	**Community:** Ask if students have any family members who make salsa. If so, invite them in to share their recipes. **Classroom:** Make a classwide bar graph to show student salsa preferences.	**CCSS.ELA-LITERACY.SL.1.4** Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly. **CCSS.ELA-LITERACY.W.1.2** Write informative/ explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 1 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Balanced Meals	Health Concepts **(HC)**	**HC.1.3** Describe the food groups. **HC.1.4** Describe what a balanced meal is.	**Cooking Concept Lesson:** Engage students by showing them MyPlate or a similar food grouping resource in a large format, such as a poster, and asking them what they notice or wonder about the plate. Define each food group and discuss how it supports overall health. Give examples of each food group. Then, give students pictures of simple foods and have them explore, sorting the food items onto the big MyPlate. Explain that balanced meals help us maintain overall health. Finally, have students elaborate by picking one food and walking around to find friends they could combine with to make a balanced meal. Once in groups, have students discuss and then share out a meal that would contain all of the food groups.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Identify food groups present in the garden.	**Cafeteria:** Identify food groups for each cafeteria offering. Have students create signs to label food groups of each item in the lunch line.	**CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.	**National Health Education Standard 6:** Students will demonstrate the ability to use goal-setting skills to enhance health

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Eat-a-Pita Pizzas	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.1.1** Create a healthy snack from the garden. **HC.1.** Harvest foods from the garden for taste and nutrition with guidance. **KTE.1.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review how to find and harvest ripe vegetables in the garden. These can be vegetables from the pizza bed that last year's Grade 1 class planted in **Garden Lesson #16: Plant a Pizza Bed**. Slice vegetables for pizza toppings while students assemble pita, sauce, and cheese to build **Eat-a-Pita Pizzas, *There's a Chef in My Soup!***. Then, have students add veggie and mushroom toppings to their pizzas. While pizzas are cooking, discuss the role of mushrooms as decomposers in the garden ecosystem. Cut pizzas for students into halves and quarters, naming these pieces. Help them count and figure out a fair way to cut and distribute pizzas so everyone starts with the same amount. As they enjoy, have students identify the food groups represented in their pizza and review how each food group supports overall health.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use produce from the garden, if possible. Bring compost out to the garden. In **Garden Lesson #16: Plant a Pizza Bed**, students will plant a bed in the shape of a pizza with wheat around the crust; tomatoes, basil and other vegetables in the "slices;" and a statue of a cow for the cheese.	**Community:** Make extra pizza to share with school staff, caregivers at pick up, or a class from a younger grade. Host a pizza party featuring homemade pizzas to celebrate a special event at school.	**CCSS.MATH. CONTENT.1.G.A.3** Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Snacking on What's in Abundance	Health Concepts **(HC)**	**HC.1.1** Create a healthy snack from the garden. **HC.1.2** Harvest foods from the garden for taste and nutrition with guidance.	**Cooking Lesson:** Visit the garden or pantry with students to identify what produce is available from the garden. Together with students, look through recipes and/or discuss snacks they have made in the past, and identify a healthy snack to prepare together using the available produce. Use this as an opportunity for students to apply learning about seasonal foods, balancing food groups, and simple cooking techniques.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Select your recipe based on the produce that's in abundance in the garden. Harvest together from the garden. Bring compost out to the garden.	**Cafeteria:** Ask the food service director if you can prepare something to serve as part of the school lunch, either now or later in the year.	**CCSS.ELA-LITERACY.SL.1.1** Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. **CCSS.MATH.CONTENT.1.MD.A.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object. **CCSS.MATH.CONTENT.1.G.A.3** Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. What do Chefs Do?	Home Economics **(HE)**	**HE.1.1** Understand what chefs and food producers do.	**Cooking Concept Lesson:** Engage students by having them brainstorm all of the things they have done in cooking class that they think chefs do. Record their ideas. Then, guide students in writing and illustrating a sentence that says "I am a chef because I…" and then fill in the blank with accomplishments students have made in the kitchen this year, such as "because I have made homemade popsicles, or because I use measuring cups, etc." Post together on the wall (possibly in a shared hallway of the school) to create a class-wide mural of Grade 1 Chefs.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	In the garden, complete a similar activity, saying, "I am a gardener because I…"	**Classroom:** Read aloud *On the Farm, At the Market* by G. Brian Karas.		
11. Sharing Recipes	Recipe Concepts **(RC)**	**RC1.1** Demonstrate an understanding of recipes and how they reflect the people and cultures of their community	**Cooking Concept Lesson:** Ahead of class, have students bring in a simple recipe from their family or community. Then, in class, have students explore these recipes by interviewing one another about the recipes, finding out for example when it is eaten; what the key ingredients are; and how it is prepared. Close with a sharing circle where each student elaborates by sharing a fact they learned about another student.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Have students identify and plant crops common in their family diets in the garden.	**Community:** Invite caregivers and other community members in to share the recipes themselves, or to send in the food items with their students.		

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Eating from the Garden in the Winter	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.1.1** Create a healthy snack from the garden. **HC.1.2** Harvest foods from the garden for taste and nutrition with guidance. **KTE.1.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Prepare a dish that features foods that have been preserved or stored, such as making muffins using frozen fruit from the fall harvest. As the dish is cooking, highlight where and when the foods were grown. Discuss how they have been stored for use when the days are shorter and colder, and fresh foods are more scarce.	**CLS.2** Students cooperate and communicate well with each other.	Select and prepare a recipe featuring ingredients grown in the school garden. In the winter, this may center around storage crops and preserved foods, such as fruit you've frozen. Before eating, highlight ingredients grown or sourced from the school garden.	**Classroom:** Have students write and illustrate a couple of sentences describing what they made.	**NGSS.ESS1.B** ***Earth and the Solar System*** Seasonal patterns of sunrise and sunset can be observed, described, and predicted.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 1 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Three Bean Salad	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.1.1** Create a healthy snack from the garden. **FP.1.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables using tools and equipment. **KTE.1.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Explain how beans are seeds. Discuss the function of seeds in plants (to make new baby plants) and how they are a source of nutritious, natural energy. Sort various dry beans and discuss how they are similar and different. Explain diversity and how it makes salad delicious. Provide students with pre-chopped ingredients, demonstrate how to use a juicer, and review how to use measuring spoons and cups. Assign different teams each 2 ingredients to measure and add. Then, help teams work together to contribute to one class-wide **Three Bean Salad, *Emerils.com***. Have students count aloud together as they add ingredients. Once combined, demonstrate how to use tasting spoons. Have students taste and then help them adjust seasonings. Serve and enjoy.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use beans from the garden, if possible. Garnish with fresh herbs from the garden. Bring compost out to the garden.	**Classroom:** Read aloud *A Seed is Sleepy* by Dianna Hutts Aston.	**NGSS.1.LS1.A** ***Structure and Function*** All organisms have external parts. Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. **CCSS.MATH. CONTENT.1.OA.A.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. You-Pick-the-Greens Salad	Health Concepts **(HC)**	**HC.1.1** Create a healthy snack from the garden. **HC.1.2** Harvest foods from the garden for taste and nutrition with guidance. **HE.1.2** Understand scarcity in terms of seasonality. **KTE.1.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Walk through the garden and identify and harvest leafy greens that are in abundance. Explain the nutritional benefits of leafy greens, many of which are considered "superfoods" because they are packed with nutrients to keep us healthy. Then have students prepare **You-Pick-the-Greens Salad with Three Simple Dressings, *There's a Chef in My Soup!*** Have different teams each prepare a different dressing, and then conduct a comparative taste test between 3 different salads. Use descriptive words to identify how each is unique.	**CLS.2** Students cooperate and communicate well with each other.	Use greens from the garden. Add in other produce growing in the garden. Bring compost out to the garden.	**Classroom:** Vote on favorite salads. Tally results and create a bar graph representing the class preferences. **Cafeteria:** Share favorite salad dressing recipes with the food service directors and encourage incorporation into salad bars. **BAM! Box:** Send students home with bags of fresh greens and challenge them to make salad for their families.	**CCSS.ELA-LITERACY.L.1.5** With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.1.5.C** Identify real-life connections between words and their use (e.g., note places at home that are cozy).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Minty Green Peas	Home Economics **(HE)** Food Preparation **(FP)**	**HE.1.2** Understand scarcity in terms of seasonality. **KTE.1.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Introduce the recipe for **Minty Green Peas, *There's a Chef in My Family!*,** using fresh mint and peas from the garden if possible. Discuss seasonality of peas and why this is a seasonal dish. Identify peas as seeds. Then prepare the dish with students. While you are at the stove sautéing the onion, have students shell the peas and add them to a bowl. Once you've added the peas, have the students tear up the mint leaves. Stir everything together and enjoy. While eating, have students develop a word bank of adjectives for the flavors and textures.	**CLS.2** Students cooperate and communicate well with each other.	Use mint and peas from the garden, if possible. Bring compost out to the garden.	**Classroom:** Use descriptive words recorded while eating to write poems or sentences describing the Minty Green Peas.	**CCSS.ELA-LITERACY.L.1.5** With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.1.5.C** Identify real-life connections between words and their use (e.g., note places at home that are cozy).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Mixed Berry Crumble 	Kitchen Tools and Equipment **(KTE)**	**HC.1.2** Harvest foods from the garden for taste and nutrition with guidance. **HE.1.1** Understand what chefs and food producers do. **KTE.1.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Discuss the role of dessert in the diet as a sweet treat for a special occasion. Discuss why a fruit crumble is a healthy alternative to more processed desserts (in addition to the sugar, it has plenty of vitamins, minerals, and other important nutrients). Review how to use measuring cups and spoons, and then help students measure and mix the pre-chopped ingredients to prepare and enjoy **Strawberry-Rhubarb Irish Crumble, *Theres a Chef In My World***. When it's time to enjoy, cut crumble in half and then in quarters, naming each fraction. Then continue cutting into equal parts for the students. As students enjoy the crumble together, write a list titled "What Chefs Do" and under it have students brainstorm a list of verbs describing the steps they took to make the meal (i.e. mixed, measured, etc).	**CLS.2** Students cooperate and communicate well with each other.	Use straw-berries and rhubarb stems from the garden, if possible. Bring compost out to the garden.	**Classroom:** Help students write and illustrate a simple recipe for the crumble, using very general instructions like "Mix fruit and sugar together."	**CCSS.MATH. CONTENT.1.G.A.3** Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Researching Mexico	Recipe Concepts **(RC)**	**RC.1.1** Demonstrate an understanding of recipes and how they reflect the people and cultures of their community.	**Cooking Concept Lesson:** In preparation for the Feast Around the World, have students explore various aspects of life in Mexico. Have them locate Mexico on a map, and use videos and/or leveled readers to research different aspects of life in Mexico, including celebrations, customs, and the like. Have them elaborate by preparing to present on their country in the Feast Around the World.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In the garden, plant and label a bed of vegetables and herbs that are typical in Latin American cuisine and that grow in your region, such as chayote, cilantro, or limes.	**Community:** Ask students if they have family members from Mexico or other parts of Latin America. If so, invite them in to share a favorite recipe of tradition from the region.	**Social Studies:** Diversity and Culture. **Social Studies:** Geography.	
18. Super-Stuffed Burritos	Recipe Concepts **(RC)** Food Preparation **(FP)**	**RC.1.1** Demonstrate an understanding of recipes and how they reflect the people and cultures of their community. **CFT.1.3** Demonstrate an understanding of the flavors of various world cultures.	**Cooking Lesson:** Remind students that the Feast Around the World gives us a chance to experience international foods and learn about different cultures. Harvest relevant produce from the garden with students. Precook and chop all ingredients. Demonstrate how to stuff and roll a burrito, and then have students fill and wrap **Super-Stuffed Burritos,** ***There's a Chef in My World!***, and prepare to present at the Feast Around the World.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use beans and vegetables from the garden. Add in other produce growing in the garden. Garnish with cilantro or other herbs growing in the garden. Bring compost out to the garden.	**Community:** Ask students if they have family members from Latin America. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Diversity and Culture. **Social Studies:** Geography.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Elementary School Feast Around the World!

GRADE 2 | *Kitchen*

SCOPE & SEQUENCE

GRADE 2 STANDARDS

At the end of Grade 2, students will be able to:

- Demonstrate knowledge of taste sensations and describe a variety of familiar and unfamiliar foods.
- Identify and further articulate basic textures and palate experiences.
- Demonstrate understanding of local and seasonal foods.
- Begin managing scarcity and abundance in the kitchen environment.
- Describe and/or perform preservation processes to manage abundance in the garden.

GRADE 2 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen!	Personal and Community Life Skills **(CLS and PLS)** Food Preparation **(FP)**	**FP.2.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables	Engage students in a name game and team building exercise. Explore teamwork by establishing kitchen agreements together. Review Personal and Community Life Skills. Explain and demonstrate how to prepare food for others without contaminating it (wash hands, use utensils instead of hands when possible, avoid touching hair and face while cooking, etc). Then have students elaborate and practice these agreements as they wash hands, and create an assembly line to prepare a very simple snack together, such as **Ants on a Log,** ***Emerils.com***. Enjoy together.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Compare group agreements for the kitchen with those students have in the garden. How are behavior expectations similar in both places? How are they different?	**Classroom:** Compare group agreements for the kitchen with agreements students have in the classroom. How are behavior expectations similar in both places? How are they different?	**CCSS.ELA-LITERACY. SL.2.1** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Food Texture	Culinary Flavors and Textures **(CFT)**	**CFT.2.1** Identify and describe basic textures. **CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture.	**Cooking Concept Lesson:** Define "texture." Then provide students with a range of bite-sized foods to taste, such as: smooth applesauce, chunky applesauce, a piece of bread, a crispy cracker, a banana slice, and a carrot slice. Give them a set of texture cards, each with one word on it: smooth, lumpy, soft, hard, mushy, and crunchy. Have them explore by tasting each food and matching it to the word they think best describes the texture. Have them share out and explain the definition of each word. Then have them elaborate by sorting those words based on which they think are similar (smooth, soft, and mush, for example) and which are opposites (hard and soft, for example).	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	During activity, use foods from the garden. Bring compost out to the garden. In **Garden Lesson #2: Comparing Food Textures**, students will explore textures of edible stems and leaves.	**Community:** Send students home with a texture scavenger hunt they can do in their home or neighborhood.	**CCSS.ELA-LITERACY.L.2.5** Demonstrate understanding of word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.2.5.A** Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy). **CCSS.ELA-LITERACY.L.2.5.B** Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny).	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Make-Yourself-Some-Apple-sauce 	Culinary Flavors and Textures **(CFT)**	**CFT.2.1** Identify and describe basic textures. **CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture. **HC.2.4** Create a healthy snack using whole fresh foods. **FP.2.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables using tools and equipment. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Pre-chop all apples for **Make-Yourself-Some Applesauce, *There's a Chef in My Soup!*.** Demonstrate how to use a digital scale to weigh food. Have students weigh ingredients and record. Ask students to discuss why chefs might weigh foods before and after cooking (to make predictions about yield). Then have students combine ingredients in a saucepan. As you let the applesauce cook, lead them in a comparative taste test using 3 or 4 different varieties of apples. Have them describe the apple flavors and textures, referring to the adjectives explored in **Lesson #2: Food Texture**. Then have them vote on their preferences and create a bar graph to show which varieties students preferred. Finally, finish the apple sauce, weigh the final product to compare to the original weight, discuss, and enjoy the applesauce together.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	If possible, use apples from the garden. Bring compost out to the garden.	**BAM! Box:** Take home the applesauce recipe and ingredients to make applesauce at home. Modify by adding berries or other fruit.	**CCSS.ELA-LITERACY.L.2.5** Demonstrate understanding of word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.2.5.A** Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy). **CCSS.ELA-LITERACY.L.2.5.B** Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny). **CCSS.MATH.CONTENT.2.MD.D.10** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Modify-a-Pita Pizza	Health Concepts **(HC)**	**HC.2.3** Define whole fresh foods in each food group. **HC.2.4** Create a healthy snack using whole fresh foods. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Explain that students will now begin modifying recipes, which is the one way chefs discover great new flavor combinations. Have each team of students prepare **Eat-a-Pita Pizzas, *There's a Chef in My Soup!***. They prepared these in Grade 1, but this time the focus will be on modifying the recipe. Each team will create their own special pizza with toppings they choose and harvest from the pizza bed they planted in **Grade 1 Garden Lesson #16: Plant a Pizza Bed**. This time, they must follow the ratios recommended by MyPlate or another food grouping resource (meaning they need to include a lot of vegetables!). Review the food groups represented by each part of the pizza (crust=grain, cheese=dairy, etc). Then give them time to create their pizzas. Wrap up with every team presenting its special creation and describing its process. Then every student gets to try a small slice of every pizza.	**CLS.2** Students cooperate and communicate well with each other.	Use as much produce as possible from the garden, and particularly from the pizza bed the students planted in **Grade 1 Garden Lesson #16: Plant a Pizza Bed**. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Community:** Prior to this cooking activity, have students interview 5 people to find out what they most like on pizzas. They can use this information in their planning process.	**CCSS.ELA-LITERACY.SL.2.4** Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health. **National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Mexican Broiled Corn	Food Preparation **(FP)** Culinary Flavors and Textures **(CFT)**	**FP.2.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables using tools and equipment. **CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture. **HC.2.4** Create a healthy snack using whole fresh foods. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Ask students to recall what they learned about Mexican culture and cuisine in **Grade 1 Lesson #17: Researching Mexico**. Explain that today's dish often sold by street vendors in Mexico and in some parts of the US with large Mexican populations. Harvest or purchase, then boil and broil corn. Have students measure and combine sour cream and milk. Demonstrate how to use a pastry brush to brush corn with sour cream mixture. Add cheese and spices (to their liking) to prepare **Mexican Broiled Corn, *There's a Chef in My World!***. Discuss which ingredients are whole, local and/or seasonal and which are not. Enjoy together. As you do, have students describe the flavors and textures.	**CLS.2** Students cooperate and communicate well with each other.	Use corn from the garden, if available. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Community:** Have students ask their caregivers about popular snacks from when they were children and share out in class.	**CCSS.ELA-LITERACY.L.2.5** Demonstrate understanding of word relationships and nuances in word meanings. **CCSS.ELA-LITERACY.L.2.5.A** Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy). **CCSS.ELA-LITERACY.L.2.5.B** Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Cooking with What's in Abundance	Health Concepts **(HC)**	**HC.2.4** Create a healthy snack using whole fresh foods. **CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Discuss the economic, environmental, and culinary benefits of eating produce you grow yourself. Visit the garden with students to list produce that's available and in season. Note the edible plant parts of each produce item (roots, stems, leaves, flowers, fruits, and seeds). Compare to records or memories from past seasons to look for patterns. Note the food group of each crop you are going to harvest. Then harvest and prepare a recipe featuring ingredients grown in your school garden. Before you eat, highlight which ingredients were sourced in the school garden.	**CLS.2** Students cooperate and communicate well with each other.	Pre-select a recipe featuring produce you have in abundance in the garden. Look for options to garnish garden herbs. After cooking, bring compost out to the garden.	**Cafeteria:** Invite your food service director into the garden. Have students tour him/her around to show him/her available produce and discuss what, if anything, they might like to incorporate into the school lunch program.	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 2 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Designing Balanced Meals Featuring Whole Foods	Health Concepts **(HC)**	**HC.2.3** Define whole fresh foods in each food group.	**Cooking Concept Lesson:** Use an image of MyPlate or another food grouping resource to engage students in recalling the food groups and the nutritional value of a balanced diet. Give teams a stack of food cards and have them sort cards into food groups. Then within each group, have them explore to find whole foods. Discuss the nutritional benefits of eating whole and minimally processed foods (nutrients can be lost when food is processed; sugars, salts, and other unhealthy additives can be added). Have teams share out their whole foods onto a larger MyPlate, so collectively, the class will have created a big MyPlate filled with whole foods representing each food group. Then challenge each team to elaborate by coming up with a balanced meal that features a whole or minimally processed food from each food group.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Bring students to the garden to look for, harvest, and taste foods from as many food groups as you can find growing.	**Cafeteria:** Look for whole foods from each food group in the lunch line.	**CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Whole vs. Processed	Health Concepts **(HC)**	**HC.2.2** Recognize local and seasonal foods. **HC.2.3.** Define whole fresh foods in each food group. **RC.2.1** Describe how traditional foods and recipes function in social contexts of families and communities, and cultural traditions and celebrations.	**Cooking Concept Lesson:** Give student teams different food products (or pictures of these food products), such as a strawberry, strawberry jam, and a strawberry pop tart. Challenge them to explore by sorting them from least processed (whole food) to most processed. Have teams share out the spectra they created and the reasoning behind it. Discuss the nutritional benefits of eating whole foods. Conduct a similar sort with pictures of foods grown in different places, with labels that say where they were grown. Have them use a map to sort from those grown closest to home to those grown farthest away. Have students discuss some reasons why we sometimes eat food that was grown far away. Explain seasonality as one reason: Something that's out of season here might be in season on the other side of the world. Discuss and explain the environmental benefits of eating local and seasonal foods.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Bring students to the garden to search for whole, local, seasonal foods. Point out that any food growing in their garden is all 3, and review the health and environmental benefits of growing and eating garden-fresh produce.	**Community:** Challenge students to look in the grocery store for an example of each of the following: A local food; a food grown on another continent; a seasonal food; a food that is not in season locally; and a whole food and a highly processed food. Have them share their findings with the class.	**CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups. **Social Studies:** Geography. **NGSS.2.LS4.D** ***Biodiversity in Humans*** There are many different kinds of things living in any area, and they exist in different places on land and in water.	**National Health Education Standard 3:** Students will demonstrate the ability to access valid information, products, and services to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Warm Greens with Emeril's Herb Vinaigrette	Food Preparation **(FP)** Home Economics **(HE)**	**FP.2.2** Demonstrate ability to prepare fruits and vegetables using the tools and equipment identified Tools and Equipment. **HE.2.1** Manage garden scarcity and abundance with cooking techniques. **CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Have students recall the nutritional benefits of eating leafy greens. Walk through the garden with your students to identify and harvest abundant greens and herbs for preparing warm greens with **Emeril's Herb Vinaigrette, *Emerils.com***. Allow teams to choose which greens and herbs they use based on what's abundant in the garden or locally at this time of year. Harvest, wash, and dry. Demonstrate how to use a whisk to prepare the dressing. While you or another adult cooks the greens, have students tear herbs and add to pre-chopped ingredients to prepare **Emeril's Herb Vinaigrette, *Emerils.com*** If you have enough variety in types of greens or herbs from your garden, each team can prepare a salad with a different green or a dressing featuring a different herb and then they can conduct a comparative taste test and add sticky dots to a chart paper in columns to graph their preferences.	**CLS.2** Students cooperate and communicate well with each other.	Use greens and herbs from the garden. Review the plant parts as you harvest (likely all leaves). Add in other produce growing in the garden. Bring compost out to the garden.	**Classroom:** Read *A Simple Brown Leaf* by L. J. Davis.	**CCSS.MATH. CONTENT.2.MD.D.10** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Herbs of the World	Health Concepts **(HC)**	**HC.2.1.** Demonstrate the ability to design a garden that incorporates various world cultures.	**Cooking Concept Lesson:** Divide class into 6 teams. Assign each team a continent (skip Antarctica). Give each team the tools they need to explore and research common culinary herbs from that continent, and a local garden guide to discover which of those herbs can be grown in your region. Have them share out their findings, and then elaborate upon their ideas to collectively plan an Herbs of the World Bed or container that you can plant together in spring, ideally right outside your kitchen door.	**CLS.2** Students cooperate and communicate well with each other.	Ask students to review planting techniques they've learned in the garden (adding compost to soil, for example) and to apply them to plant the Herbs of the World Bed in **Lesson #13: Planting Herbs of the World**.	**Community:** Send students home with a handout of the Spices and Herbs of the World, and have them ask their caregivers which are important in their culture or their diets, if any.	**Social Studies:** Geography. **Social Studies:** Cultural Traditions. **CCSS.ELA-LITERACY.RI.2.5** Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Maple-Buttery Corn Muffins	Culinary Flavors and Textures **(CFT)**	**CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Review how to use measuring cups and spoons. Have teams prepare **Maple-Buttery Corn Muffins, *There's a Chef in My Soup*.** Work with students to calculate how many muffin tins you'll need to fill based on how many students are in class and how many muffins each tin holds. While the muffins are baking, discuss which food groups went into their muffins; whether these muffins are whole foods, minimally processed, or highly processed, and why. Bring in a package of highly processed corn bread mix and compare the ingredients lists. Discuss the health benefits of making your own minimally-processed snacks. Finally, enjoy muffins together.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Before you eat, talk about where all of the ingredients came from (corn plants, cows, chickens, etc). Have students "toast" with their muffins to the farms and gardens where all of plants and animals were raised. Bring compost out to the garden.	**Community, Cafeteria, or Classroom:** Make enough muffins to share with teachers, families, food service staff, office staff, or others.	**CCSS.MATH. CONTENT.2.OA.C.4** Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Eating Local in the Winter	Home Economics **(HE)**	**HE.2.1** Manage garden scarcity and abundance with cooking techniques. **CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture. **HC.2.4** Create a healthy snack using whole fresh foods. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Visit the garden or pantry with students to list produce that's in season. In the winter, this may center around storage crops and preserved foods, such as roasted winter squash with toasted nuts or seeds. Note the edible plant parts of each crop (roots, stems, leaves, flowers, fruits or seeds). Compare to records from past seasons to look for patterns of abundance and scarcity. Then harvest and prepare a recipe featuring ingredients grown in your school garden. Before you eat, highlight which ingredients were grown or sourced in the school garden and have students discuss the economic, environmental, culinary and health benefits of eating food from the garden.	**CLS.2** Students cooperate and communicate well with each other.	Pre-select a recipe featuring produce you have in abundance in the garden. Look for options to garnish or substitute with abundant produce. After cooking, bring compost out to the garden.	**Cafeteria** Have students write a simple recipe for the dish they prepared.	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 2 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Planting Herbs of the World	Health Concepts **(HC)**	**HC.2.1.** Demonstrate the ability to design a garden that incorporates various world cultures.	**Cooking Concept Lesson:** Explain to students how to plant an Herbs of the World Bed (researched and planned by students in **Lesson #10: Herbs of the World**) in your garden or in a container close to the kitchen. Have them plant it together. Once planted, have teams that did the research on each herb elaborate by making signs for each herb explaining what it is, where it is used, how it is used, and anything else they think important.	**CLS.2** Students cooperate and communicate well with each other.	Before planting, ask the students to teach you how to prepare the soil, plant the bed, and care for it, based on their garden learning.	**BAM! Box:** Plant container herb gardens with students that they can take home for their home kitchens.	**Social Studies:** Geography.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Power-Packed Spinach Salad	Health Concepts **(HC)**	**HC.2.4** Create a healthy snack using whole fresh foods. **CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture. **HE.2.1** Manage garden scarcity and abundance with cooking techniques. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Review how to use a salad spinner and whisk. Explain to students that spinach, like other leafy greens they've cooked, is packed with vitamins and minerals to keep them healthy. Then prepare a **Power-Packed Spinach Salad, *There's a Chef in My Family!,*** with students. If relevant, help students modify the recipe to incorporate any other fruits and vegetables available in your garden at the time, like strawberry slices. Have students divide salad up evenly and enjoy. While eating, discuss which food groups are represented in the salad.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use spinach from the garden. Add in any other garden fruits or vegetables you think might work. Bring compost out to the garden.	**Classroom:** Read *Sylvia's Spinach* by Katherine Pryor.	**CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Go Nuts for Banana Bread 	Culinary Flavors and Textures **(CFT)**	**CFT.2.2.** Categorize familiar and unfamiliar foods by flavor and texture. **FP.2.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables using tools and equipment identified in Tools and Equipment. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Introduce recipe for **Go Nuts for Banana Bread, *Emerils.com***. Discuss the nutritional benefits of bananas, and locate where they are grown on a world map. Then guide students in preparing the recipe. As they enjoy, discuss the flavor and texture and how it compares to other breads they commonly eat.  **Caution** Note: This recipe includes tree nuts and should be modified for individuals with tree nut allergies.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Trace ingredients back to their source. Bring compost out to the garden.	**Classroom:** Make a Venn diagram comparing banana bread with other kinds of bread students eat. How are the similar? How are they different? Extend into a writing project.	**Social Studies:** Geography.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Cooking with What's in Abundance	Home Economics **(HE)**	**HE.2.1** Manage garden scarcity and abundance with cooking techniques. **CFT.2.2** Categorize familiar and unfamiliar foods by flavor and texture. **HC.2.4** Create a healthy snack using whole fresh foods. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Visit the garden with students to list produce that's in season. Note the edible plant parts of each crop (roots, stems, leaves, flowers, fruits, and seeds). Compare to records or memories from past seasons to look for patterns of abundance and scarcity. Then harvest and prepare a recipe featuring ingredients grown in your garden. Before you eat, highlight which ingredients were grown or sourced in the garden and have students recall the nutritional, economic, environmental, and culinary benefits of eating fresh from the garden.	**CLS.2** Students cooperate and communicate well with each other.	Pre-select a recipe featuring produce you have in abundance. Look for options to garnish or substitute with abundant produce. After cooking, bring compost out to the garden.	**Cafeteria:** Have students graph and analyze patterns of what is in abundance in the garden in each season.	**NGSS Crosscutting Concept:** ***Patterns*** Patterns in the natural world can be observed.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
17. Researching India	Recipe Concepts **(RC)**	**RC.2.1** Describe how traditional foods and recipes function in social contexts of families and communities, and cultural traditions and celebration.	**Cooking Concept Lesson:** In preparation for the Feast Around the World, have students explore India. Have them locate India on a map, and use age-appropriate readings and/or videos to research different aspects of life in India, including celebrations, customs, and the like. Have them elaborate by preparing to present on their country at the Feast Around the World.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	If relevant, visit the herbs of the world bed planted in **Lesson #13: Planting Herbs of the World** to review any common herbs from India.	**Community:** Ask students if they have family members from India. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Diversity and Culture. **Social Studies:** Geography.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Indian Naan Bread 	Recipe Concepts **(RC)**	**RC.2.1** Describe how traditional foods and recipes function in social contexts of families and communities, and cultural traditions and celebrations. **KTE.2.1-5** Kitchen Tools and Equipment	**Cooking Lesson:** Pre-make one batch of naan dough. Remind students that the Feast Around the World provides them with a chance to learn about many cultures and taste foods from around the globe. Then, with your students, demonstrate how to prepare yeast and how to sift flour. Have students mix, knead, coat, and cover dough for **Indian Naan Bread, *There's a Chef in My World!***. While their dough is rising, have them roll and shape your pre-made dough into circles. Bake and serve with the **Vegetable Curry, *There's a Chef in My World!,*** being prepared by the Grade 5 class at the Feast Around the World!	**CLS.2** Students cooperate and communicate well with each other. **CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Offer fresh herbs from the garden as an optional garnish on the side, particularly if you grew any herbs common in India in your herbs of the world bed. Bring compost out to the garden. Serve the final feast out in the garden.	**Community:** Ask students if they have family members from India. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Diversity and Culture. **Social Studies:** Geography. **CCSS.MATH. CONTENT.2.MD.A.1** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Elementary School Feast Around the World!

GRADE 3 | *Kitchen*

SCOPE & SEQUENCE

GRADE 3 STANDARDS

At the end of Grade 3, students will be able to:

- Use descriptive language to explain foods and their flavor attributes and textures.
- Demonstrate understanding of and articulate the relationship between flavor and culture.
- Demonstrate increased understanding of the seed to plate cycle.
- Demonstrate understanding of recipe sequencing and basic recipe techniques.
- Demonstrate knowledge of eating on a budget and begin to understand that health is connected to food choices.
- Demonstrate understanding of whole and processed foods.
- Demonstrate understanding of abundance.
- Identify and interpret information from a food label.

GRADE 3 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen!	Personal and Community Life Skills **(PLS and CLS)**	**RC.3.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Engage students by having them share their names and a food they enjoyed over the summer. Explore behavior expectations by establishing kitchen agreements together. Review Personal and Community Life Skills. Explain and demonstrate safe and proper use of melon ballers, apple corers, and strawberry hullers, and discuss when and why these tools are used. Demonstrate how to pit stone fruits. Then have students elaborate, practicing their agreements and skills as they prepare and enjoy some fruit kabobs similar to the **Fresh Melon Kebobs, *Emerils.com***, but incorporating apples, stone fruit, melons, and anything else you have growing in the garden.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Use fruit from the garden. Garnish with edible herbs or flowers from the garden. As you enjoy, trace ingredients back to their source. Collect and deliver compost to the garden.	**Classroom:** Read *Fruit in Suits* by Jared Chapman. Discuss how fruits are all unique characters just like the students in the class.	**CCSS.ELA-LITERACY.SL.3.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Flavors	Culinary Flavors and Textures **(CFT)**	**CFT.3.1** Demonstrate an understanding of taste sensations. **CFT.3.2** Describe foods and their flavor attributes.	**Cooking Concept Lesson:** Hand out journals that students will use for reflection at the end of each lesson. Review the taste sensations: sweet, salty, sour, bitter, and umami. Let students know that they will be tasting foods to identify the first 4 flavor sensations. Have students explore these by conducting a blind taste test in which students close their eyes, taste a pinch of something (i.e. sugar, lemon juice, arugula, and sea salt) and try to match the taste to one of the words.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Use arugula and/or other produce from the garden. Bring compost out to the garden.	**BAM! Box:** Work with your caregivers to find and record something in your regular diet that fits each of the taste sensations. Share in class.	**CCSS.ELA-LITERACY.W.3.2.C** Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to CFT.3.2. Describe foods and their flavor attributes enhance health and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Getting Started with Paring Knives 	Recipe Concepts **(RC)**	**RC.3.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.3.1-4** Kitchen Tools and Equipment.	**Cooking Lesson:** Make sure knives are out of reach of students while you introduce and discuss them. Engage students in a discussion of tools. Explain the importance of being safe and responsible with knives because they are sharp and can be dangerous. Then demonstrate how to safely use a paring knife to cut a peeled banana, or something else soft. Then hand out bananas and knives and give them time to elaborate by cutting their own bananas or other soft foods.	**CLS.2** Students cooperate and communicate well with each other.	During this lesson, compare guidelines for safe knife use with guidelines for safe garden tool use.	**Cafeteria:** Invite in your food service director to discuss and demonstrate knife safety. **Community:** Invite in a local chef to demonstrate knife safety. **Classroom:** Make the connection between structures and functions of the knife parts (i.e. an edge to cut, a handle to hold) with other examples of structure and function, such as structures of a seed or insect.	**NGSS Crosscutting Concept:** Structure and Function	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Swedish Cucumber Salad	Culinary Flavors and Textures **(CFT)**	**CFT.3.2** Describe foods and their flavor attributes. **HC.3.2** Demonstrate an understanding of local and seasonal foods. **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review safe use of paring knives and other relevant tools. Then help students prepare **Swedish Cucumber Salad, *There's a Chef in My World!***. As students enjoy, discuss the nutritional value of cucumbers and ask students to identify the local and seasonal ingredients in the recipe. Then reflect on the taste sensations that are combined in this recipe.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use cucumbers and dill from the garden. Try adding in other produce growing in the garden. Bring compost out to the garden.	**Community:** Interview community members for other cucumber salad recipes and compare.	**CCSS.MATH. CONTENT.3.MD.A.2** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).1 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Texture	Culinary Flavors and Textures **(CFT)**	**CFT.3.3** Describe what texture means. **RC.3.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **HC.3.2** Demonstrate an understanding of local and seasonal foods. **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Check for tree nut allergies before this lesson and modify the recipe accordingly, for example by replacing walnuts with sunflower seeds. Introduce the term "texture" and share adjectives that might be used to describe it. Have students taste a basil leaf, a walnut and a dab of cream cheese, and discuss the texture of each. Then demonstrate how to use a mortar and pestle; have students mash basil and walnuts and describe the changes in texture. Demonstrate how to use a garlic press and how to puree using a food processor. Have students work together to prepare **Jillie's Pesto-Cheese Dip, *There's a Chef in My Soup!***. Reserve a bit of the pesto to taste alongside the pesto-cheese dip. Demonstrate how to use a microplane before having them use one to add Parmesan cheese on the dips. Then have students taste both dips with crackers or carrot sticks and discuss the differences in texture. **Caution**	**CLS.2** Students cooperate and communicate well with each other.	Use basil from the garden. Use pesto as a dip for something ready to harvest from the garden, such as carrot sticks. Bring compost out to the garden.	**Cafeteria:** Explore the foods offered in the cafeteria for a variety of textures.	**CCSS.ELA-LITERACY.L.3.1.G** Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Cooking with What's in Abundance 	Home Economics **(HE)**	**HC.3.2** Demonstrate an understanding of local and seasonal foods. **HE.3.3** Describe abundance and the causes of abundance in the garden **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Identify something in abundance in the garden. Have students define local and seasonal and discuss why this crop is in abundance (season, planting choices, etc.). Search for that crop on Emerils.com to find a recipe that uses it. Then work with students to harvest and prepare the recipe. If you have time to split this lesson across 2 sessions, have your students research and select the recipe themselves.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	Start this lesson in the garden so that abundant produce drives recipe selection.	**BAM! Box:** Bring home a bag of produce that was in abundance in the school garden together with a recipe you found to use that produce. Prepare it together with your caregivers.	**NGSS Science and Engineering Practice:** Asking Questions and Defining Problems	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

GRADE 3 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Discovering Grains	Health Concepts **(HC)**	**HC.3.3** Define and describe grain based carbohydrates. **RC.3.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Introduce grain-based carbohydrates, including what they do for the body and what foods provide good sources of them. Demonstrate safe and proper use of a box-grater. Then have students grate carrots and parsnips and make **It's-a-Good-Morning Muffins,** ***There's a Chef in My Family***.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use carrots, parsnips, and eggs from the garden. If you don't have carrots or parsnips, replace with grated zucchini or summer squash growing in the garden. Bring compost out to the garden.	**Community:** Collect favorite muffin recipes from a variety of sources (community members, local restaurants) and compare ingredients and ratios.	**CCSS.MATH. CONTENT.3.MD.A.2** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).1 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Budgeting	Healthy Eating **(HE)**	**HE.3.1** Apply critical thinking skills to budgeting in a home kitchen. **HE.3.2** Compare and contrast cost of store bought processed foods, home processed foods, and foods grown in the garden.	**Cooking Concept Lesson:** Provide students with a box of store-bought muffins labeled with both the total price and the price per muffin. Provide them with a list of the ingredients for the **It's-a-Good-Morning Muffins** from **Lesson #7: Discovering Grains**, along with the cost of each ingredient. Have students calculate the cost of a batch of homemade muffins. Compare with the cost of the store-bought muffins. Discuss the pros and cons of making your own food, including economic impacts.	**PLS.5** Students develop the ability to make informed and responsible decisions.	If you have time during this lesson, go out to the garden and harvest a bunch of carrots, for example. Discuss the cost of these carrots in the store and/or in a restaurant before enjoying them.	**Community:** Set up a farm stand to sell your garden produce. Label each with the market price and your school price. Use the money earned to invest in garden or kitchen equipment for the class.	**CCSS.MATH. CONTENT.3.OA.A.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. **CCSS.MATH. CONTENT.3.NBT.A.3** Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	**National Health Education Standard 3:** Students will demonstrate the ability to access valid information, products, and services to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Threshing, Winnowing, and Grinding Wheat	Health Concepts **(HC)**	**HC.3.4.** Compare and contrast processed and whole grains.	**Cooking Concept Lesson:** Show students a labeled diagram of a wheat seed and explain that white flour has the germ (embryo) and bran (seed coat) removed. Engage in a discussion of the nutritional benefits of whole wheat. Explain how to thresh, winnow, and grind wheat into flour (this process is described by Common Ground Garden here). Then have students elaborate, making whole wheat flour. Have them elaborate by diagramming or discussing the process, showing how to create arrows to connect different elements of the process, showing how "Wheat goes into bread which goes into us; wheat stalks go into compost which goes out to the garden," etc.	**CLS.2** Students cooperate and communicate well with each other.	Use wheat grown in the garden. Compost all unused parts of wheat plants. Save some wheat seeds to replant.	**Community:** Interview a local baker on his/her ratios of different types of flour and how he/she chooses to balance taste and nutrition.	**CCSS.ELA-LITERACY.W.3.3.A** Organize an event sequence that unfolds naturally. **NGSS Science and Engineering Practice:** Constructing Explanations	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Old-Fashioned Pretzels 	Food Preparation **(FP)**	**FP.3.2** Demonstrate an understanding of whole grain preparations.	**Cooking Lesson:** Review the nutritional benefits of eating whole wheat. Then have students prepare the dough for **Old-Fashioned Pretzels, *Emerils.com***. Highlight that this recipe calls for about half whole wheat flour and half white, and explain that this is often a good ratio to use if you want to increase whole wheat in a baked good, like zucchini bread or pancakes. Have each student shape his/her own pretzel and boil. While they are baking, show students examples of other whole grains, such as ground, cracked, rolled, or sprouted wheat, barley, or corn.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Garnish pretzels with rosemary, oregano, or other herbs growing in the garden. Bring compost out to the garden.	**Cafeteria:** Identify grains available in the cafeteria and create promotional materials to display to encourage students to choose and eat the whole grains that are available.	**CCSS.MATH. CONTENT.3.MD.A.2** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Label Reading	Health Concepts **(HC)**	**HC.3.6** Read and interpret a food label	**Cooking Concept Lesson:** Ask students to bring 2 nutrition labels into class with them. Demonstrate how to identify the components of a nutrition food label. Have students explore, comparing and contrasting the labels from highly processed food items to those of minimally processed food items. Make sure you have extra nutrition food labels to use as examples in case students forget or there aren't enough minimally processed / whole food items represented. Have students elaborate, journaling about the difference between the labels, providing prompts.	**PLS.5** Students develop the ability to make informed and responsible decisions.	During this lesson, search the garden for growing sources of carbohydrates, such as grains, fruits and vegetables.	**Community:** Video a student-led tour of the bakery section of the grocery store, describing the different options available and the health benefits.	**CCSS.ELA-LITERACY.RI.3.9** Compare and contrast the most important points and key details presented in two texts on the same topic.	**National Health Education Standard 3:** Students will demonstrate the ability to access valid information, products, and services to enhance health. **National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Healthy Snack Plan	Health Concepts **(HC)**	**HC.3.1** Create a healthy snack plan to grow in the school garden. **HC.3.2** Demonstrate an understanding of local and seasonal foods.	**Cooking Concept Lesson:** Engage students, having each student share a favorite food they have had in the garden. Tally the results and record on a bar graph. Then have students choose a healthy snack that they could plant in the garden. Explain how to use planting guides to determine when each crop for their snack should be planted in your region. Have them elaborate by making a healthy snack plan.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In **Garden Lesson #13: Garden Caretakers** have students plant the healthy snack plans they created in this lesson.	**Cafeteria:** Choose a favorite food from the cafeteria. Research where it was grown and determine when it is seasonal.	**CCSS.MATH. CONTENT.3.MD.B.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

GRADE 3 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Grain Farmer	Health Concepts **(HC)**	**HC.3.5** Identify where grains are sourced locally.	**Cooking Concept Lesson:** Take a field trip to a local grain farm and/or invite in a local grain farmer for a guest presentation with Q and A.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely	In **Garden Lesson #2: Bread is for Eating** students will explore wheat growing in the garden and in **Garden Lesson #18: Planting Wheat for Next Year's Grade 3 Class**, they will plant wheat.	**Community:** Share photos and information from your field trip with the local newspaper to advocate for local grains.	**CCSS.ELA-LITERACY.SL.3.1.A** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills toenhance health and avoid or reduce health risks.
14. Biscuits with Berries	Food Preparation **(FP)**	**FP.3.3** Create a healthy snack using seasonal food from the garden or farmers market. **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review safe and proper use of measuring cups and spoons, mixing bowls, sifters, and the like. Then have students prepare **Biscuits with Berries, *Emerils.com***. While the biscuits are baking, discuss the seasonality of berries and how this recipe could be modified in different seasons.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use berries from the garden. Garnish with edible flowers growing in the garden. Bring compost out to the garden.	**Community:** Collect biscuit recipes from across the United States and compare desirable traits in recipes.	**CCSS.MATH.CONTENT.3.MD.A.2** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Inter-viewing Recipes	Recipe Concepts **(RC)**	**RC.3.1** Describe the structure and function of a recipe.	**Cooking Concept Lesson:** Hand out recipes for everything students have cooked together this year. Have each team explore a recipe to answer questions like "What tools will you need?"; "What is the first thing you'll do?"; "How many people will this serve?"; etc. Explain the key elements of a recipe, and the optional elements that are also sometimes included. Then assign the following homework assignment for students to elaborate: Record a healthy snack recipe from your family or community.	**CLS.2** Students cooperate and communicate well with each other.	Discuss ways to modify recipes to incorporate as much garden produce as possible, such as increasing vegetables, substitutions, and garnishing with garden herbs.	**Community:** Record a healthy snack recipe from your family or community.	**CCSS.ELA-LITERACY.SL.3.1.C** Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
16. Cooking with What's in Abun-dance 	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.3.2** Demonstrate an understanding of local and seasonal foods. **FP.3.3** Create a healthy snack using food from the garden or farmers market **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Select 2 or 3 recipes from the homework in **Lesson 15: Interviewing Recipes** that you could prepare with the students incorporating garden produce. Then guide students in harvesting and preparing the recipes selected. If time allows, split this into 2 sessions and work with the students to select the recipes that would work best.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Use abundant garden produce to drive recipe selection. If possible, involve students in identifying abundant produce and selecting recipes.	**Community:** Share photos and captions of student recipe harvesting and preparation to share on school social media pages.	**CCSS.ELA-LITERACY.SL.3.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.	National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Researching China	Culinary Flavors and Textures **(CFT)**	**CFT.3.4** Identify flavors, foods, and dishes from other cultures	**Cooking Concept Lesson:** In preparation for the Feast Around the World, have students explore China, locating it on a map, and researching different aspects of life in China, including celebrations, customs, and the like. Have them elaborate by preparing to present on their country at the Feast Around the World.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	If relevant, visit the Herbs of the World Bed planted in **Grade 2 Lesson #13: Planting Herbs of the World** to harvest and add any common herbs from China.	**Community:** Ask students if they have family members from China or other countries in Asia. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Diversity and Culture. **Social Studies:** Geography.	
18. Sesame Peanut Noodle Salad	Culinary Flavors and Textures **(CFT)**	**CFT.3.4** Identify flavors, foods, and dishes from other cultures **FP.3.1** Describe how and when to harvest food from the garden. **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Check for peanut allergies and adjust recipe as needed. With students, explain that the Feast Around the World is an opportunity to discover food traditions from diverse cultures. Harvest a wide variety of vegetables that are good raw, such as sugar snap peas or carrots. Have students prepare **Sesame Peanut Noodle Salad, *There's a Chef in My World!***, and chop and add vegetables they grew for the Feast Around the World. Put a label in front of this dish that says "Contains peanuts." **Caution**	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	This recipe works with a wide variety of vegetables, so start with what you have in abundance in the garden.	**Community:** Ask students if they have family members from China or other parts of Asia. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography. **Social Studies:** Diversity and Culture.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Elementary School Feast Around the World!

GRADE 4 | Kitchen

SCOPE & SEQUENCE

GRADE 4 STANDARDS

At the end of Grade 4, students will be able to:

- Demonstrate increased understanding of culinary flavors and textures and begin to make simple combinations.
- Demonstrate understanding of how to preserve abundance from the garden.
- Demonstrate knowledge of recipe parts, processes, and yields.
- Demonstrate understanding of purchasing and preparing nutrient rich food on a budget.
- Demonstrate ability to apply grade level math skills to food preparation techniques.
- Begin to understand the versatility of ingredients and how they are used in various cultural dishes.
- Demonstrate safe and proper use of various tool with increasing independence.

GRADE 4 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen! 	Personal and Community Life Skills **(PLS and CLS)**	**KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Engage students by having them share names and a summer highlight. Review kitchen agreements established in **Grade 3 Lesson #1: Welcome to the Kitchen!** Review Personal and Community Life Skills. Review safe and proper use of paring knives, vegetable peelers, apple corers, and other relevant tools. Then have students elaborate by practicing these agreements and skills as they prepare and enjoy a **German Apple Pancake, *There's a Chef in My World!***	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Make a Venn Diagram comparing appropriate behaviors in the kitchen and in the garden.	**Classroom:** Make a Venn Diagram comparing appropriate behaviors in the kitchen and in the classroom.	**CCSS.ELA-LITERACY.SL.4.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Flavors and Textures from Around the World	Culinary Flavors and Textures **(CFT)**	**CFT.4.3** Assess main ingredients, seasonings and dishes of other cultures.	**Cooking Concept Lesson:** Have students survey their caregivers and then share out to discover the cultures and food traditions represented in your class. Bring in harvested or purchased interesting fruits or vegetables that are common to those cultures but may not be familiar to all of your students, such as jackfruit or jicama. Label each with the name and region where it is common. Have students explore, taste, and describe the flavors of each fruit or vegetable.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In **Garden Lesson #3: Planting Seeds** have students plant some crops that grow in your region and reflect the cultures represented in your student population. Label each with the country or continent where it is prevalent.	**BAM! Box:** Interview a family member about his/her heritage and anything he/she knows about plants or crops grown in their ancestral homes.	**Social Studies:** Cultural Traditions.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Vietnamese Pickled Carrots (Carot Chua) 	Culinary Flavors and Textures **(CFT)** Food Preparation **(FP)**	**CFT.4.1** Review basic sensory attributes of flavors **CFT.4.2** Create basic flavor combinations using international cuisines. **FP.4.1** Demonstrate knowledge of how to wash and store fruits and vegetables. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review safe and proper use of peelers and paring knives. Discuss why chefs preserve foods, and include the idea that preserving foods can alter their taste. Then have students peel and chop carrots for **Vietnamese Pickled Carrots (Carot Chua),** ***Emerils.com***. Save and freeze scraps for stock. Then, call volunteers to measure and mix the vinegar, salt,and sugar. As each ingredient is added, match each to a taste sensation (sour, salty, sweet). When students eat carrots (at least 1 hour and up to 2 weeks after making), have them close their eyes and see if they can taste each flavor: salty, sweet, bitter, and sour. Then have them reflect and share about this particular sour, sweet, and salty combination.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use carrots from the garden. Add in other produce growing in the garden. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Community:** Research other pickles made in your community and do a comparative taste test.	**CCSS.MATH. CONTENT.4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Sweet and Spicy Pickles 	Culinary Flavors and Textures **(CFT)** Food Preparation **(FP)**	**CFT.4.2** Create basic flavor combinations using international cuisines. **FP.4.2** Describe and perform food preservation processes such as drying, freezing, pickling. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Discuss the value of preserving seasonal foods that are in abundance in order to enjoy them year-round. Have students prepare **Emeril's Homemade Sweet and Spicy Pickles, *Emerils.com***. As students work, have them save and freeze onion and garlic peels for making vegetable stock in the winter. Demonstrate how to process the jars, focusing on food safety, and then demonstrate how to fill and process a jar of pickles before having them do the same in small groups. Follow the USDA's Complete Guide to Home Canning to preserve jam safely. Let pickles age at least 2 weeks before enjoying.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use cucumbers, onions, and garlic from your garden. Bring compost out to the garden.	**Community:** Make jars of pickles as gifts for loved ones. **BAM! Box:** Bring home a jar of pickles and come up with a fun way to enjoy them, such as on crackers or sandwiches. Take photos and share your pickle ideas with the class.	**CCSS.ELA-LITERACY.RI.4.3** Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Freezing and Dehydrating 	Food Preparation **(FP)**	**FP.4.2** Describe and perform food preservation processes such as drying, freezing, pickling. **FP.4.1** Demonstrate knowledge of how to wash and store fruits and vegetables. **HE.4.1** Calculate expansion and contraction of volumes of foods. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review the value of preserving seasonal foods when they are in abundance in order to enjoy them year-round. Harvest ripe tomatoes and fruit from the garden. Weigh them and record the weight. Have students coat the tomatoes in oil and place on baking sheets to roast. Once roasted (which will be many hours later), pack the tomatoes in bags or jars, label, and freeze for use in the winter. While tomatoes are beginning to roast, demonstrate how to use food dehydrator. Review safe use of paring knives and then have students slice, weigh, and dehydrate a seasonal fruit. Once dehydrated (which could be during their next class), weigh the fruit again to compare. Have students make explanations for the change in weight. Then store dried fruit in an airtight container and label for use in the winter.	**PLS.6** Students actively seek creative and resourceful solutions.	Use tomatoes and other fruit from the garden. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Community:** Interview a local expert in the community about techniques for preserving foods such as freezing, dehydrating, canning, etc.	**CCSS.MATH. CONTENT.4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Nutty Buttery Green Beans	Recipe Concepts **(RC)** Kitchen Tools and Equipment **(KTE)**	**RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **FP.4.1** Demonstrate knowledge of how to wash and store fruits and vegetables. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate how to turn on the stove and set it to the desired setting. While you bring water to a boil, have students trim green beans for **Nutty Buttery Green Beans,** ***There's a Chef in My Soup!.*** Save and freeze scraps for vegetable stock. Then demonstrate how to add the green beans into boiling water carefully, without splashing hot water up. As the beans cook, have students practice safe use of the stove by preparing the butter sauce with an adult. Once beans are ready, demonstrate how to use a potholder to strain safely. Mix in sauce and enjoy.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use green beans from the garden. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Cafeteria:** Interview cafeteria staff for other ideas of vegetables that can be boiled like green beans. **Community:** Interview local restaurant chefs for other ideas of simple sauces for seasonal vegetables.	**NGSS.4.PS3.B** Conservation of Energy and Energy Transfer.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 4 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Green Salad with French Dressing	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.4.2** Understand that nutrients in soil and plants are assimilated into the body. **FP.4.1** Demonstrate knowledge of how to wash and store fruits and vegetables. **RC.4.1** Relate the parts of recipe. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1** Kitchen Tools and Equipment	**Cooking Lesson:** Discuss how nutrients in the soil go into plants, and when we eat the plants, they are assimilated into our bodies. Then have students explore the recipe for **Green Salad with French Dressing, *Emerils.com*** to determine which tools and ingredients they will need. Have them gather their equipment and prepare the salad, adding in some dried fruit from the fall. Enjoy the salad together. Either in class or as homework, have them write instructions for someone else explaining how to make the salad, including some of the following terms or concepts: ingredients, process, portion size, and yield.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Use lettuce from the garden. Add in other produce growing in the garden. Garnish with herbs and/or edible flowers growing in the garden. Bring compost out to the garden.	**Community:** Share bags of extra greens from the garden with a recipe cards for French Dressing with bus drivers and school staff.	**CCSS.ELA-LITERACY.W.4.4** Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Best Basic Red Sauce 	Food Preparation **(FP)**	**FP.4.1** Demonstrate knowledge of how to wash and store fruits and vegetables. **FP.4.3** Demonstrate ability to make simple recipes inspired by world cultures **HC.4.3** Describe fruits and vegetables in relation to the food groups. **HE.4.1** Calculate expansion and contraction of volumes of foods. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Have students research the history of red sauce and pasta in Italian food. Take out tomatoes the class roasted and froze in the fall. Discuss what food group tomatoes are in (fruits and vegetables) and review the health benefits of this food group. Have students weigh the tomatoes and compare to the original weight of the raw tomatoes. Review safe use of the stove, and then have students prepare **Best Basic Red Sauce, *There's a Chef in My Soup!***, using the tomatoes. Save and freeze onion and garlic scraps for vegetable stock. Once sauce is made, freeze for later use.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	During this lesson, recall with students the journey from growing the tomatoes to using them today.	**Community:** Work with a local market to sell extra prepared Red Sauce, allowing students to set price and develop marketing.	**NGSS.4.PS3.B** Conservation of Energy and Energy Transfer.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Home-made Pasta	Recipe Concepts **(RC)** Kitchen Tools and Equipment **(KTE)**	**RC.4.2.** Demonstrate the ability to follow recipe instructions with increased independence. **HC.4.1** Create a calendar of seasonal menus that reflect local and seasonal foods. **HE.4.1** Calculate expansion and contraction of volumes of foods. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate proper and safe use of a manual pasta machine. Then have students prepare **Homemade Semolina Pasta, *Emerils.com*,** while you heat the **Best Basic Red Sauce** (made in **Lesson #8: Basic Red Sauce**). Have students measure volume of pasta before and after cooking, and discuss why it expanded. As students enjoy pasta with Basic Red Sauce, discuss how this dish could be varied in different seasons to reflect local, seasonal produce.	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	As you enjoy pasta and red sauce, trace each ingredient back to its source in the school garden or on a farm.	**Classroom:** Read *Strega Nona* by Tomie dePaola.	**CCSS.MATH. CONTENT.4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Latkes 	Food Preparation **(FP)** Recipe Concepts **(RC)**	**FP.4.3** Demonstrate ability to make simple recipes inspired by world cultures. **RC.4.1** Relate the parts of recipe. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Introduce the significance of Latkes in Jewish culture. Review proper use of a peeler, box grater, and other relevant tools. Have students peel and coarsely grate potatoes for **Latkes, *There's a Chef in My World!***. Save and freeze scraps for stock. Have students grate onion and prepare egg mixture. Add potatoes and then cook for students. While latkes are cooking, have students put out sour cream and applesauce with serving spoons and plates. Then serve and enjoy together.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use potatoes and onions from the garden.	**Classroom:** Read *Latkes, Latkes Good to Eat* by Naomi Howland to understand the relevance of latkes in Chanukah traditions.	**CCSS.ELA-LITERACY.SL.4.1.B** Follow agreed-upon rules for discussions and carry out assigned roles.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Making Vegetable Stock 	Home Economics **(HE)**	**HE.4.2** Understand multiple uses of vegetable scraps and strategies to reduce waste. **GF.4.2** Understand that nutrients in soil and plants are assimilated into the body. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Introduce the idea of making stock from food scraps and discuss the benefits (reducing food waste; nutrient-rich; etc). Then have students make **Vegetable Stock, *Emerils.com*** using vegetable scraps collected and frozen in earlier lessons. Trace nutrients in stock back to plants and soil. Freeze stock for later use.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	As stock is cooking, have students compare putting vegetable scraps in compost to putting them in stock and discuss where the nutrients go in each scenario.	**Community:** Use local resources to research the benefits of bone broth.	**NGSS.4.PS3.B** Conservation of Energy and Energy Transfer.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Pasta and Swiss Chard in Broth with Meatballs 	Food Preparation **(FP)** Recipe Concepts **(RC)** Health Concepts **(HC)**	**FP.4.1.** Demonstrate knowledge of how to wash and store fruits and vegetables. **FP.4.3** Demonstrate ability to make simple recipes inspired by world cultures. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **HC.4.3** Describe fruits and vegetables in relation to the food groups. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate safe handling of raw meats, including which cutting boards to use for meat. Discuss why this is so important. Have students make meatballs for **Pasta and Swiss Chard in Broth with Meatballs, *Emerils.com*,** while you bring the vegetable broth they made in **Lesson #11: Making Vegetable Stock** to a simmer. Add in meatballs and cook while students chop Swiss chard, grate cheese, and break noodles into pieces. Have students discuss what food groups are represented in the soup and how each supports their overall health. Ladle and enjoy.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use Swiss chard or other leafy greens from the garden. Add in other produce growing in the garden. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Community:** Interview local chefs about their favorite meat preparation techniques.	**NGSS.4.PS3.B** Conservation of Energy and Energy Transfer.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 4 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Straw-berry Jam 	Health Concepts **(HC)**	**HC.4.1** Create a calendar of seasonal menus that reflect local and seasonal foods. **FP.4.1** Demonstrate knowledge of how to wash and store fruits and vegetables. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review paring knife safety. Have students prepare **Strawberry Jam, *Emerils.com*.** While jam is cooking, assign each team a season and a meal (i.e. spring lunch) and challenge them to create a menu that reflects local and seasonal foods for that time. Collect these together to create a year-round local eating guide. Have students write an introduction explaining the benefits of incorporating local, seasonal foods into their diets. Follow the USDA's Complete Guide to Home Canning to preserve jam safely.	**PLS.6** Students actively seek creative and resourceful solutions.	Use strawberries from the garden. Bring compost out to the garden.	**Classroom:** Read *From Strawberry to Jam* by Lisa Owings. Then create your own version of a "How to" Guide based on your own recipe. **Community:** Interview local restaurants on how their menu changes through the seasons.	**CCSS.MATH. CONTENT.4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health. **National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Blueberry French Toast 	Food Preparation **(FP)** Health Concepts **(HC)**	**FP.4.1** Demonstrate knowledge of how to wash and store fruits and vegetables. **HC.4.2** Understand that nutrients in soil and plants are assimilated into the body. **RC.4.2.** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1** Kitchen Tools and Equipment	**Cooking Lesson:** Provide students with recipe and have them identify and gather necessary tools and ingredients to prepare **Ooey Gooey Blueberry "French Toast"**, ***There's a Chef in My Family!.*** Place the French toast in the oven for them, review stove safety, and then help students prepare the blueberry sauce while the French toast is cooking. Discuss where the blueberries were grown, what nutrients they contain, and what those particular nutrients do for our body.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Use blueberries from the garden. Garnish with edible flowers growing in the garden. Bring compost out to the garden. If time allows, have students measure the baking sheets and calculate area and volume to reinforce measurement work they are doing in the garden.	**Classroom:** Read *Blueberries for Sal* by Robert McCloskey,a story written in 1948 about picking blueberries in Maine.	**NGSS.4.PS3.B** Conservation of Energy and Energy Transfer.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Berries Three Ways	Health Concepts **(HC)**	**HC.4.3** Describe fruits and vegetables in relation to the food groups. **HC.4.4** Identify where fruits and vegetables are sourced locally. **HC.4.5** Compare and contrast fresh, canned, and frozen fruits and vegetables.	**Cooking Concept Lesson:** Engage students by harvesting berries together. Explore what food group they belong in. Conduct a comparative tasting between fresh berries, homemade jam made in **Lesson #13: Strawberry Jam**, and highly-processed store-bought jam. Explain how to look at the nutrition label and compare ingredients to those you used in your jam. Have students elaborate by comparing labels in their journals.	**PLS.5** Students develop the ability to make informed and responsible decisions.	Harvest and use berries from the garden. Bring compost to the garden.	**BAM! Box:** In preparation for **Lesson #16: Food Groups in Food Purchases**, work with a caregiver to list all of the family's food purchases for a week.	**CCSS.ELA-LITERACY.RI.4.9** Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.
16. Food Groups in Food Purchases	Health Concepts **(HC)**	**HC.4.6** Collect and display data from weekly food purchases for family or community.	**Cooking Concept Lesson:** Have each student track his/her family's food purchases for a week. Then explore the results together, categorizing what was bought into the different food groups: Grains, Protein, Fruits, Vegetables, and Dairy.	**PLS.5** Students develop the ability to make informed and responsible decisions.	In the garden, look to see if there is anything families buy that they could be growing in this region. Dedicate a space in the garden where students and/or families can grow produce to take home.	**Classroom:** Read selections from *What the World Eats* by Faith D'Aluisio and Peter Menzel. Compare and contrast what a week's worth of groceries looks like around the world.	**CCSS.MATH.CONTENT.4.MD.A.2** Use the four operations to solve word problems.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Researching Morocco	Food Preparation **(FP)**	**FP.4.4** Explain cultural and historical significance of preservation methods.	**Cooking Concept Lesson:** In preparation for the Feast Around the World, have students explore Morocco, locating it on a map, and researching different aspects of life in Morocco, including celebrations, customs, and the like. Explain that every culture around the world has preserved foods. In cold climates, they froze foods; in warmer climates, such as that in Morocco, they dehydrated food. Have them elaborate by preparing to present on their country in the Feast Around the World.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	If relevant, visit the Herbs of the World bed planted in **Grade 2 Lesson #13: Planting Herbs of the World** to harvest and add any common herbs from Morocco or other parts of Africa.	**Community:** Ask students if they have family members from Morocco or other countries in Africa. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography. **Social Studies:** Cultural Traditions. **CCSS.ELA-LITERACY.RI.4.7** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Moroccan Couscous 	Food Preparation **(FP)** Health Concepts **(HC)**	**FP.4.1** Demonstrate knowledge of how to wash and store fruits and vegetables. **HC.4.2** Understand that nutrients in soil and plants are assimilated into the body. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Harvest vegetables that are good raw, such as carrots and radishes, with students. As students harvest, thank the plants and soil for the nutrients they provide us. Then have students prepare **Moroccan Couscous, *There's a Chef in My World!***, and incorporate fruit this class dehydrated earlier in the year for the Feast Around the World.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use vegetables that are good raw, such as carrots and radishes from the garden. Bring compost out to the garden.	**Community:** Ask students if they have family members from Morocco or other countries in Africa. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography. **Social Studies:** Diversity and Culture.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Elementary School Feast Around the World!

GRADE 5 | *Kitchen*

SCOPE & SEQUENCE

GRADE 5 STANDARDS

At the end of Grade 5, students will be able to:

- Assign flavors, textures, and techniques to various cultural traditions.
- Understand basic principles of keeping foods at correct hot, holding, and cold temperatures.
- Demonstrate knowledge of proper tool use with supervision.
- Use more advanced kitchen tools and equipment.
- Demonstrate knowledge of food preservation techniques.
- Demonstrate knowledge of and perform simple recipes.
- Demonstrate understanding of the relationship between gardening, healthy food choices, and wellness.
- Interpret and utilize nutrition fact labels and food labels.
- Demonstrate knowledge of basic home economic principles for sourcing food items.
- Demonstrate understanding of food cost and food waste in the kitchen.

GRADE 5 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen!	Personal and Community Life Skills **(PLS and CLS)**		**Cooking Concept Lesson:** Engage students by having them share their names and something they like to cook. Review kitchen agreements established in **Grade 4 Lesson #1: Welcome to the Kitchen!** together. Review Personal and Community Life Skills. Then have students elaborate, practicing these agreements as they create and decorate a kitchen journal that they will use throughtout the year to document cooking projects and activities. Journaling is a great activity for students to do at home, in the classroom, or while a dish is cooking.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Look for similarities and differences between garden and kitchen agreements.	**Classroom:** Create and decorate a poster representing kitchen agreements.	**CCSS.ELA-LITERACY.SL.5.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Summer Pudding 	Recipe Concepts **(RC)** Health Concepts **(HC)** Kitchen Tools and Equipment **(KTE)**	**RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **HC.5.1** Summarize seed to plate process **KTE.5.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate how to use a bread knife safely and properly. Then have students prepare bread and berries for **Summer Pudding,** ***There's a Chef in My World!***. While pudding is setting in refrigerator, demonstrate how to use the electric mixer and then have students prepare whipped cream. Enjoy together the next day. When they finish, or for homework, have students trace the journey of the berries from farm to kitchen. Also have them record "Cook's Notes" on this recipe in their kitchen journals. 	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use berries and lemon from the garden. Garnish with edible flowers growing in the garden. Bring compost out to the garden.	**Community:** Work with community members to develop variations of the Summer Pudding recipe.	**Social Studies:** Cultural Traditions.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Knife Cuts	Recipe Concepts **(RC)** Kitchen Tools and Equipment **(KTE)**	**RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.5.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate how to cut a zucchini in half long-ways using a small chef's knife. Hand out knives and have students practice on a zucchini of their own. Then have them put the flat surface of the zucchini down, and demonstrate each of the following knife cuts, giving students time to practice on a fraction of zucchini afterwards: cube, rough chop, fine chop, dice, and slice. Discuss when each cut might be important.  **Caution**	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use zucchini from the garden. Bring compost out to the garden.	**Cafeteria:** Invite your food service director to discuss and demonstrate knife safety.	**NGSS Crosscutting Concept:** Structure and Function	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Oven-Roasted Veggies	Recipe Concepts **(RC)**	**RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.5.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review how to slice and chop safely and properly with a small chef's knife. Review the nutritional benefits of the vegetable food group. Then have students work together to prepare **Oven-Roasted Veggies, *There's a Chef in My Family!*.** While the veggies are roasting, or for homework, have students record some "Cook's Notes" on this recipe in their kitchen journals. 	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use potatoes, carrots, onion, squash, or zucchini and red bell pepper from the garden. Add in other produce growing in the garden. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Cafeteria:** Interview cafeteria staff on how the technique of roasting can be applied in other ways.	**CCSS.ELA-LITERACY.W.5.2.D** Use precise language and domain-specific vocabulary to inform about or explain the topic.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole 	Recipe Concepts **(RC)** Health Concepts **(HC)**	**RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **HC.5.3.** Describe the benefits of a nutrient rich diet. **KTE.5.1-4.** Kitchen Tools and Equipment	**Cooking Lesson:** Review safe use of knives then have students chop fresh garden vegetables such as onion, chard, or zucchini to add to quesadillas. Sautée the veggies and cook quesadillas for students. While you or another adult is cooking the quesadillas, have 1 group of students prepare salsa and the other group prepare guacamole. Then enjoy **Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole, *There's a Chef in My Soup!,*** together. When they finish, or for homework, have students record "Cook's Notes" on this recipe in their kitchen journals. 	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Incorporate fresh vegetables such as onion, chard, and zucchini from the garden. If available, add additional vegetables to the quesadillas. Add avocados, tomatoes, garlic, onions, bell peppers, and limes for the salsa and guacamole. Garnish with cilantro on the side if you have it growing. Bring your food scraps out to the compost.	**BAM! Box:** Challenge students to make quesadillas for their family at home and share the recipe they created or any photos they take with the class.	**CCSS.ELA-LITERACY.W.5.2** Write informative/ explanatory texts to examine a topic and convey ideas and information clearly.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Apple-of-My-Eye Crisp	Recipe Concepts **(RC)** Health Concepts **(HC)**	**RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **HC.5.1** Summarize seed to plate process **KTE.5.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate how to use a pastry blender (or 2 forks) safely and properly. Then have students prepare crust for **Apple-of-My-Eye Crisp, *There's a Chef in My Soup!*** Review tool safety, and then have students prepare filling. Enjoy together. When they finish or for homework, have students describe the journey of an apple from seed to crisp.	**CLS.2** Students cooperate and communicate well with each other.	Use apples from the garden. Add in other fruit growing in the garden. Bring compost out to the garden.	**Community:** Create videos of community members demonstrating their recipes and techniques for pie making.	**CCSS.MATH.CONTENT.4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 5 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Discovering Proteins	Health Concepts **(HC)**	**HC.5.4** Identify where proteins are sourced locally.	**Cooking Concept Lesson:** Engage students in a brainstorm of activities they like to do that require strong muscles (like sports). Explain that muscles and other parts of the body need protein to grow. Have students read Proteins Lesson for Kids: Definitions and Facts. Trace a student volunteer on butcher paper, and work with students to color in the parts of the body that are made of proteins. Around the body, have students write the names of activities they like to do that require muscles and, therefore, require protein. Title the poster "Why We Need Protein."	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	In **Grade 4 Garden Lesson #17: Planting Beans** these students planted beans that should now be fully grown, dried, and ready to explore.	**Community:** Take a field trip to a local plant-based protein farm and/or invite in a local plant-based protein farmer for a guest presentation with Q and A.	**CCSS.ELA-LITERACY.SL.5.1.A** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Miso Soup	Health Concepts **(HC)**	**HC.5.2** Define and describe what a protein is. **HC.5.3** Describe the benefits of a nutrient rich diet.	**Cooking Concept Lesson:** Review which foods have protein based on the reading students did in **Lesson #7: Discovering Proteins**. Engage students by having them talk about dishes they have prepared and/or eaten that contain proteins. Write the various protein sources on the board or a piece of chart paper. Add key proteins students do not mention, making sure to include beans. Explain beans are a plant-based protein, in the same food group as meats. Discuss how proteins help our bodies, and describe the benefits of proteins. Then prepare and enjoy **Miso Soup with Vegetable Stock, *Emerils.com*,** together and explain that tofu and miso both come from soy beans. When they finish, or for homework, have students record "Cook's Notes" on this recipe in their kitchen journals. 	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Discuss where the water in the soup came from, and draw a connection between our need for water and plant needs for water.	**Cafeteria:** Look at the upcoming cafeteria menu to identify when beans will be served. Create promotional materials for those dates to inform students of the health, environmental, and economic benefits of eating plant-based proteins.	**NGSS.5.LS2.B** Cycles of Matter and Energy Transfer in Ecosystems	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Layered Black Bean Chili Dip 	Food Preparation **(FP)** Health Concepts **(HC)**	**FP.5.1** Demonstrate understanding of how to handle, prepare, and process proteins using a variety of cultural traditions. **HC.5.2** Define and describe what a protein is. **RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.5.2-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review concept of beans being a plant-based protein source. Have students make **Layered Black Bean Chili Dip, *Emerils.com***. As you enjoy, discuss food groups represented in the dip, defining and describing plant-based proteins. When they finish, or for homework, have students record "Cook's Notes" on this recipe in their journals. 	**CLS.2** Students cooperate and communicate well with each other.	Use beans, tomatoes and cilantro from the garden. As you enjoy, trace ingredients back to their source, the soil. As you enjoy, give thanks to the rocks, and acknowledge the elements that broke them down into soil over time. Bring out compost to the garden.	**Community:** Look at menus from local restaurants to explore different uses of beans.	**NGSS.5.LS2.B** Cycles of Matter and Energy Transfer in Ecosystems.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Cooking Beans	Food Preparation **(FP)** Health Concepts **(HC)**	**FP.5.1** Demonstrate understanding of how to handle, prepare, and process proteins using a variety of cultural traditions. **HC.5.3** Describe the benefits of a nutrient rich diet. **RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.5.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate how to cook red, black and cannellini beans for **Beans Galore Salad, *There's a Chef in My Family!*.** While beans are cooking, have different groups research and then share out on different cultural uses of beans, such as miso (Japanese); refried beans (Mexican); and/or hummus (Mediterranean), and the health, economic and/or environmental benefits of plant-based diets. Once cooked, refrigerate or freeze beans for use in **Lesson #11: Beans Galore Salad.**	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use beans planted by students in **Grade 4 Garden Lesson #17: Planting Beans**.	**Classroom:** Research the history of beans throughout the world using books like *How Carrots Won the Trojan War* by Rebecca Rupp.	**Social Studies:** Geography. **Social Studies:** Cultural Traditions.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Beans Galore Salad 	Food Preparation **(FP)** Health Concepts **(HC)**	**FP.5.1** Demonstrate an understanding of how to handle, prepare, and process plant-based proteins using a variety of cultural traditions. **HC.5.4.** Identify where proteins are sourced locally. **RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.5.2-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review tool safety. Then use beans students cooked to prepare **Beans Galore Salad, *There's a Chef in My Family!.*** Use a map to identify where beans are sourced locally. When they finish, or for homework, have students record "Cook's Notes" on this recipe in their kitchen journals. 	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use beans, onions, and garlic and from the garden. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Community:** Create a cooking show style video showing the steps to make the Beans Galore Salad.	**CCSS.ELA-LITERACY.W.5.2.D** Use precise language and domain-specific vocabulary to inform about or explain the topic.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Student Plays	Health Concepts **(HC)**	**HC.5.1** Summarize seed to plate process.	**Cooking Concept Lesson:** Have students elaborate on kitchen and garden learning to date by having them write short plays summarizing the process from growing to preparing to eating something this year. Evaluate their understanding of this process as they perform plays for a live audience (such as a younger class).	**CLS.2** Students cooperate and communicate well with each other. **PLS.6** Students actively seek creative and resourceful solutions.	Perform the plays in the garden. Use real props from the garden, such as plants and tools.	**Community:** Invite community partners to come see the performances and learn more about the garden and kitchen program.	**CCSS.ELA-LITERACY.SL.5.4** Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

GRADE 5 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Designing Vegetarian and Vegan Meals	Food Preparation **(FP)** Health Concepts **(HC)**	**FP.5.2** Design and/or create complete protein meals using a variety of cultural traditions. **HC.5.3.** Describe the benefits of a nutrient rich diet.	**Cooking Concept Lesson:** Have students explore MyPlate or another food grouping resource. Explain or review the food groups and the desired ratio for a balanced meal. Define "complete protein." Divide students into teams. Then have students elaborate, challenging teams to create cost-conscious, complete protein meals, each reflecting a different cultural tradition. Have them draw their meal on a paper plate and then share out. As each group shares, discuss what food groups are included in each of the group's dishes.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team. **CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	As time allows or for homework, challenge students to design a theme garden bed for a nutritionally complete vegan meal.	**BAM! Box:** Plan and prepare a vegetarian meal or snack for your family.	**CCSS.MATH. CONTENT.4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Shopping on a Budget	Home Economics **(HE)**	**HE.5.1** Demonstrate knowledge of shopping for groceries on a budget. **HE.5.2** Understand the economic impact of growing your own food and using it in the kitchen.	**Cooking Concept Lesson:** Set up a pretend grocery store with each food product (or picture of a product) labeled with a price. Have students explore, giving them a budget and a challenge to plan a day's worth of meals that will include all of the food groups (grains, protein, fruit, vegetables, and dairy) and work within their budget.	**PLS.5** Students develop the ability to make informed and responsible decisions. **CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Once students finish the activity, suggest that they can harvest anything from the school garden and add it to their shopping carts for free. Then discuss how having a garden impacted their purchasing power.	**BAM! Box:** Discuss with caregivers what produce they could use at home. Then grow one thing in the garden for your family. Bring it home to prepare together, and then share out on what your family made with it.	**CCSS.MATH. CONTENT.4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Pasta Primavera	Recipe Concepts **(RC)** Culinary Flavors and Textures **(CFT)**	**RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **CFT.5.1** Describe how other cultures use flavors in their cuisines. **KTE.5.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review tool safety. Give students the recipe for **Pasta Primavera, *There's a Chef in My Family!*.** Have them work together to identify, locate, and gather the equipment and ingredients required, and then prepare the recipe. As they enjoy, explain that "primavera" means spring in Italian. Discuss how this recipe could be modified in different seasons to incorporate seasonal produce. When they finish, or for homework, have students record "Cook's Notes" on this recipe in their kitchen journals. 	**CLS.1** Students demonstrate problem solving and resolve conflict as a team. **CLS.2** Students cooperate and communicate well with each other.	Use carrots, asparagus, onion, garlic, zucchini, squash, tomatoes, and peas from the garden. Add in other produce growing in the garden. Bring compost out to the garden.	**Community:** Explore local restaurants for pasta dishes, noting the variety of ingredients and sauces.	**CCSS.ELA-LITERACY.W.5.3.C** Use a variety of transitional words, phrases, and clauses to manage the sequence of events.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Researching India	Culinary Flavors and Textures **(CFT)**	**CFT.5.2** Explain food traditions of other cultures using sensory language to describe flavor and ingredients. **CFT.5.1** Describe how other cultures use flavors in their cuisines.	**Cooking Concept Lesson:** In preparation for the Feast Around the World, have students explore India by locating it on a map, and researching different aspects of life in India, such as celebrations, customs, and the like. Have them elaborate, preparing to present on their country in the Feast Around the World.	**CLS.2** Students cooperate and communicate well with each other.	If relevant, visit the Herbs of the World Bed planted in **Grade 2 Lesson #13: Planting Herbs of the World** to harvest and add any common herbs or spices from India.	**Community:** Ask students if they have family members from India or other countries in the Indian subcontinent. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography. **Social Studies:** Diversity and Culture. **CCSS.ELA-LITERACY.RI.5.7** Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.	
17. Garam Masala	Recipe Concepts **(RC)** Culinary Flavors and Textures **(CFT)**	**RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **CFT.5.1** Describe how other cultures use flavors in their cuisines. **KTE.5.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate safe and proper use of a spice grinder. Then have students prepare **Garam Masala, *Emerils.com***. Store for use in **Lesson #18: Vegetable Curry**. When they finish, or for homework, have students record "Cook's Notes" on this recipe in their kitchen journals.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Discuss which part of the plant coriander, cumin, cardamom, and nutmeg are (seeds); what peppercorns are (fruits); what cloves are (flower buds); and what cinnamon is (stem).	**Classroom:** Read *Foods of India* by Christine VeLure Roholt.	**Social Studies:** Diversity and Culture.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Vegetable Curry	Culinary Flavors and Textures **(CFT)**	**CFT.5.2** Explain food traditions of other cultures using sensory language to describe flavor and ingredients. **CFT.5.1** Describe how other cultures use flavors in their cuisines.	**Cooking Lesson:** Harvest assorted vegetables together with students (see recipe for ideas). Review tool safety. Then divide tasks amongst teams and have each team contribute something to a collective **Vegetable Curry, *There's a Chef in My World!*,** for the Feast Around the World. When they finish, or for homework, have students record "Cook's Notes" on this recipe in their kitchen journals. 	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments. **CLS.4.** Students appreciate and are respectful of differences and diversity in their communities.	Use onion, ginger, garlic, jalapeño pepper, potatoes, and other assorted vegetables from the garden. Bring compost out to the garden.	**Community:** Ask students if they have family members from India or the Indian subcontinent and, if so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography. **Social Studies:** Diversity and Culture.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Elementary School Feast Around the World!

GRADE 6 | *Kitchen*

SCOPE & SEQUENCE

GRADE 6 STANDARDS

At the end of Grade 6, students will be able to:

- Demonstrate knowledge of culinary flavors and textures to identify ingredients.
- Demonstrate mastery of basic cooking methods and recipe preparations.
- Demonstrate ability to increase and decrease recipe portions.
- Demonstrate understanding of nutrition facts on food labels to make informed choices about healthy eating.
- Demonstrate understanding of food traditions and culture.
- Demonstrate knowledge of whole food versus processed food.
- Demonstrate the ability to plan and stage a thematic classroom event.

GRADE 6 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen!	Culinary Flavors and Textures **(CFT)**	**CFT.6.2** Understand the relationship between smell and taste in culinary practices. **FP.6.1** Demonstrate knowledge of safe food handling practices.	**Cooking Concept Lesson:** Explore with students ideas about how each individual can contribute to the kitchen space and the learning of every student. Then, explain that you will work together to develop kitchen agreements. Review Personal and Community Life Skills and safe food handling practices. Then elaborate, practicing these skills and agreements together as you play a blind taste test game in pairs. Gather as a class to discuss the important role of smell in helping taste food. Then, review the Personal and Community Life Skills that students demonstrated throughout the activity.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	For the smelling and tasting activity, use aromatic herbs or produce from the garden. Bring compost out to the garden.	**Classroom:** Write a poem about a dish, describing it using all of your senses; then reveal the name and origin of the dish in the end.	**NGSS.MS.LS.D.** Information Processing. **CCSS.ELA-LITERACY.SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Squash and Zucchini Casserole 	Recipe Concepts **(RC)**	**RC.6.1** Understand the importance of and how to measure various food, storage and cooking temperatures **CFT.6.1** Utilize taste sensations: sweet sour, bitter, and salty in a series of breakfast items for the class. **FP.6.1** Demonstrate knowledge of safe food handling practices **FP.6.2** Name and describe basic cooking techniques and use them as instructed to prepare recipes. **KTE.6.1-4** Kitchen Tools and Equipment.	**Cooking Lesson:** Introduce the **Summer Squash and Zucchini Casserole, *Emerils.com***, recipe. Review knife cuts students learned in **Grade 5 Lesson #3: Knife Cuts**. Have students practice by cutting squash and zucchini. Demonstrate how to sauté; then have students sauté vegetables. Have students prepare the casserole. Place in the oven, and explain the role of thermometers in the kitchen: to test temperatures of both ovens and dishes to cook things well. Demonstrate how to use a thermometer to check the temperature of the oven. While casserole bakes, have students practice using thermometers. They can measure temperatures in the freezer and refrigerator and compare to room temperature. Remove casserole from the oven, and demonstrate how to check the internal temperature before and after letting it rest. Explain that eggs have to be cooked to 160 degrees F in order to ensure that they are free of bacteria and safe to eat. When the casserole is ready, enjoy together and discuss the taste sensations experienced (salty egg mixture, sweet onions, possibly bitter if you added bitter greens, etc.).	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use squash, zucchini, and onion from the garden. Add in other summer squash, sun-dried tomatoes, or herbs from the garden. Bring compost out to the garden.	**Community:** Research organizations in your community that collect frozen meals to distribute to community members in need and donate a casserole.	**NGSS Science and Engineering Practice:** Analyzing and Interpreting Data.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Proteins	Health Concepts **(HC)**	**HC.6.3** Describe how the body uses nutrients from food to function. **HC.6.4** Identify where products from different food groups are sourced locally.	**Cooking Concept Lesson:** Have students prepare questions in advance to interview a local farmer/rancher. If possible, take a field trip to explore a local meat, egg or dairy farm and/or invite a local rancher to your class. Explain the various sources of protein and how and why to eat protein.	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	During this lesson, look around the garden for sources of protein. These might be eggs (if you have chickens), beans, or nuts. If you don't have any, discuss how you might add protein to your garden.	**Classroom:** Write a letter to the farmer thanking them for their time and expressing all that was learned.	**CCSS.ELA-LITERACY.SL.6.1.A** Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Ka-Bam Kabobs	Food Preparation **(FP)**	**FP.6.1** Demonstrate knowledge of safe food handling practices. **FP.6.2** Name and describe basic cooking techniques and use them as instructed to prepare recipes. **RC.6.1** Understand the importance of and how to measure various food, storage and cooking temperatures. **RC.6.3** Read and follow a recipe inferring whether it can be modified. **KTE.6.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Pre-marinate the meat for **Ka-Bam Kabobs, *There's a Chef in My Soup!*** If possible, incorporate meat raised by the rancher in **Lesson #3: Proteins**. Review safe use of the oven and have students preheat their ovens. Have them line a baking sheet with aluminum foil. Explain that raw meat can contain pathogens and therefore it is critical to follow safe protocols such as using a separate cutting board for meat; washing hands thoroughly before and after handling raw meat; and cooking meat to the correct temperature before eating. Demonstrate how to handle raw meat safely, review knife safety, and demonstrate skewer safety. Then have students chop vegetables and prepare kabobs. Have students scale up the recipe by adding more vegetables. Demonstrate how to place something in an oven safely, and then have students place kabobs in the oven. While the kabobs are cooking, have students wash hands well, and then demonstrate safe and proper use of hot pads to remove items from the oven. Have students remove kabobs. Review how to use a thermometer to check the internal temperature of meat. Have students check and remove their kabobs when the thickest part of the meat is at least 145 degrees F. Enjoy together.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use vegetables from the garden. Add in other produce growing in the garden. Bring compost out to the garden.	**Community:** Create a recipe for kabobs that you would like to create for your family at home.	**NGSS.MS.PS3.B** Conservation of Energy and Energy Transfer.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. One Stop Breakfast Casserole 	Food Preparation **(FP)**	**FP.6.1** Demonstrate knowledge of safe food handling practices. **FP.6.2.** Name and describe basic cooking techniques and use them as instructed to prepare recipes. **HC.6.5** Understand how to create complete protein dishes with vegan, vegetarian, and/or animal proteins. **KTE.6.1-4** Kitchen Tools and Equipment.	**Cooking Lesson:** Pre-make a, **One Stop Breakfast Casserole, *Emerils.com***. Begin baking 1 hour and 20 minutes before you plan to serve. With students, review bread knife safety, and then have students slice bread and prepare egg mixture while you cook sausage and shallots. Add in available garden vegetables. Discuss the importance of adding vegetables to make this a balanced meal, and then discuss the key nutrients found in each vegetable they added. Then have students layer the bread and sausage, pour over egg mixture, and cover. Reserve the casserole for the next class, and remove the pre-prepared, cooking casserole from the oven to serve. As students enjoy, have them share out which food groups are in this meal and why each is important to their health.	**CLS.2** Students cooperate and communicate well with each other.	Add chard, spinach, or other leafy greens growing in the garden. Garnish with herbs growing in the garden. Bring compost out to the garden.	**Community:** Interview community members about their favorite breakfast dishes.	**CCSS.ELA-LITERACY.W.6.3.C** Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Grilled Fish Tacos with a Roasted Chile and Avocado Salsa 	Food Preparation **(FP)**	**FP.6.1** Demonstrate knowledge of safe food handling practices. **FP.6.2** Name and describe basic cooking techniques and use them as instructed to prepare recipes. **KTE.6.1-4** Kitchen Tools and Equipment..	**Cooking Lesson:** Introduce the **Grilled Fish Tacos with a Roasted Chile and Avocado Salsa, *Emerils.com***, recipe. Have students wrap stacks of 5 tortillas and warm in oven. Have them prepare the salsa. Next demonstrate safe use of the grill or grill pan, prepare the fish for the grill, and then add to the grill. While it's cooking, demonstrate how to set a timer, assess flakiness, and flip when ready. Once fish is cooked, have students remove tortillas and assemble tacos to enjoy immediately. While eating, discuss where this dish falls on the whole food to highly processed food continuum and why (it is minimally processed). Then discuss the food groups represented in the tacos (tortilla: grains, fish: protein, salsa: vegetables), and discuss how to make this a more balanced meal (i.e. adding a salad for more vegetables, adding cheese for dairy, etc).	**PLS.4** Students are active and engaged learners who show up on time, prepared to learn and participate, and able to manage their time.	Add sliced cabbage, tomatoes, or other produce growing in the garden. Garnish with cilantro growing in the garden. Bring compost out to the garden. In **Garden Lesson #8: Garden Design Challenge, Part 2: Planting a Garden Bed**, show students fish emulsion, explain its function, and demonstrate how to apply it as an organic fertilizer in the garden.	**Classroom:** Have students research the history, cultural, and traditional significance of tacos.		**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 6 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Breakfast Party Planning, Part 1	Menu Development **(MD)**	**MD.6.1** Research and plan a menu suing world culture theme. **HC.6.1** Describe the health benefits of eating seasonal foods. **HC.6.2** Identify ingredients by name.	**Cooking Concept Lesson:** Explain the health benefits of eating seasonal foods. Then go out to the garden and have students look for foods that are ready to harvest. Have students list them. If there is nothing in the winter, go to the pantry and look for preserved foods and/or storage crops that were recently grown in the school garden. Use these as a jumping off point to have students elaborate, researching breakfast recipes at ***Emerils.com*** that might be suitable for an international Breakfast Party in the Afternoon that occurs in **Lesson #11: Breakfast Party Preparation**.	**PLS.5** Students develop the ability to make informed and responsible decisions.	Start this lesson in the garden to encourage the produce that's in abundance to drive recipe selection. If nothing is in season in the winter, do the same in the pantry to identify preserved foods and storage crops from the fall harvest.	**Classroom:** Use a flashlight and a globe in a dark room to model the cause of the seasons.	**NGSS.MS.ESS2.D** Weather and Climate.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Breakfast Party Planning, Part 2	Menu Development **(MD)**	**MD.6.1** Research and plan a menu using world culture theme.	**Cooking Concept Lesson:** Assign student teams different regions to represent for their breakfast items. Have them continue exploring, researching possible recipes for the Breakfast Party. Gather and have each team suggest a few breakfast recipe options that represent their assigned region or culture. Explain and discuss how family and culture influence eating and other health-related behaviors.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	As students research breakfast options from other regions, have them note produce we have in common, and produce that grows elsewhere but not locally.	**BAM! Box:** Have students plan with their families or community members a breakfast item that they will bring from home to add to the Breakfast Party in the Afternoon.	**Social Studies:** Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Breakfast Party Planning, Part 3	Menu Development **(MD)**	**MD.6.2** Create recipes to scale. **HE.6.2** Demonstrate knowledge of planning and cooking healthy meals on a budget. **RC.6.2** Demonstrate ability to decrease and increase portions using US customary standards. **RC.6.3** Read and follow a recipe inferring whether it can be modified.	**Cooking Concept Lesson:** Provide student teams with a grocery budget. Explain that they can use anything in the garden (i.e. produce that's ready to harvest) or kitchen (i.e. preserved foods, oils, spices, etc),and that they have a specified budget to purchase groceries. Have the teams work together to elaborate, selecting a recipe from their research they can scale up to serve the entire class plus their families. Then have them visit a local grocery store or use an online grocery tool to price out the ingredients to determine if they can prepare it within their budget. Continue until everyone has a recipe that will work.	**PLS.6** Students actively seek creative and resourceful solutions.	Have students start with a walk through the garden to remind themselves of what's available to harvest. If nothing is in season in the winter, do the same through the pantry to find storage crops and preserved foods from the fall harvest.	**Community:** With your family, assess what is available in the kitchen, set a grocery store budget, and go shopping to complete meals under budget.	**CCSS.MATH. CONTENT.6.NS.B.3** Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Home-made Yogurt 	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.6.4** Identify where products from different food groups are sourced locally. **HC.6.6** Demonstrate knowledge of whole foods, minimally processed foods and processed foods. **FP.6.1** Demonstrate knowledge of safe food handling practices. **FP.6.2** Name and describe basic cooking techniques and use them as instructed to prepare recipes. **KTE.6.1-4** Kitchen Tools and Equipment.	**Cooking Lesson:** Discuss the role of dairy in a healthy diet and identify where dairy is sourced locally. Discuss the unique role of yogurt in promoting healthy digestion by increasing beneficial bacteria. Review stove safety. Demonstrate how to use a candy thermometer. Guide students in making **Homemade Yogurt, *Emerils.com***. As it's heating, recall with students other dairy products they have had in various dishes from diverse cultures. When it's time to enjoy the yogurt (1-4 days later, ideally at your Breakfast Party), have students sweeten to taste and mix with berries. Look together at food labels for a variety of store-bought yogurts (including sweetened flavors) to compare.	**PLS.5** Students develop the ability to make informed and responsible decisions.	Use berries (possibly some frozen in fall) from the garden. As you enjoy, trace ingredients back to their source.	**Classroom:** Have students read about and discuss the chemical processes involved in making yogurt, using a resource such as Semisolid Science: Growing Yogurt from *Scientific American*.	**NGSS.MS.PS1.B.** Chemical Reactions Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants. **(MS-PS1-2), (MS-PS1-3), (MS-PS1-5).**	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Breakfast Party Prepara-tion	Business Planning **(BP)**	**BP.6.1** Demonstrate ability to plan and stage a classroom event that promotes healthy eating, reflects a world culture, and includes family and community. **CFT.6.1** Utilize taste sensations: sweet sour, bitter, and salty in a series of breakfast items for the class. **HC.6.2** Identify ingredients by name. **MD.6.3** Harvest, cook and serve food. **KTE.6.1-4** Kitchen Tools and Equipment.	**Cooking Lesson:** It's Breakfast Party Day! Have students cook the recipe they selected and properly set a table from which they'll serve and enjoy their meal. If necessary, store items appropriately to be served later in the day.	**CLS.2** Students cooperate and communicate well with each other.	Use produce from the garden. Decorate with flowers from the garden. Bring compost out to the garden.	**Community:** Interview community members about how food is a part of different celebrations in their culture.	**CCSS.ELA-LITERACY.SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Nutrients	Health Concepts **(HC)**	**HC.6.3** Describe how the body uses nutrients from food to function.	**Cooking Concept Lesson:** Engage students in a discussion of how exactly they think our bodies get nutrients from food. Then have them read a description of that process. Ask them to elaborate on their learning by creating comic strips depicting this process from the perspective of a particular food they have prepared in the kitchen this year.	**PLS.5** Students develop the ability to make informed and responsible decisions.	During this kitchen lesson, compare the process of food being digested and releasing nutrients into our bloodstream with the process of food being decomposed and releasing nutrients into the soil in a compost system.	**Cafeteria:** Have students create labels for various cafeteria offerings (such as at a salad bar) indicating the nutrient content of each food. Have them include how that nutrient supports overall health (i.e. High in Vitamin A, Good for Eyesight).	**NGSS MS.LS1.C:** Organization for Matter and Energy Flow in Organisms Within individual organisms, food moves through a series of chemical reactions in which it is broken down and rearranged to form new molecules, to support growth, or to release energy.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

GRADE 6 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Lemon Poppy Seed Muffins with Raspberry Butter 	Health Concepts **(HC)**	**HC.6.3** Describe how the body uses nutrients from food to function. **HC.6.6** Demonstrate knowledge of whole foods versus minimally processed foods.	**Cooking Lesson:** Provide each team with the recipe for **Lemon Poppy Seed Muffins with Raspberry Butter, *Emerils.com***. Have them work together to locate the ingredients and equipment necessary and to prepare their muffins. As you enjoy together, discuss the ingredients used. Compare with ingredients from a highly processed, store-bought muffin. Show students how to research nutrients in a particular ingredient. Have them research ingredients used in both types of muffins and discuss the nutrients present in each, along with what provides more healthy nutrients to the body. NOTE: If you type the name of any fruit or vegetable into Google, you get a Nutrition Facts label indicating levels of nutrients such as Vitamin A or Protein in a serving.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Use lemons and raspberries from the garden. Bring compost out to the garden.	**Community:** Visit a local bakery to explore the variety of muffins available.	**CCSS.MATH. CONTENT.6.RP.A.3** Use ratio and rate reasoning to solve real-world and mathematical problems	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Breakfast Business	Home Economics **(HE)**	**HE.6.1** Compare and contrast economics of cooking from single ingredients at home, foods grown in the garden, and purchasing ready-made foods.	**Cooking Concept Lesson:** Explain to students how to make a plan for a muffin or other breakfast item-based business. Ideally, this can be a real business run by the Grade 6 class, such as selling muffins weekly to interested school staff. Have student teams discuss, exploring the pros and cons of various possible business options to pursue.	**PLS.6** Students actively seek creative and resourceful solutions.	Incorporate fresh garden produce into the product. If you make a stand, decorate with flowers from the garden. Bring compost out to the garden.	**Classroom:** Have students use real-world experiences with their breakfast business to write and solve word problems related to business income and expenses.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.6.RP.A.3.B** Solve unit rate problems including those involving unit pricing and constant speed.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Breakfast Business Planning	Recipe Concepts **(RC)**	**RC.6.2** Demonstrate ability to decrease and increase portions using US customary standards. **RC.6.3** Read and follow a recipe inferring whether it can be modified. **BP.6.2.** Create simple financial plan. **BP.6.3.** Balance the income and expenses. Plan for shortfall or excess.	**Cooking Concept Lesson:** Explain to students how to create a simple financial plan for their breakfast business, elaborating upon the skills they developed in planning their Breakfast Party in the Afternoon to project expenses. Have them use this information, together with market price for muffins (or whatever they're making), to determine the price they want to charge for their product. Make signs and flyers announcing the business.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	When budgeting for the breakfast business, have students consider how they can incorporate garden produce to maximize fresh, local produce in their recipes and also bring their costs down.	**Community:** Present financial plan to a local baker to receive feedback on ideas.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.6.RP.A.3.B** Solve unit rate problems including those involving unit pricing and constant speed.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Breakfast Business Implementation	Business Planning **(BP)**	**BP.6.2** Create simple financial plan. **BP.6.3** Balance the income and expenses. Plan for shortfall or excess.	**Cooking Lesson:** Have students prepare their muffins or other breakfast products together and sell them. Then compare projected budget to actuals and make adjustments for next time.	**CLS.2** Students cooperate and communicate well with each other.	Incorporate produce from the garden into the breakfast business.	**Classroom:** Use data and tracking methods throughout business operation for later analysis.	**Social Studies:** Economics. **CCSS.ELA-LITERACY.SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.	

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Researching for the Feast Around the World	Business Planning **(BP)**	**BP.6.1** Demonstrate ability to plan and stage a classroom event that promotes healthy eating, reflects a world culture, and includes family and community.	**Cooking Concept Lesson:** In preparation for the Feast Around the World, the Grade 7 class takes the lead on planning the event and assigns the Grade 6 and Grade 8 classes a country or region. Once students have their country, have them explore the country, locating it on a world map and researching different aspects of life in the country, including celebrations, customs, and the like. Have them elaborate, preparing to present on the country in the Feast Around the World. Explain that the Grade 7 class will help them select a realistic and healthy dish to prepare from that country.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In **Garden Lesson #17: Seasonal Patterns in the Garden** and **Garden Lesson #18: Connecting Climate to Crops to Traditional Foods Around the World**, students will be researching the connection between climate and seasonal growing options. In their research for the Feast Around the World, have them focus specifically on climate and seasonal growing options for the region they've been assigned.	**Community:** Ask students if they have family members from the countries or regions represented in the Feast Around the World. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography and Culture.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Cook for the Feast Around the World 	Business Planning **(BP)**	**BP.6.1** Demonstrate ability to plan and stage a classroom event that promotes healthy eating, reflects a world culture, and includes family and community. **KTE.6.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Have students prepare their dish for the Feast Around the World.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	In **Garden Lesson #17: Seasonal Patterns in the Garden** and **Garden Lesson #18: Connecting Climate to Crops to Traditional Foods Around the World**, students will be researching the connection between climate and seasonal growing options. For the dish they prepare, have them focus specifically on climate and seasonality of the ingredients used.	**Community:** Ask students if they have family members from the countries or regions represented in the Feast Around the World. If so, invite them in to share a favorite recipe from the region. **Classroom:** Have students journal about their favorite recipe from the Feast Around the World including support of why they chose the dish as their favorite.	**Social Studies:** Geography and Culture.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Middle School Feast Around the World!

GRADE 7 | *Kitchen*

SCOPE & SEQUENCE

GRADE 7 STANDARDS

At the end of Grade 7, students will be able to:

- Understand and articulate the relationship between the culinary arts and senses.
- Demonstrate increased skill of kitchen tools and equipment.
- Demonstrate the ability to prepare a variety of dishes following more complex recipes.
- Demonstrate knowledge of ingredients and relate seasonality to the availability of ingredients.
- Demonstrate knowledge of various ways other cultures incorporate food groups into their diets.
- Describe the health benefits of seasonal eating.
- Demonstrate understanding of and define a local food system.
- Demonstrate knowledge of all food groups and explain how cooking methods can alter the nutritive value of food.
- Demonstrate knowledge of basic business planning skills for a food related product or concept.

GRADE 7 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen!	Personal and Community Life Skills **(PLS and CLS)**	**HC.7.2** Identify and harvest foods from the garden when they are at their peak for preserving. **HC.7.3** Relate seasonality to availability of ingredients. **FP.7.1** Demonstrate knowledge of safe food handling practices with increased skill.	**Cooking Concept Lesson:** Have students share names and explore kitchen agreements together created in **Grade 6 Lesson #1: Welcome to the Kitchen**. Ask for any suggestions before approving the agreements. Review Personal and Community Life Skills. Then have students elaborate, practicing these skills and agreements together as they walk through the garden to identify what is in abundance. Have them decide together on something they can harvest and preserve. Review safe and proper harvesting and food handling, review why this is important, and then harvest together. Enjoy and then bring the remaining produce into the kitchen together to store for making preserves in **Lesson #2: Making Preserves**. Have students create a kitchen journal to document cooking projects and activities throughout the year.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	As students harvest produce in this kitchen lesson, have them recall the process of growing and caring for it.	**Classroom:** Work with students to develop a method of measuring the garden's abundance.		**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Making Preserves 	Health Concepts **(HC)**	**HC.7.2** Identify and harvest foods from the garden when they are at their peak for preserving. **HC.7.3** Relate seasonality to availability of ingredients. **HC.7.4** Demonstrate understanding of how cooking techniques can alter nutrients in food. **HC.7.6** Read and interpret food labels and terms.	**Cooking Lesson:** Provide students with a recipe for preserving the produce they harvested in **Lesson #1: Welcome to the Kitchen**. Review safe and proper use of the stove. Help students prepare the recipe. As the jam or other product is cooking down, have students research nutrients prevalent in this food, how those nutrients support overall health, and how cooking techniques can alter the nutrients in foods. Note: It is ideal to process the jars as described in **Lesson #3: Canning Preserves** directly after making them.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use produce from the garden. Deliver compost to the garden. Trace ingredients back to the garden in marketing materials for the preserved product.	**Classroom:** Research animals that hibernate and how they take advantage of the abundant seasons to last through the winter.	**Social Studies:** Economics.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Canning Preserves 	Home Economics **(HE)**	**HE.7.1** Explore the economic impact of preserving foods (freezing, canning, and drying foods at the peak of their ripeness for winter use). **HC.7.4** Demonstrate understanding of how cooking techniques can alter nutrients in food. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review safe and proper use of the stove and safe canning procedures as outlined in the USDA Complete Guide to Home Canning. Help students preserve their jam or other product in jars. As the jars are warming, have students research and make nutrition labels for the preserves, listing the ingredients in order, the nutrients present, and noting how each of those nutrients supports overall health. Also have students discuss and research the economic impact of preserving your own food.	**CLS.2** Students cooperate and communicate well with each other.	Use produce from the garden. Deliver compost to the garden. Trace ingredients back to the garden in marketing materials for the preserved product.	**BAM! Box:** Have students bring home a jar of preserves to enjoy with family and/ or community in a creative way. Document and share how they enjoyed the preserve (on toast or with cheese, for example). Have them write recipes that use the preserve to be shared with customers.	**VA:Cr2.3.6a** Design or redesign objects, places, or systems that meet the identified needs of diverse users.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Researching Nutrients	Health Concepts **(HC)**	**HC.7.6** Read and interpret food labels and terms.	**Cooking Concept Lesson:** Define nutrients as substances that provide nourishment essential for growth and maintenance of life. Assign a nutrient to each pair of students, including all macronutrients (i.e. proteins, carbohydrates, etc.), and some common micro-nutrients, like vitamin A or calcium. Have pairs explore, researching how their nutrient helps the body. Trace a student on butcher paper and then have each pair of students elaborate, sharing out the findings on their nutrient. As they do, have them write the name of that nutrient in a color (say red for calcium) and then draw something on the body to represent how calcium supports the body in overall health (i.e. draw in strong bones in red). Then give pairs food labels, demonstrate how to find information on labels, and have them elaborate on their learning, reading their labels to determine how that food would contribute to overall health.	**CLS.2** Students cooperate and communicate well with each other.	In the kitchen, research produce items growing in the garden to determine which nutrients they have.	**Cafeteria:** Make informational posters on the nutrients to hang in the cafeteria, particularly highlighting any nutrient-dense foods in the lunch line.	**NGSS.MS.LS1.C.** Organization for Matter and Energy Flow in Organisms.	**National Health Education Standard 3:** Students will demonstrate the ability to access valid information, products, and services to enhance health. **National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Seared Pork Chops with Hoisin BBQ Sauce and Pineapple Asian Slaw 	Culinary Flavors and Textures **(CFT)**	**CFT.7.1** Utilize taste sensations: sweet sour, bitter, and salty in a series of lunch items for the class. **CFT.7.2** Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples. **FP.7.2** Use a variety of cooking techniques. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Have students follow recipe to prepare Hoisin BBQ Sauce and Slaw for **Seared Pork Chops with Hoisin BBQ Sauce and Pineapple Asian Slaw, *Emerils.com***. Demonstrate how to season pork, heat the skillet, and then cook the pork. Explain that it is important to preheat the skillet when cooking meat in order to minimize sticking and also to precipitate a series of chemical reactions that will help the meat brown and develop flavors. Have students cook pork and assemble the dish. While enjoying, have students describe the food's appearance, smell, texture, and taste. Discuss the flavors of each ingredient, and reflect on the combination. Also have them research the nutrients prevalent in the ingredients they used and discuss how this dish contributes to overall health.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Use cabbage from the garden. Garnish with herbs and/or edible flowers from the garden. Deliver compost to the garden. Trace ingredients back to the garden.	**Community:** Interview local chefs about their favorite marinades.	**NGSS.MS.PS3.B** Conservation of Energy and Energy Transfer.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Fall Quinoa Tabbouleh 	Health Concepts **(HC)**	**HC.7.1** Demonstrate an understanding of how seasonality influences traditional cultural dishes. **HC.7.3** Relate seasonality to availability of ingredients. **RC.7.1** Compare and contrast recipes from various world cultures. **RC.7.3** Follow a recipe with increased independence and make modifications with the ingredients. **CFT.7.1** Utilize taste sensations: sweet, sour, bitter, and salty in a series of lunch items for the class. **CFT.7.2** Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Pre-cook quinoa. Show quinoa to students and share its origin (Andean, South America). Discuss the health benefits of quinoa (high in protein). Have students prepare quinoa for recipe. While it's cooking, have students look over the recipe for **Fall Quinoa Tabbouleh, *Emerils.com***, and brainstorm how to modify it to incorporate available, seasonal produce. Review tool safety, and then have students use the pre-cooked quinoa to follow the recipe. Reserve the quinoa they cooked for the next class. As you enjoy, discuss how this recipe combines a South American crop with a Mediterranean recipe. Have students share ideas for how it could be modified to incorporate seasonal produce in the winter or spring. Also have students describe the dish's appearance, smell and taste.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use apples and onions from the garden. Add in other produce from the garden, such as sugar snap peas, corn, or cherry tomatoes. Deliver compost to the garden. As you enjoy, trace ingredients back to the garden.	**Community:** Create recipe cards for the dish and share with school administration and staff.	**Social Studies:** Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 7 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Posole 	Food Preparation **(FP)** Recipe Concepts **(RC)**	**FP.7.2** Use a variety of cooking techniques. **FP.7.3** Identify the right cooking technique to complete a task and articulate why it is the correct technique. **RC.7.1** Compare and contrast recipes from various world cultures. **RC.7.3** Follow a recipe with increased independence and make modifications with the ingredients. **CFT.7.1** Utilize taste sensations: sweet sour, bitter, and salty in a series of lunch items for the class. **CFT.7.2** Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review tool and stove safety. Guide students through making **Posole, *Emerils.com*.** Demonstrate searing and other new stovetop techniques as you go, discussing when each is appropriate to use. While soup thickens, have students compare and contrast the preparation of hominy with that of quinoa, highlighting that both are grains. As they enjoy, have them compare hominy with other corn products they eat. Explain that Posole is a traditional Mexican dish that is frequently served on celebratory occasions such as Cinco de Mayo and New Year's Day. As they eat, have students describe the dish's appearance, smell and taste and compare to other recent dishes they've prepared.	**CLS.2** Students cooperate and communicate well with each other.	Use onions, tomatoes, garlic, cilantro, lettuce, and radish from the garden. Deliver compost to the garden. As you enjoy, trace ingredients back to their source.	**Classroom:** Video a cooking show style presentation with information about different grains and the demonstration of at least one recipe.	**Social Studies:** Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. Five Grain Salad 	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.7.1** Demonstrate an understanding of how seasonality influences traditional cultural dishes. **HC.7.3** Relate seasonality to availability of ingredients. **FP.7.3** Identify the right cooking technique to complete a task and articulate why it is the correct technique. **CFT.7.1** Utilize taste sensations: sweet sour, bitter, and salty in a series of lunch items for the class. **CFT.7.2** Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Review tool and stove safety. Divide class into 5 teams and give each team one of the following grains to cook and a recipe to prepare: wild rice, amaranth, quinoa, millet, and brown rice. Once all grains are cooked, guide class through preparing **Five Grain Salad, *Emerils.com***. As you enjoy, have students share ideas for how they could modify these dishes to incorporate seasonal produce in the fall or spring. Also have students describe the dish's appearance, smell and taste and compare to other recent dishes they've prepared. 	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments	Use produce from the garden, if available. Challenge teams to modify recipes to incorporate abundant garden produce or preserved foods, if available. Deliver compost to the garden. As you enjoy, trace ingredients back to their source.	**Classroom:** Research how grains are grown around the world.	**NGSS.MS.LS4.D** Biodiversity and Humans.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. Creole Rice Salad 	Health Concepts **(HC)** Recipe Concepts **(RC)**	**HC.7.1** Demonstrate an understanding of how seasonality influences traditional cultural dishes. **HC.7.3** Relate seasonality to availability of ingredients. **RC.7.1** Compare and contrast recipes from various world cultures. **RC.7.3** Follow a recipe with increased independence and make modifications with the ingredients. **CFT.7.1** Utilize taste sensations: sweet sour, bitter, and salty in a series of lunch items for the class. **CFT.7.2** Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Pre-cook rice. Review tool and stove safety. Give students recipe and help them prepare **Creole Rice Salad, *Emerils.com***, modifying as they see fit to incorporate available, seasonal produce. As you enjoy, discuss the origin of this dish (Creole), and have students share ideas for how they could modify this dish to incorporate seasonal produce in the fall or spring. Also have students describe the dish's appearance, smell, and taste, and compare to other recent dishes they have prepared.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Use produce from the garden, if available. Challenge teams to modify recipes to incorporate abundant garden produce or preserved foods, if available. Deliver compost to the garden. As you enjoy, trace ingredients back to their source.	**Classroom:** Research other Creole recipes and traditions.	**Social Studies:** Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. Fried Wild Mushroom Salad with Wild Mushroom Dressing	Health Concepts **(HC)**	**HC.7.1** Demonstrate an understanding of how seasonality influences traditional cultural dishes. **HC.7.3** Relate seasonality to availability of ingredients. **CFT.7.1** Utilize taste sensations: sweet sour, bitter, and salty in a series of lunch items for the class. **CFT.7.2** Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Have students look at wild mushrooms and discuss the role of foragers in the food system. Make clear the risk of foraging your own mushrooms and explain how you know where you can get safe mushrooms (from grocery stores or professional, certified foragers). Demonstrate how to fry mushrooms and explain that frying brings out the flavor. Guide students in preparing **Fried Wild Mushroom Salad with Wild Mushroom Dressing, *Emerils.com*.**	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Discuss the role of fungi as decomposers in the garden. Review the important role decomposers play in returning nutrients to the soil and thus into the plants we eat.	**Classroom:** Have students use field guides to identify various mushrooms that grow locally in the wild. NOTE: Do not allow students to eat mushrooms they or you have collected.	**NGSS.MS.LS2.A** Interdependent Relationships in Ecosystems.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Vegetable Frittata 	Health Concepts **(HC)**	**HC.7.1** Demonstrate an understanding of how seasonality influences traditional cultural dishes. **HC.7.3** Relate seasonality to availability of ingredients. **CFT.7.1** Utilize taste sensations: sweet sour, bitter, and salty in a series of lunch items for the class. **CFT.7.2** Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Guide students in preparing the recipe **Vegetable Frittata, *Emerils.com*.** Highlight that they can use any vegetables they choose. Then challenge each cooking station team to develop its own version featuring local, seasonal produce. When all frittatas are cooked, slice so that each student gets a small slice of each frittata. Have teams present their frittatas, explaining their rationale for the culinary decisions they made. As students taste each one, have them describe the appearance, smell, and taste of each one. Have students record notes in their journals. 	**CLS.2** Students cooperate and communicate well with each other.	Use any abundant garden produce, if available. Deliver compost to the garden. As you enjoy, trace ingredients back to their source.	**Classroom:** Create vegetable frittata recipes for each season and submit to the local newspaper for publication in the appropriate seasons.	**CCSS.ELA-LITERACY.W.7.2.C** Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Steamed Baby Cauli-flower	Food Preparation **(FP)** Recipe Concepts **(RC)**	**FP.7.3** Perform basic recipe actions using vegetables and moist (steam, water) heat. **RC.7.2** Perform entry-level culinary measurements using metric system measurements of volume, weight, and whole, decimal, and fractional numbers. **RC.7.3.** Follow a recipe with increased independence and make modifications with the ingredients. **KTE.7.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Have students measure volume and weight of all ingredients for **Steamed Baby Cauliflower, *Emerils.com*,** using the metric system. Review stove safety, and demonstrate how to use a steamer insert. Then provide cooking station teams the recipe to prepare the dish. Before enjoying, have students measure and weigh all ingredients again and compare to the weight and volume before cooking. Discuss why chefs need to anticipate such changes in food weight and volume.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use celery, lemon, garlic and/ or cauliflower from the garden. Deliver compost to the garden. As you enjoy, trace ingredients back to their source.	**Classroom:** First, make a prediction and then research what the cauliflower plant looks like throughout its life cycle.	**CCSS.MATH.CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 7 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Brain-storming Recipes for the Feast Around the World	Recipe Concepts **(RC)**	**RC.7.1** Compare and contrast recipes from various world cultures. **BP.7.1** Demonstrate ability to plan and stage a school event that promotes healthy eating, reflects a world culture, and includes family and community.	**Cooking Concept Lesson:** Explain that Grade 7 students become the event planners for the Middle School Feast Around the World. Have students apply what they learned from the Elementary School Feast to plan and prepare their own. Explain that after researching, they will assign countries and recipes to Grades 6 and 8. Assign each team a region of the world and show that region on the world map. Put out various cookbooks, such as Emeril's ***There's a Chef in My World!*** or online recipe resources such as *Emerils.com* and have student teams begin to explore, brainstorming recipes from coutries representing their region of the world.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	During this kitchen lesson, have students walk around the garden and brainstorm how to incorporate abundant produce into their recipes.	**Classroom:** Read selections from *What the World Eats* by Faith D'Aluisio and Peter Menzel.	**Social Studies:** Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Selecting Recipes for the Feast Around the World	Menu Development **(MD)**	**MD.7.1** Demonstrate ability to develop and plan large event using world culture theme. **HC.7.3** Relate seasonality to availability of ingredients.	**Cooking Concept Lesson:** In teams, have students select dishes from the region of the world they are researching that can feature local produce in abundance, and that can be scaled up to provide a small taste to all of the middle school students and their families. Explain how, and then have them work together to scale the recipe appropriately. Create a required list of ingredients. Have them reference the Kitchen Tools and Behaviors list to determine what dishes can be prepared by which classes (Grade 6, 7, or 8). Note that they can choose more than one dish to be prepared by the same grade, particularly if there is more than one class at that grade level. For example, one Grade 6 class might make Tabbouleh, and another might make Kabobs. Have students elect dishes for Grade 7 that can be prepared a week in advance, such as refrigerated pickles, popsicles, dehydrated fruit, or the like.	**CLS.2** Students cooperate and communicate well with each other.	Work with students to modify recipes to incorporate as much produce as possible from the garden.	**Classroom:** Collect data on the taste tests implemented with the students in **Lesson #11: Vegetable Frittata**.	**CCSS.MATH. CONTENT.7.NS.A.3** Solve real-world and mathematical problems involving the four operations with rational numbers.	**National Health Education Standard 6:** Students will demonstrate the ability to use goal-setting skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Community Support for the Feast Around the World	Menu Development **(MD)**	**MD.7.1** Demonstrate ability to develop and plan large event using world culture theme. **HC.7.3** Relate seasonality to availability of ingredients.	**Cooking Concept Lesson:** Engage teams in brainstorming ingredients and other supplies (i.e. decorations, beverages, etc) for their Feast that they might be able to get donated. Have each student explore community engagement and support by writing a letter to a business requesting support and explaining the social and nutritional benefits of the Feast Around the World.	**PLS.6** Students actively seek creative and resourceful solutions.	Have students include photos or illustrations of their garden in their donation request and thank you letters.	**Community:** Work with school staff and parents to identify resources within the extended school community that may want to be involved.	**CCSS.ELA-LITERACY.W.7.4** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	**National Health Education Standard 8:** Students will demonstrate the ability to advocate for personal, family, and community health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Planning for the Feast Around the World	Menu Development **(MD)**	**MD.7.1** Demonstrate ability to develop and plan large event using world culture theme. **BP.7.2** Understand simple profit and loss balance sheet for event. **RC.7.1** Compare and contrast recipes from various world cultures. **RC.7.2** Perform entry-level culinary measurements using metric system measurements of volume, weight, and whole, decimal, and fractional numbers.	**Cooking Concept Lesson:** Explain how and then have student teams turn their required lists of ingredients into a food order and attach prices to each item to determine the cost of their dish.	**PLS.5** Students develop the ability to make informed and responsible decisions.	During this kitchen lesson, have students visit the garden to determine which ingredients they can harvest and what they will need to purchase.	**Community:** Ask students if they have family members from the countries or regions represented in the Feast Around the World. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography and Culture.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Cooking for the Feast Around the World	Recipe Concepts **(RC)**	**RC.7.2** Perform entry-level culinary measurements using metric system measurements of volume, weight, and whole, decimal, and fractional numbers. **RC.7.3** Follow a recipe with increased independence and make modifications with the ingredients. **HC.7.3** Relate seasonality to availability of ingredients. **HC.7.4** Demonstrate understanding of how cooking techniques can alter nutrients in food.	**Cooking Lesson:** Have student teams work together to prepare their dish for the Feast Around the World. This should be something that they can store for a week, such as a dehydrated fruit, popsicles, refrigerator pickles, or the like. Discuss how processing affects nutrients in food.	**PLS.6** Students actively seek creative and resourceful solutions.	Use produce from the garden. Deliver compost to the garden. As you prepare the food, trace ingredients back to their source.	**Community:** Ask students if they have family members from the countries or regions represented in the Feast Around the World. If so, invite them in to help students prepare a favorite recipe from the region.	**Social Studies:** Geography and Culture.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Preparing for the Feast Around the World	Business Planning **(BP)**	**BP.7.1** Demonstrate ability to plan and stage a school event that promotes healthy eating, reflects a world culture, and includes family and community.	**Cooking Concept Lesson:** While students in Grades 6 and 8 cook for the Feast Around the World, have students in Grade 7 work on the remaining event details, including: welcoming in community partners, decorating, making informational signs, and the like.	**PLS.3** Students cultivate honest and responsible behaviors that contribute to the learning of the community.	Use flowers from the garden for bouquets. If hosting the event in the garden, prepare the site for the Feast.	**Community:** Ask students if they have family members from the countries or regions represented in the Feast Around the World. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography and Culture.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

Middle School Feast Around the World!

GRADE 8 | *Kitchen*

SCOPE & SEQUENCE

GRADE 8 STANDARDS

At the end of Grade 8, students will be able to:

- Demonstrate mastery of culinary flavors and textures, recipe concepts, food preparation, menu development, and health concepts.
- Demonstrate the ability to modify recipes independently and incorporate seasonal ingredients and spices when available.
- Demonstrate understanding and articulate the relationship between soil, food, and health.
- Demonstrate knowledge of basic business planning to market and sell a food related product.
- Demonstrate knowledge and identify appropriate cooking methods to meet dietary and health needs.
- Demonstrate ability to create a dish using flavors and textures from other cultures.
- Demonstrate knowledge of complex menu development using several cooking methods and ingredient substitutions.

GRADE 8 | FALL

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
1. Welcome to the Kitchen!	Culinary Flavors and Textures **(CFT)**	**CFT.8.3** Create a menu that includes combinations of basic textures and taste sensations from a variety of cultures. **HC.8.3** Describe seasonality and name ingredients that are grown in different seasons.	**Cooking Concept Lesson:** Have students share names and explore kitchen agreements together created in **Grade 7 Lesson #1: Welcome to the Kitchen**, asking for any suggested updates. Review Personal and Community Life Skills. Then have students elaborate, practicing these skills and agreements together as they look through cookbooks or online recipes at *Emerils.com* to brainstorm possible dishes that would fit into a dinner menu that incorporates a variety of taste sensations and cultural traditions. For homework, have students create their Grade 8 cooking journals to record every dish they prepare this year using Cook's Notes. Then instruct students to record every dinner they eat for the next few weeks.	**PLS.1-6** **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Challenge students to find dinner recipes that feature produce that's in abundance in the garden.	**Community:** Visit a local bookstore and explore the variety of cookbooks available.	**Social Studies:** Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
2. Preparing the Product for Our Business 	Recipe Concepts **(RC)**	**RC.8.1** Convert recipes from US customary into metric standards and vice versa. **RC.8.2** Follow and modify a recipe independently to include seasonal ingredients. **HC.8.3** Describe seasonality and name ingredients that are grown in different seasons. **FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques. **KTE.8.1-3** Kitchen Tools and Equipment.	**Cooking Lesson:** Find a recipe for the product this class decided to make and sell in **Grade 7 Garden Lesson #9: Planning Our Business, Part 1**. Have teams work together to scale up the recipe to make the desired quantity based on their business plan. Review any relevant food safety and handling methods, and then have them prepare their product.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	In this kitchen lesson, students are preparing a product they planned throughout Grade 7 garden lessons and planted for in **Grade 7 Garden Lesson #14: Planting for Our Business**.	**Classroom:** Use a variety of mathematical methods to determine desired quantity and to scale recipes. Then use equations to check work.	**CCSS.MATH. CONTENT.8.EE.C.8.C** Solve real-world and mathematical problems leading to two linear equations in two variables.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Planning a Dinner Menu	Culinary Flavors and Textures **(CFT)**	**CFT.8.1** Utilize taste sensations: sweet sour, bitter, and salty in a dinner menu. **CFT.8.2** Identify three foods for each taste sensation—include cultural connections. **CFT.8.3** Create a menu that includes combinations of basic textures and taste sensations from a variety of cultures. **HC.8.3** Describe seasonality and name ingredients that are grown in different seasons. **RC.8.2** Follow and modify a recipe independently to include seasonal ingredients.	**Cooking Concept Lesson:** Have student teams explore recipes brainstormed in **Lesson #1: Welcome to the Kitchen!** and explain how to plan a dinner menu, including an appetizer, an entrée, and a side, that incorporates a variety of taste sensations and cultural traditions in a palatable combination. Have teams work on this together, making ingredient lists, highlighting opportunities to select and modify recipes to maximize produce from the garden.	**CLS.2** Students cooperate and communicate well with each other.	During this kitchen lesson, walk the garden together and list abundant produce. Have students look for recipes that feature produce they have in abundance in the garden.	**Community:** Ask a local chef what is on their ingredient list for his/her restaurant this week.	**CCSS.ELA-LITERACY.SL.7.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Preparing Dinners 	Food Preparation **(FP)**	**FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques. **CFT.8.1** Utilize taste sensations: sweet sour, bitter, and salty in a dinner menu. **CFT.8.2** Identify three foods for each taste sensation—include cultural connections. **CFT.8.3** Create a menu that includes combinations of basic textures and taste sensations from a variety of cultures. **HC.8.3** Describe seasonality and name ingredients that are grown in different seasons. **RC.8.2** Follow and modify a recipe independently to include seasonal ingredients. **KTE.8.1-3** Kitchen Tools and Equipment.	**Cooking Lesson:** Provide student teams time and guidance to prepare the dinners they selected in **Lesson #3: Planning a Dinner Menu** that incorporate a variety of taste sensations and cultural traditions. Then have each student taste a small sample of each dinner and provide specific feedback including positive elements and suggestions for improvements. Have students record Cook's Notes in their journals. 	**PLS.6** Students actively seek creative and resourceful solutions.	Help students incorporate produce from the garden. Deliver compost to the garden. As they enjoy, trace ingredients back to their source.	**Community:** Read a variety of professional restaurant reviews and explore descriptive language used.	**Social Studies:** Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
5. Fats and Simple Carbohydrates	Health Concepts **(HC)**	**HC.8.4** Demonstrate understanding of how the body uses fats and carbohydrates. **HC.8.5** Analyze a recipe for nutritional values.	**Cooking Concept Lesson:** Have students record and look at their records of dinners eaten from this week and categorize all of the food groups represented. Then discuss the role of fats and simple carbohydrates in the diet; how the body uses these foods; the risks of eating too much of these foods; and how to know how much of these food groups is okay to eat.	**PLS.5** Students develop the ability to make informed and responsible decisions.	During this lesson, discuss the use of minimal fats and/or simple carbohydrates (sugars) as one way to enhance the flavors of fresh garden produce (for example, cooking greens in oil or bacon drippings; adding sugar to winter squash; etc).	**Community:** Create materials explaining the role of fats and simple carbohydrates in an easy to understand, factual way.	**NGSS Science and Engineering Practice:** Analyzing and Interpreting Data.	**National Health Education Standard 6:** Students will demonstrate the ability to use goal-setting skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Cooking Beans	Food Preparation **(FP)**	**FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques. **FP.8.3** Summarize benefits of different cooking techniques for retaining nutrients. **KTE.8.1-3** Kitchen Tools and Equipment.	**Cooking Lesson:** Divide into teams and have teams cook: Black Eyed Peas, Cannellini Beans, and Black Beans. While beans are cooking, have students look at recipes for for **Black-Eyed Pea Salad, Cannellini Bean Salad with Parsley Pesto,** and **Gallo Pinto, all at *Emerils.com*.** Challenge them to find and record similarities and differences between each recipe. Discuss the benefits of certain cooking techniques for preserving nutrients. Freeze cooked beans for future use in recipes.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Harvest and use beans and peas planted by students in **Grade 7 Garden Lesson #17: Interde-pendence**. Deliver compost to the garden.	**Community:** Look at local restaurant menus for different uses of beans.	**CCSS.ELA-LITERACY.RI.8.2** Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

GRADE 8 | WINTER

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
7. Bean Dishes 	Food Preparation **(FP)**	**FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques. **HC.8.3** Describe seasonality and name ingredients that are grown in different seasons. **HC.8.5** Analyze a recipe for nutritional values. **KTE.8.1-3** Kitchen Tools and Equipment.	**Cooking Lesson:** Have student teams each prepare one of the following recipes: **Black Eyed Pea Salad, Cannellini Bean Salad with Parsley Pesto,** and **Gallo Pinto, all at *Emerils.com*.** As students enjoy all three salads, share the regional and cultural traditions represented in the dishes, and have students recall the nutritional benefits of beans and other produce in the dishes.	**CLS.3** Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Use beans, peas, and produce from the garden. Deliver compost to the garden. Trace ingredients to their source.	**Classroom:** Explore the history and use of idioms that use the word beans like "spill the beans."	**Social Studies:** Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
8. My Food Cart, Part 1	Business Planning **(BP)**	**BP.8.1** Create a business plan to bring a food related product to market. **HC.8.3** Describe seasonality and name ingredients that are grown in different seasons.	**Cooking Concept Lesson:** Individually or in pairs, have students begin to explore ideas for a hypothetical food cart with a world culture theme. Their plans should include healthy menu options for each season.	**PLS.6** Students actively seek creative and resourceful solutions.	During this lesson, have students work together to recall what is in abundance in their garden each season. Have them use this list to guide their menu ideas for each season.	**BAM! Box:** Have students work with family or community to build 3D models of their food businesses, including a food prep area, a seating area, physical design, signage, and the like.	**Social Studies:** Economics.	**National Health Education Standard 6:** Students will demonstrate the ability to use goal-setting skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
9. My Food Cart, Part 2	Menu Development **(MD)** Health Concepts **(HC)**	**MD.8.2** Create a planting list for a farm or garden to grow. **HC.8.1** Design a seasonal menu plan that reflects the foods grown in your bio-region/state. **HC.8.3** Describe seasonality and name ingredients that are grown in different seasons.	**Cooking Concept Lesson:** Have students elaborate on their learning from previous business planning and gardening lessons to create a planting list for a farm or garden to support their hypothetical food cart.	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Start this lesson by having students recall times in the garden when they ended up with more of or less than a crop than they expected. Discuss ways to best estimate yield.	**Community:** Ask a local landscaper or farmer for advice on creating a planting list.	**Social Studies:** Economics.	**National Health Education Standard 6:** Students will demonstrate the ability to use goal-setting skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
10. My Food Cart, Part 3 	Menu Development **(MD)**	**MD.8.1** Create a menu using world culture theme. **CFT.8.3** Create a menu that includes combinations of basic textures and taste sensations from a variety of cultures. **HC.8.1** Design a seasonal menu plan that reflects the foods grown in your bio-region/state. **HE.8.1** Design and produce a week of healthy and seasonal recipes and meals on a budget using a world culture.	**Cooking Concept Lesson:** Engage students by looking at a variety of menus from local restaurants and food businesses. Then explore what qualities make a cohesive, diverse, high quality menu. Explain elements such as a central theme connecting to a world culture, dishes that feature local, seasonal ingredients, and a variety of dishes to accommodate many diets, appetites, price ranges, and ages. Have students elaborate on their understanding by designing their own fall and spring menus, using the Menu Planning Worksheet, for their hypothetical food cart.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	Have students work together to recall what's in abundance in their garden each season. Have them use this list to guide their menu ideas for each season.	**Community:** Explore a variety of menus from your local restaurants.	**Social Studies:** Economics, Geography, Cultural Traditions, Diversity and Community.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Profit and Loss for My Food Cart	Business Planning **(BP)**	**BP.8.2** Create basic Profit/Loss for business. **HE.8.2** Explain cost and health benefit of farm to table.	**Cooking Concept Lesson:** Have students elaborate upon their business skills from previous lessons to develop a basic profit/loss sheet for their hypothetical food carts, projecting expenses, sales, and thus projected profits or losses.	**PLS.5** Students develop the ability to make informed and responsible decisions.	During this kitchen lesson discuss expenses in a garden setting including soil, water, seeds/ plants and time/work.	**Community:** Ask volunteers from a local bank to review basic profit/loss sheets and give advice.	**Social Studies:** Economics. **CCSS.MATH. CONTENT.8.EE.C.8.C** Solve real-world and mathematical problems leading to two linear equations in two variables.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Food Business Plan Presentations	Health Concepts **(HC)** Business Planning **(BP)**	**HC.8.1** Design a seasonal menu plan that reflects the foods grown in your bio-region/state. **HC.8.3** Describe seasonality and name ingredients that are grown in different seasons. **BP.8.1** Create a business plan to bring a food related product to market.	**Cooking Concept Lesson:** Have students elaborate on their learning by presenting their hypothetical food cart seasonal menus to a panel of judges or to one another. This can be formatted like a science fair, in which each student has a poster, and judges walk through to talk with the students and then judge their designs based on specific criteria. Have judges or classmates vote on one or more dishes from one business for class to produce together in **Lesson #13: Preparing a Dish from Our Food Cart.**	**PLS.4** Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	During this lesson, have students explain with reason the connection between what is growing in the garden in abundance and the seasonal menu items.	**Community:** Invite community members and local experts to help judge.	**CCSS.ELA-LITERACY.SL.8.4** Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

GRADE 8 | SPRING

Each activity described below should be designed to last approximately 45 minutes.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
13. Preparing a Dish from Our Food Cart 	Food Preparation **(FP)**	**FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques. **FP.8.3** Summarize benefits of different cooking techniques for retaining nutrients. **HC.8.5** Analyze a recipe for nutritional values. **RC.8.2.** Follow and modify a recipe independently to include seasonal ingredients.	**Cooking Lesson:** Have students prepare dishes selected in **Lesson #12: Food Business Plan Presentations**. Have them research the nutritional value of their dishes before and after cooking, and present each dish to the class before enjoying.	**PLS.6** Students actively seek creative and resourceful solutions.	Have students modify recipes to maximize use of produce from the garden. Deliver compost to the garden. Trace ingredients to their source.	**Community:** Invite in a food business leader from your community to enjoy the dishes and give feedback on the business plans and dishes.	**CCSS.ELA-LITERACY.SL.8.4** Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
14. Healthy Soil = Healthy Food = Healthy People	Health Concepts **(HC)**	**HC.8.2.** Understand and articulate the relationship between healthy soil, healthy foods, and healthy bodies. **HC.8.5** Analyze a recipe for nutritional values. **FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques. **FP.8.3** Summarize benefits of different cooking techniques for retaining nutrients. **RC.8.2** Follow and modify a recipe independently to include seasonal ingredients.	**Cooking Lesson:** Explain to students that plants produce vitamins and absorb minerals from the soil. Harvest something in abundance in the garden and prepare it together. As you enjoy together, research and discuss the vitamins and minerals in the dish and how each supports overall health. Put food waste in the compost, and discuss how this returns minerals to the soil for new plants.	**CLS.2** Students cooperate and communicate well with each other.	Follow this activity with a visit to the garden to "thank" the soil by building compost, adding it into a bed, and/ or writing it a thank you letter.	**Classroom:** Have students create skits or videos to share with younger grades helping make the connection between healthy soil, healthy plants, and healthy people.	**CCSS.ELA-LITERACY.SL.8.5** Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communi-cation skills to enhance health and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
15. Pita Bread 	Health Concepts **(HC)** Food Preparation **(FP)**	**HC.8.5** Analyze a recipe for nutritional values. **HC.6.6** Demonstrate knowledge of whole foods, minimally processed foods and processed foods. **FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques. **FP.8.3** Summarize benefits of different cooking techniques for retaining nutrients. **KTE.8.1-3** Kitchen Tools and Equipment.	**Cooking Lesson:** Demonstrate how to use a hand-held and standing mixer. Provide students with recipe and have them prepare **Pita Bread, *Emerils.com***. As bread is baking, review the role of grains in the diet and the health benefits of whole grains. Discuss how to modify grain-based recipes to use more whole grains, for example by replacing half of white flour with whole wheat flour.	**PLS.1.** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	If you have extra wheat growing in the garden (planted in **Grade 3 Garden Lesson #18: Planting Wheat for Next Year's Grade 3 Class**), thresh, winnow, grind, and incorporate it with students. As you enjoy the bread, trace each ingredient back to its source.	**Classroom:** Research other flatbreads from around the world.	**NGSS Science and Engineering Practice:** Engaging in Argument from Evidence.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
16. Egg Drop Soup	Recipe Concepts **(RC)**	**RC.8.1** Convert recipes from US customary into metric standards and vice versa. **FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques **HC.8.5** Analyze a recipe for nutritional values. **KTE.8.1-3** Kitchen Tools and Equipment.	**Cooking Lesson:** Give students the recipe for **Egg Drop Soup**, ***There's a Chef in My World!***. Explain that this is a household staple in China. Explain the difference between US customary and metric measurement systems, including where each is used. Have students brainstorm the pros and cons of each system. Have students convert the recipe into metric units and then follow the recipe using metric measurements to prepare the recipe. As students enjoy, have them share out the nutritional value of the ingredients they added.	**CLS.2** Students cooperate and communicate well with each other.	In **Garden Lesson #16: Installing Our Gift to the Garden**, have students convert garden measurements (such as length or area of beds) into metric units.	**Classroom:** Have students share different mathematical strategies used to convert recipes from customary US and metric systems.	**CCSS.MATH. CONTENT.8.EE.C.8.C** Solve real-world and mathematical problems leading to two linear equations in two variables.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
17. Researching for the Feast Around the World	Health Concepts **(HC)**	**HC.8.6** Reflect on personal and communal eating in terms of daily habits and celebrations.	**Cooking Concept Lesson:** In preparation for the Feast Around the World, have students explore the country of origin for the dish(es) the Grade 7 class has assigned them. Have students research different aspects of life in this country, including celebrations, customs, and the like. Have them learn about traditional dishes for daily life and special celebrations in that region. Then have them elaborate on their learning by preparing to present on their country in the Feast Around the World.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	In this kitchen lesson, have students identify crops in your school garden that reflect the region students are studying.	**Community:** Ask students if they have family members from the countries or regions represented in the Feast Around the World. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography and Culture.	**National Health Education Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
18. Preparing Food for the Feast Around the World	Food Preparation **(FP)**	**FP.8.1** Demonstrate mastery of skill and knowledge of safe food handling practices. **FP.8.2** Demonstrate mastery of a variety of cooking techniques. **HC.8.5** Analyze a recipe for nutritional values. **RC.8.2** Follow and modify a recipe independently to include seasonal ingredients. **KTE.8.1-3.** Kitchen Tools and Equipment.	**Cooking Lesson:** Have students prepare their dishes for the Feast Around the World, modifying as appropriate to maximize the use of local, seasonal produce that is in abundance. Work together to analyze the recipes for nutritional values. If time allows, conduct a brief kitchen reflection, allowing students to share life lessons learned in the kitchen.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	Incorporate produce from the garden. Deliver compost to the garden. Trace ingredients back to their source.	**Community:** Ask students if they have family members from the countries or regions represented in the Feast Around the World. If so, invite them in to share a favorite recipe from the region.	**Social Studies:** Geography and Culture.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Middle School Feast Around the World!

LESSON PLANS

Garden

WELCOME TO THE GARDEN

Garden

EST. TIME 45 minutes SEASON fall

GRADE K | LESSON #1

ESSENTIAL QUESTION(S)

- How can I be my best self in the garden?
- How can I be my best for my community?
- How can I be my best for my environment?

MATERIALS

- ❒ Chart paper (at least 2 sheets)
- ❒ Easel
- ❒ Markers
- ❒ 1 clipboard for each student
- ❒ 1 sharpened pencil for each student
- ❒ Handout: 1 copy of the *Garden Scavenger Hunt* for each student

VOCABULARY

- Community
- Environment

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (15 MINUTES)

To prepare for this lesson, gather materials.

TEACHER BACKGROUND

The development of expectations for the garden space happens collaboratively with students in this lesson. This is a process that encourages students to reflect on how they impact their own learning, their community, and the environment along with what behaviors they can agree to as a class to ensure that their shared goals are met.

LESSON DESCRIPTION

In this lesson, students will explore what makes up the garden space—everything living, nonliving, and themselves! They will then discuss how to be the best for themselves, their community, and their environment in this garden space. The teacher will guide them to cohesive language around these understandings before modeling behaviors that align with these understandings. Finally, students will explore and enjoy the garden while practicing these behaviors.

LEARNING OBJECTIVES

Life Skills Learning Objectives

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.

PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.

PLS.5 Students develop the ability to make informed and responsible decisions.

PLS.6 Students actively seek creative and resourceful solutions.

CLS.5 Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA.K.SL.1. Students will be able to participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

CCSS.ELA.K.SL.6. Students will be able to speak audibly and express thoughts, feelings, and ideas clearly.

Social Studies: Citizenship.

CULTIVATE CURIOSITY (10 MINUTES) *engage*

1. Lead students to a comfortable sitting position in a central gathering area in the outdoor classroom space (in a circle, if possible).
2. Welcome students to the garden and provide them with a few minutes to silently observe what makes up the space from their seated position, using only their eyes and ears. Allow each student's voice to be heard by asking them to say aloud their name and a thing they see that makes up the garden space. As students share, write their individual names and the things they observed in the garden area on a sheet of chart paper.
3. When every student has had the chance to share, take a moment to review the chart paper as a group. Remind students that each of them individually make up the garden space, as well as all of the other living and nonliving things they shared.

See "Teaching Strategies" in Appendix section for information on how to lead Think-Pair-Share.

ROOT AROUND (15 MINUTES) *explore*

1. Explain to students that each of the living and nonliving things that make up the garden are unique and special independently, work together in their **community**, and exist peacefully in their **environment**. Provide an example of something growing in the garden, explaining its value independently, in its community, and in the garden environment.
2. Introduce the first chorus of the song "With People I Like" by the Banana Slug String Band. Sing the first chorus with students as they find someone to partner with and sit down with linked arms in the central gathering area.
3. For the following Essential Questions, provide 1 minute for students to think about their answer independently, 2 minutes to tell their ideas to their partner (pair), before selecting a few students to share their ideas with the whole group, a process referred to as "think-pair-share."
4. As the Enduring Understandings emerge from the group discussions, write them on a new sheet of chart paper for students to view.

ESSENTIAL QUESTIONS	ENDURING UNDERSTANDINGS TO REITERATE DURING GROUP DISCUSSION
How can we be our best for ourselves?	Make choices that keep you safe. (for example: move slowly, stay within the garden boundaries)
How can we be our best for our community?	Show respect for each other. (for example: join the group for the callback, listen, and share)
How can we be our best for our environment?	Show respect for the plants, animals, and environment. (for example: stay on garden pathways, be gentle with plants)

GROW UNDERSTANDING (10 MINUTES) *explain*

1. Explain to students that they are going to practice exploring the garden space in a way that keeps them safe, shows respects for each other, and shows respect for the plants, animals, and environment.
2. Model for students behaviors that are examples and counterexamples of these 3 enduring understandings, asking students to show thumbs up / thumbs down if the model behaviors align with the enduring understandings.

ENDURING UNDERSTANDINGS	EXAMPLES	COUNTEREXAMPLES
Make choices that keep you safe.	• moving slowly through the garden area • staying within the garden boundaries	• running carelessly through the garden area • stepping outside of garden boundaries
Show respect for each other.	• interacting with classmates in a gentle way with our bodies and language • joining the group at the callback signal • listening with a still body and attentive eyes • sharing ideas	• interacting with classmates in an aggressive way with our bodies and language • continuing to wander after the callback signal • showing active or distracted behaviors when others are sharing
Show respect for the plants, animals, and environment.	• interacting with plants and animals in a gentle way • moving along garden pathways	• interacting with plants and animals in a careless or aggressive way • carelessly stepping into garden beds

OBSERVE THE FRUITS (5 MINUTES) *elaborate*

1. Explain to students that they will have time to explore and enjoy the garden with their classmates to look closer at the living and nonliving things they observed earlier and to model the behaviors that they just learned.
2. Distribute to each student, 1 clipboard, 1 sharpened pencil, and 1 Garden Scavenger Hunt handout.
3. Explain to students that on your cue, their challenge is to explore the garden to find the six items pictured on the scavenger hunt. When they find objects that match the descriptors on the Garden Scavenger Hunt, they do not need to pick or collect them. They can mark an "X" in the appropriate box with the picture. In the last box, students can draw something else interesting they saw in the garden.
4. Remind students of their boundaries and their callback signal to let them know to return to the whole group gathering space. As students explore and enjoy the garden area, acknowledge observed behaviors that align with the enduring understandings, such as being active and engaged learners or showing care for the environment. Also, use the observational checklist to assess students' current development of the life skills.

5. After a few minutes, provide the call back signal and as each student returns to the whole group gathering space, acknowledge them by name for showing respect for each other and working together as a group.
6. If time permits, go around the circle and have each student share something interesting that they found.

REFLECT (5 MINUTES) *evaluate*

1. Acknowledge students individually and as a group for the behaviors that they exhibited that aligned with the enduring understandings that they developed together with the goal of being the best for themselves, their communities, and their environment.
2. Ask students to reflect silently on what it means to be the best for themselves, their communities, and their environment beyond the garden—perhaps in the environment they are preparing to return to in school or in their home environment.
3. Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.
4. Sing the first chorus of the song "With People I Like" by the Banana Slug String Band as students' line-up to be dismissed.

*Keep the chart paper of students' observations to revisit in **Garden Lesson #5: Living or Non-Living.**

ADAPTING FOR INDOORS

In the case of inclement weather, the Cultivate Curiosity, Root Around, and Grow Understanding sections of this lesson can occur inside the classroom. The Observe the Fruits section should take place in the garden area on the next garden day that the weather allows.

CONNECTIONS TO KITCHEN LESSONS

Compare group agreements for the garden with agreements students have in the kitchen. How are behavior expectations similar in both places? How are they different?

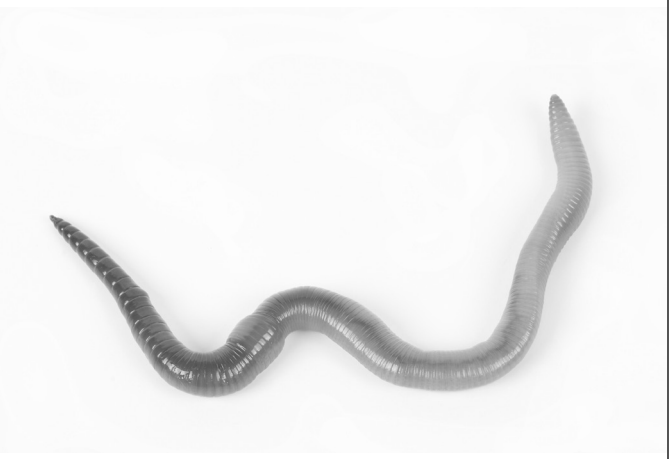
ADDITIONAL RESOURCES

For more information on group management and group development of procedures and parameters, see:

- *Tools for Teaching* by Fred Jones
- *Rethinking Classroom Management* by Patricia Belvel

NAME: _____ DATE: _____

GARDEN SCAVENGER HUNT

	
	
	Something neat!

LIVING OR NONLIVING?

Garden

EST. TIME 45 minutes SEASON fall

GRADE K | LESSON #5

ESSENTIAL QUESTION(S)

- How can we tell the difference between living things and nonliving things in the garden?
- How can we tell the difference between plants and animals in the garden?
- How can we safely use trowels to plant transplants?
- How can we provide plants with everything they need?

MATERIALS

- ❒ Handouts / Visual Aids
- ❒ Equipment
- ❒ Materials for Planting

VOCABULARY

- Living
- Nonliving
- Plants
- Animals
- Trowel
- Roots
- Stems
- Leaves
- Soil

ASSESSMENT

- Observational checklist

PREPARATION (15 MINUTES)

To prepare for this lesson, gather materials and ensure that there is space in the garden cleared for seedlings to be transplanted (1 per every 3 students).

TEACHER BACKGROUND

While many students may be able to classify objects as living or non-living, categorizing items that were once-living as well as articulating the reasoning behind an object's classification can be challenging. In this lesson, students discover that living things eat food (or make their own food), breathe, move (or react to surroundings), grow, and produce young (seeds, eggs, babies). In contrast, non-living things do not eat, breathe, move (without being moved), grow, or make babies.

LESSON DESCRIPTION

In this lesson, students will work on sorting and classifying the things they observe in the garden area, first by living and nonliving, and then sorting living things into animals and plants, each time developing qualifiers for each category. Students will then learn how to safely use hand trowels and practice by transplanting seedlings. Finally, students will discuss how they can provide their plants with everything they need (soil, water, sun, air).

Create Your Own!

Use the lesson template to create your own and share with us!

LEARNING OBJECTIVES

Content Learning Objectives

GPM.K.1 Describe what lives in a garden and name what they need to live (sunlight, water, air, nutrients).

GTE.K.1 Name, identify, and safely use new tools.

GTE.K.2 Match new tools to tasks.

GTE.K.3 State how to properly care for new tools.

GTE.K.4 Describe the purpose of a new tool.

Life Skills Learning Objectives

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-Literacy.SL.K.1 Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

NGSS.K.LS1.C Organization for Matter and Energy Flow in Organisms

All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.

LESSON MATERIALS

Materials for Lesson Introduction

Visual Aids

❒ Chart from **Lesson #1: Welcome to the Garden** (if available)

Equipment

❒ Chart Paper, Easel, Markers

❒ Hand Trowels (1 per every 3 students)

❒ Journals (1 per student)

❒ Clipboards (1 per student)

❒ Pencils, Colored Pencils, Handheld Sharpeners (enough for all students)

Materials for Planting

Seedlings (1 per every 3 students)

See "Teaching Strategies" in Appendix section for information on how to lead Think-Pair-Share.

CULTIVATE CURIOSITY (5 MINUTES) *engage*

1. Lead students to a comfortable sitting position in a central gathering area in the outdoor classroom space (in a circle, if possible).
2. Welcome students to the garden and provide them with a few minutes to silently observe from their seated position (using only their eyes and ears), what has stayed the same and what has changed since their last visit. After a few moments, discuss together.
3. Present the chart poster that was created in the first **Garden Lesson #1: Welcome to the Garden** lesson (if available). Ask students to think-pair-share and identify things from the list that are living and nonliving and request that they explain their reasoning for each. Through the discussion, guide student understanding of qualifications of **living** and **nonliving** things.

LIVING (OR ONCE-LIVING)	NON-LIVING
• Eats or makes its own food • Breathes • Moves (or has moving parts) • Reacts to surroundings • Grows and develops • Produces young, seeds, or eggs	• Doesn't need to eat • Doesn't breathe • Doesn't move without being moved • Doesn't react to surroundings • Doesn't grow • Doesn't make babies

See "Teaching Strategies" in Appendix section for information on transitioning between whole and small groups effectively.

ROOT AROUND (10 MINUTES) *explore*

1. Explain to students that they will have time to explore the garden with their classmates to find 5 new living things and 5 new nonliving things using the qualifications they came up with as a class. Remind students of their boundaries and their callback signal to let them know to return to the whole group gathering space. Use a phrase such as "when I say go, and not before I say go" to cue students to transition from whole group listening to small group work.
2. As students explore the garden area, acknowledge observed behaviors and reinforce understandings of qualifications of living and nonliving things through discussion with small groups.
3. Provide the call back signal for each student to return to the whole group gathering space.

GROW UNDERSTANDING (5 MINUTES) *explain*

1. In the whole group, discuss some of the living and nonliving things students found in the garden. Ask students to explain their reasoning and reinforce the language around the qualities of living and nonliving things through the discussion.
2. Look more closely at the list of living things with students and work together to further divide that list into **plants** and **animals**. Guide students into a similar conversation about what qualities differentiate plants from animals.
3. Explain to students that throughout the year we are going to do our best to create an environment where both plants and animals can live and grow.

OBSERVE THE FRUITS (15 MINUTES) *elaborate*

1. Explain to students that they are going to learn how to carefully plant new baby plants in their garden and then work together to determine how to provide them with everything they need to live and grow.
2. With all students' attention, identify a handle **trowel** by name and ask students to repeat the name aloud. Then, state the purpose of the tool and describe a situation when it would be used, such as the task for today.
3. Demonstrate how students will retrieve their hand trowel from their storage place and how they will carefully travel through the garden space to their work area with the handle trowel.
4. Divide students into teams of 3, instructing a student in each group to choose from a selection of places for their team to plant their baby plant, a student to retrieve the hand trowel as demonstrated, and a student to meet the teacher to receive their baby plant and carefully carry it to their group's work area. When all students are at their work area with all of their tools, request that they put their eyes on the teacher for their next instructions. Use a phrase such as "when I say go, and not before I say go" to cue students to transition from whole group listening to small group work.
5. When all students are in the work area with their tools and plants, demonstrate how they will use the hand trowel to dig a hole the approximate size of the **roots** of the plant, how to carefully place the baby plant in the hole and loosely pack the **soil** around the roots so the **stem** stands up tall with its **leaves** reaching up into the air to the sun. Instruct students to show you they are finished with this task by placing their hand trowel on the ground outside of the bed and putting their eyes on you. Cue students to transition from whole group listening to small group work.

6. As students work together to plant their seedling, acknowledge observed behaviors that align with the Life Skills Learning Objectives, such as showing care for the environment. Also, use the observational checklist to assess students current development of the life skills.
7. When all groups have finished planting their baby plant, acknowledge their careful use of tools and their gentle care of their plant before demonstrating how to clean their tool and return it to the storage area. Select a student in each group (perhaps the student who was the "site selector" previously) to complete this task and request the other members return to the whole group gathering area to collect their journals and coloring supplies. Cue students to transition from whole group listening to complete their tasks.

REFLECT (5 MINUTES) *evaluate*

1. Read to students the following prompt to complete in their journal:

> **Prompt:**
> Draw a picture of your plant and where you planted it in the garden. Include yourself in your picture, with the tool you used today and any other tools you think you may need to take care of your plant.

2. Recognize students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they showed care for the environment.

ADAPTING FOR INDOORS

In the case of inclement weather, the Cultivate Curiosity, Root Around, and Grow Understanding sections of this lesson can occur inside the classroom—perhaps with images of the garden or a view of the garden out of a window. The Observe the Fruits section should take place in the garden area on the next garden day that the weather allows.

CONNECTIONS TO KITCHEN LESSONS

In the kitchen, before you eat a dish featuring fruits or vegetables, celebrate the sun, soil, water, air, and nutrients that made those fruits and vegetables grow.

POSSIBLE EXTENSIONS

Community: Draw a picture of your home or neighborhood and circle 5 living and 5 nonliving things.

Cafeteria: Look at a school lunch and identify which foods came from plants and which came from animals.

ADDITIONAL RESOURCES

- *Is It Living or Non-Living* by Rebecca Rissman
- *What's Alive?* By Kathleen Weidner Zoehfeld
- *Is it Alive?* By Marcia Freeman
- *Living and Non-Living* by Angela Royston Living
- *Living and Non-Living* by Carol K. Linden

SOIL WEB

Garden

EST. TIME 45 minutes SEASON fall

GRADE 1 | LESSON #5

ESSENTIAL QUESTION(S)

- What lives in the soil and how do they work together (like a web) to help our garden?

MATERIALS

- ❒ Fungus and Invertebrates from the garden
- ❒ Chart paper, Easel, Markers
- ❒ Magnifying tools (1 per every 2 students)
- ❒ *A Log's Life* by Wendy Pfeffer
- ❒ Journals (1 per student)
- ❒ Clipboards (1 per student)
- ❒ Pencils, Colored Pencils, Handheld Sharpeners (enough for all students)

VOCABULARY

- Decomposing, decomposers, decomposition
- Fungus
- Bacteria
- Invertebrates

ASSESSMENT

- Observational checklist

PREPARATION (15 MINUTES)

To prepare for this lesson, gather all materials and check for rotting things in the compost pile or around the garden to point students to during their exploration. Also, read *A Log's Life* by Wendy Pfeffer to develop comprehension questions for read aloud.

TEACHER BACKGROUND

The process of decomposition can be hard for students to see in a single observation, but with a close look, evidence can be found; particularly when students are introduced to specific types of decomposers and know exactly what they are looking for. This lesson introduces 3 types of decomposers: fungus (mold, mildew, mushrooms), bacteria (microscopic), invertebrates (beetles, slugs, ants, worms, spiders). These decomposers work together to form a soil web.

LESSON DESCRIPTION

In this lesson, students will explore the idea that not everything in the garden is growing, some things are breaking down to let others grow. They will sing a song introducing the lesson vocabulary before searching for evidence of decomposition or decomposers in the garden. The idea of decomposers is extended to the "Garden FBI: Fungus Invertebrates Bacteria" through a song and book. Then students will look for evidence of these organisms breaking things down so others can grow.

Create Your Own!

Use the lesson template to create your own and share with us!

LEARNING OBJECTIVES

Content Learning Objectives

GFS.1.2 Describe a soil web. Identify fungi, bacteria, and invertebrates.

Life Skills Learning Objectives

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC STANDARD CONNECTIONS

NGSS Science and Engineering Practice: Engaging in Argument from Evidence

CCSS.ELA-Literacy.SL.1.1 Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

CULTIVATE CURIOSITY (5 MINUTES) *engage*

1. Lead students to a comfortable sitting position in a central gathering area in the outdoor classroom space (in a circle, if possible).
2. Welcome students to the garden and provide them with a few minutes to silently observe from their seated position (using only their eyes and ears), what has stayed the same and what has changed since their last visit. Challenge students to consider what they believe is growing and what they believe maybe breaking down. After a few moments, discuss together.
3. Introduce the words **decomposing**, **decomposers** and **decomposition** through an activity such as singing the song "Decomposition" by the Banana Slug String Band.

See "Teaching Strategies" in Appendix section for information on how to manage transitions between whole and small groups effectively.

ROOT AROUND (10 MINUTES) *explore*

1. Explain to students that they will have time to explore the garden with a partner and they will use magnifying tools to look for evidence of things that are "dying to let another grow" (decomposing) and for evidence of the animals or other living things that are doing the "munch munch munch" (decomposers). Ask them for ideas of where they might have success, such as on rotting things and/or in the compost pile. Remind students of their boundaries and their callback signal to let them know to return to the whole group gathering space.
2. Pair up students and distribute magnifying tools then release students from the whole group gathering space.
3. As students explore the garden area, verbally acknowledge behaviors that reflect the life skills learning objectives, such as sharing fairly or treating creatures gently. Also, reinforce understandings of decomposers and decomposition through discussion with small groups.
4. Provide the call back signal for each student to return to the whole group gathering space.

GROW UNDERSTANDING (15 MINUTES) *explain*

1. In the whole group, discuss some of the evidence students found of decomposers and decomposition.
2. Explain to students that the main decomposers are called the "Garden FBI: **Fungus**, **Bacteria**, and **Invertebrates**." Discuss how they all work together, interacting in a soil food web.
3. Read the book *A Log's Life* to learn even more about the garden FBI. Ask students to raise their hand when they see any of the garden FBI during the read aloud, and add them to a chart.

F - FUNGUS	B - BACTERIA	I - INVERTEBRATES
• Toadstools • Mildew • Molds • Mushrooms	(Explain to students that bacteria is microscopic and can not be seen and was not mentioned in the text, but an important worker in the process of decomposition)	• Beetles • Slugs • Snails • Ants • Spiders • Millipedes • Termites • Pill Bugs • Earthworms

OBSERVE THE FRUITS (10 MINUTES) *elaborate*

1. Explain to students that they will have time to explore the garden with their partner again to look more closely for the garden FBI. Remind students of their boundaries and their callback signal to let them know to return to the whole group gathering space.
2. As students explore the garden, acknowledge observed behaviors that align with the life skills learning objectives, such as caring for the environment. Also, use the observational checklist to assess students' current development of the life skills.
3. Provide the call back signal for each student to return to the whole group gathering space to collect their journals and coloring supplies. Cue students to transition from whole group listening to completing their tasks.
4. Read to students the following prompt to complete in their journal:

Prompt:
Draw a picture of at least 3 members of the garden FBI. Show what they look like, what they are doing, and where they are doing it.

REFLECT (5 MINUTES) *evaluate*

1. Recognize specific students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they showed care for the environment.
2. Review with students:
   - What lives in the soil?
   - How do they work together like a web to help our garden?
3. Sing the same song from the beginning of class as students line up to be dismissed.

ADAPTING FOR INDOORS

In the case of inclement weather, the Cultivate Curiosity and Grow Understanding sections of this lesson can occur inside the classroom. The observations in the Root Around and Observe the Fruits sections should take place in the garden area on the next garden day that the weather allows.

CONNECTIONS TO KITCHEN LESSONS

In **Kitchen Lesson #8: Eat-a-Pita Pizzas**, add mushrooms to the pizzas and highlight that mushrooms are fungi, and serve as decomposers.

POSSIBLE EXTENSIONS

Classroom: Read aloud *Diary of a Worm* by Doreen Cronin

ADDITIONAL RESOURCES

- *Life in a Rotten Log* by Malcolm Penny
- *Who Eats What?* By Patricia Lauber
- *Log Hotel* by Anne Schreiber
- Cornell Guide to Composting in Schools: http://compost.css.cornell.edu/schools.html
- Soil Food Web poster: http://jessicasgarden.net/wp-content/uploads//2011/02/soil-ffod-web.jpg
- Compost Critters Field Guide (p. 15–17): https://www.cvswmd.org/programming--resources.html
- Soil Invertebrates: http://ei.cornell.edu/teacher/pdf/D%26R/D%26R_Soil_Invert_ID.pdf
- Dirt, Secret in the Soil: https://utah.agclassroom.org/workshops/01dirt/

INSECT STRUCTURES

Garden

EST. TIME 45 minutes SEASON spring

GRADE 2 | LESSON #17

ESSENTIAL QUESTION(S)

- What body parts do insects have to help them live, thrive, and contribute to the garden?

MATERIALS

- ❒ Handout: *Tracking Garden Changes - Insect Count Data Sheet*
- ❒ Chart Paper, Easel, Markers
- ❒ Magnifying bug boxes (1 per 2 students)
- ❒ Journals (1 per student)
- ❒ Clipboards (1 per student)
- ❒ Pencils, Colored Pencils, Handheld Sharpeners (enough for all students)

VOCABULARY

- Insects
- Magnifying glass
- Head, thorax, abdomen

ASSESSMENT

- Observational checklist
- Tracking Garden Changes Data Sheet

PREPARATION (15 MINUTES)

To prepare for this lesson, gather materials and check garden for insects to point students to during their exploration.

TEACHER BACKGROUND

The word "bug" is commonly used in the garden to describe any invertebrate. In this lesson, however, we are specifically focusing on insects. In the animal kingdom, insects are found in the phylum arthropoda (a separate phylum from earthworms in phylum annelida). Within that phylum there are 3 subphylum: subphylum chelicerata (2 body parts, no antenna; including spiders), subphylum cructacea (3 body parts, thorax in eight sections; including shrimp, crab, lobsters), subphylum uniramia (3 body parts, thorax in 3 sections; including insects, centipedes, millipedes). Insects are then a class of subphylum uniramia that specifically is defined as an air breathing animal with a hard jointed exoskeleton, and, in the adult, a body divided into 3 parts; the head with a pair of antennae, the thorax which carries 3 pairs of legs and usually 2 pairs of wings, and the abdomen which contains the guts and reproductive organs.

LESSON DESCRIPTION

In this lesson, students will recall what they learned about plant parts and functions. They will compare that to insect parts and what functions they serve. Students will collect insects from the garden in magnifying bug boxes to observe and create a scientific drawing that labels all of the parts that they learn. Students will record the number of insects they found before returning the insects to the garden.

LEARNING OBJECTIVES

Content Learning Objectives

GFS.2.2 Describe structure and function of insect parts.

Life Skills Learning Objectives

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

CLS.4 Students appreciate and are respectful of differences and diversity in their communities.

Create Your Own!

Use the lesson template to create your own and share with us!

ACADEMIC STANDARD CONNECTIONS

NGSS Crosscutting Concept: Structure and Function The shape and stability of natural and designed objects are related to their function(s).
VA.Cr2.1.2a. Experiment with various materials and tools to explore personal interests.

CULTIVATE CURIOSITY (5 MINUTES) *engage*

1. Lead students to a comfortable sitting position in a central gathering area in the outdoor classroom space (in a circle, if possible).
2. Welcome students to the garden and provide them with a few minutes to silently observe from their seated position (using only their eyes and ears), what has stayed the same from their last visit and has changed since their last visit. After a few moments, share observations.
3. Challenge students to consider what plants they see growing, and review with students what parts those plants have to help them live, thrive, and contribute to the garden.
4. Explain to students that today we are going to build on what we have learned about what **insects** do, to understand what parts they have to help them live, thrive, and contribute to the garden.

ROOT AROUND (5 MINUTES) *explore*

1. Introduce the magnifying bug box to students, explaining that it works as a **magnifying glass** on top but contains the insect for us to view.
2. Demonstrate how students will retrieve their bug box from their storage place, how to move through the garden with it, and how to carefully and gently lift an insect into the bug box. Discuss how to do this without harming the insects. Review with students where the best places are to look for insects in the garden.

Caution:
If there are any insects you would rather students not collect, such as spiders or bees, let students know that before they go.

3. Divide students into teams of 2, instructing a student in each group to retrieve the bug box as demonstrated and a student to choose a place for their group to search for insects. Instruct students to find their insects and then return to the whole group gathering area so you know they are ready for their next steps. Transition students from the whole group gathering space.

See "Teaching Strategies" in Appendix section for information on transitioning between whole and small groups effectively.

GROW UNDERSTANDING (10 MINUTES) *explain*

1. Provide students with a few minutes to observe their insects with their partners and to view other groups' insects.
2. When students return to their comfortable seated positions, ask students to share what body parts they see and how they think they help the insect live, thrive, and contribute to the garden (for example: eyes help them see). Write their observations on a piece of chart paper. Challenge students to consider what other body parts they think may not be able to be seen that help the insect live and thrive as well (perhaps comparing to the human body).
3. When many parts have been observed and described, explain to students that something special about insects is that they have a segmented body with 3 parts—**head**, **thorax**, and **abdomen**. Then assist students with categorizing the parts of the insect that they listed into these 3 parts.

HEAD	THORAX	ABDOMEN
• eyes (compound, made of several smaller eyes working together) • mouth parts (to guide food into mouth and to bite) • antennae (to smell, taste, touch, and hear)	• wings (if it can fly, usually 2 pairs) • legs (3 sets) • muscles (to operate wings and legs) • feet (with sticky pads, hooks, suckers)	• stores digestive system and reproductive organs • may hold sting organs

OBSERVE THE FRUITS (20 MINUTES) *elaborate*

1. Model for students on chart paper how to create a scientific drawing of an insect. Using the ABCDE's of drawing model:
   A - accurate
   B - big (and to scale)
   C - colorful
   D - detailed
   E - explained (labeled)
2. Instruct students on how to retrieve their materials (clipboards, paper, handouts, or science journals, pencils and colored pencils) and then how to create their own scientific drawing of their insect. Transition students from the whole group gathering space to gather their materials and get started.

Note:
Similar to the reflection prompts at the end of most lessons, this scientific illustration can be used to assess student understanding of content learning objectives.

3. As students work, acknowledge observed behaviors that align with the life skills learning objectives, such as appreciating the diversity in the insects. Also, use the observational checklist to assess students' current development of the life skills.
4. Provide the call back signal for each student to return attention to the whole group gathering space.
5. Instruct students on how to return their coloring materials, how to carefully return their insects to the garden, and how to return their bug boxes to the storage place. If time allows, have students record how many insects they found using the Tracking Garden Changes - Insect Count Data Sheet. In their teams of 2, one student can return the coloring materials and the other can return the insect to the garden and the bug box to the storage place. Instruct students to return to the whole group gathering space when these tasks are complete.

REFLECT (5 MINUTES) *evaluate*

1. Review the different insect structures and functions with students by allowing volunteers to present their scientific drawings of the bugs they collected, ensuring that the appropriate vocabulary is used to describe the drawings.
2. Discuss how these structures help insects fulfill important roles in the garden (eating plants, decomposing dead plants, pollinating flowers, eating other insects/pests, etc).
3. Explain that there is a lot of diversity in our insect population, meaning we have a lot of different insects. Ask students: Do we have a lot of diversity in our community? (Yes). Share examples. (Students' cultural backgrounds, interests, hobbies, languages, etc). Discuss how diversity makes communities stronger.

ADAPTING FOR INDOORS

In the case of inclement weather, the Cultivate Curiosity, Grow Understanding, Observe the Fruits sections of this lesson can occur inside the classroom. The insect collection in the Root Around section should take place in the garden area on the next garden day that the weather allows.

CONNECTIONS TO KITCHEN LESSONS

In the kitchen, research insects eaten around the world.

POSSIBLE EXTENSIONS

Classroom: Create imaginary insects in teams of 3. Give each team a blank piece of paper folded in thirds. Have each student draw an insect head on the top third, with the neck just passing the top fold. Fold to hide the head, then pass the papers.

ADDITIONAL RESOURCES

- *Are You a Butterfly?* by Allen, Judy and Tudor Humphries
- *Are You a Ladybug?* by Allen, Judy and Tudor Humphries
- *The Grouchy Ladybug* by Carle, Eric
- *The Very Lonely Firefly* by Carle, Eric
- Backyard ABCs by Green, Janice
- *Bugs!* by Greenberg, David T.
- *Insect Soup: Bug Poems* by Polisar, Barry Louis
- *Honey in a Hive* by Rockwell, Anne
- *Backyard Pets: Activities for Exploring Wildlife Close to Home* by Amato, Carol A.
- *Insects* by Ansary, Mir Tamim
- *Insects: DK Eyewitness Books* by DK Publishing
- *Spiders* by Gibbons, Gail
- *Simon & Schuster Children's Guide to Insects and Spiders* by Johnson, Jinny
- *Field Guide to North American Insects and Spiders* by National Audubon Society

BIOREGIONS AND LOCAL FOOD SYSTEMS

Garden

EST. TIME 45 minutes SEASON winter

GRADE 3 | LESSON #12

ESSENTIAL QUESTION(S)

- What is a local food system?
- What occurs between the farm and the market?
- How do the bioregions of our state determine the location of the farms?

MATERIALS

- ❒ Handouts / Visual Aids
- ❒ Equipment
- ❒ Materials for Cleaning Up

VOCABULARY

- Pollinating, pollinator, pollinated
- Juice (noun), juice (verb), juicer
- Funnel, mold
- Farmers market

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (15 MINUTES)

To prepare for this lesson, gather materials and read *Before We Eat* by Pat Brisson to develop comprehension questions for read aloud. Also, research the bioregions of your individual state and your local farms and farmers markets to bring a real-world context to the modeling of the local food system.

TEACHER BACKGROUND

While there is no consensus on the definition of a local food system, in this context we are discussing all of the natural features of the bioregions of your state along with all of the workers along the way that make it possible to produce, process, and distribute local food goods for consumption to enhance the environmental, economic, social, and nutritional health of your state.

LESSON DESCRIPTION

In this lesson, students will review the plant life cycle from seed to fruit, and discuss the bioregions of their state. Then students will walk through processing that same food (oranges are used as an example in this lesson), throughout its travels across the state to be juiced and frozen into popsicles before traveling to the farmers market to be sold to the community. Students will read the book *Before We Eat* to explore other local food systems and write a letter to a local farmer that vends at the farmers market showing gratitude for the work and care they contributed every step along the way.

LEARNING OBJECTIVES

Content Learning Objectives

GFS.3.4 Define local food system.

WSCG.3.1 Define and map the bioregions of your state (cross map with food system).

Life Skills Learning Objectives

CLS.4 Students appreciate and are respectful of differences and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

Social Studies: Economics.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

LESSON MATERIALS

Materials for Lesson Introduction

Handouts

- ❒ Seed to Tree Yoga Pose Cards
- ❒ *Before We Eat* by Pat Brisson

Equipment

- ❒ Laminated map of your state, dry erase markers
- ❒ Small hula hoop or toy steering wheel
- ❒ Hand juicer (1 per every 5 students)
- ❒ Cutting Board (1 per every 5 students)
- ❒ Paring Knife (1 per every 5 students)
- ❒ Pitcher (3, 1 shared between each 2 groups)
- ❒ Funnel
- ❒ Popsicle molds, or Dixie cups with plastic wrap and popsicle sticks (enough for 1 popsicle per student)

Materials for Cleaning Up

- ❒ 3 wash bins, garden-safe soap, sponge, dish towel

CULTIVATE CURIOSITY (5 MINUTES) *engage*

1. Show students orange popsicles and explain that today they are going to work together to show the full adventure an orange went on to end up as a popsicle.

Note:
The focus of this lesson is on local foods. If oranges are not grown in your state, use a different fruit that is grown in your state. For fruits that do not juice as easily as oranges, you can blend them with juice before freezing into popsicles.

2. First, draw a star on a map at a place where oranges grow (this could be a farm that vends at the local farmers market) and discuss what features the place has that makes it a good place to grow, such as plenty of sunlight, clean air, the right temperature, rainfall, the right soil, etc.
3. Then, as a whole group review the beginning of the life cycle of the orange from seed to tree using seed to tree yoga pose cards. As all students stand as tall trees, mimic the bees **pollinating** the flowers (for example, by buzzing around and tapping students' hands). Once students have been "pollinated," have them turn their hands into a fist to represent the fruit.

ROOT AROUND (25 MINUTES) *explore*

1. Ask students to explore what will happen next. Likely, someone has to pick the oranges. As the students continue to stand as tall as trees with their hands in fists as fruits, travel throughout them pretending to pick the fruits to put into a basket.
2. Tell students that the work at the farm is done and they can sit down. Then present to them baskets full of real oranges (that were picked on the farm).
3. Work with students to determine what happens next. Likely, the oranges travel to a place where they can be juiced. While a student models driving the truck full of oranges with a small hula hoop or toy steering wheel, draw on the map a line to where they may have traveled for this step.
4. Model for students in small groups of 5 how they will halve and **juice** their oranges and then use manual juicers to juice them and pour the juice into a measuring cup.

5. Provide small groups each with a cutting board, a paring knife, a juicer, and 5 oranges, and observe and assist their work (collecting the knives as soon as this step is complete). Distribute 3 pitchers (one for every 2 groups) so the groups can pour their juice in when their measuring cup gets full.
6. Remind students that there are also workers that are in charge of the very important clean-up steps. Choose 2 students from each group to deliver the organic waste to the compost bin and 3 students from each group to clean the cutting boards and juicers using garden-safe soap.
7. Work with students to determine what happens next. Likely, the oranges travel again to a place where they can be frozen into popsicles. While a student models driving the truck full of juice with a small hula hoop or a real steering wheel, draw on the map a line to where they may have traveled for this step.
8. Demonstrate how to use a **funnel**. Choose a few students that have not participated in individual jobs (like "driving") to use a funnel to pour the juice carefully into the **molds** and pretend to put them in a freezer (this step will happen after class). If you do not have popsicle molds, you can use Dixie cups. Simply cover with plastic wrap and poke a popsicle stick in the center of each.
9. Work with students to determine what happens after the popsicles are frozen. Likely, the popsicles will travel again to the market to be sold. While a student models driving the truck full of popsicles with a small hula hoop or a toy steering wheel, draw on the map a line to where they may have traveled for this step (this could be a local **farmers market** or grocery store).
10. Lastly, choose students to model a transaction at the farmers market that brings the popsicle from the farm all the way to the plate.
11. Explain to students that the popsicles they have created will be frozen and they can taste them the following week.

GROW UNDERSTANDING (5 MINUTES) *explain*

Read the book *Before We Eat* to review all of the people that play a part in bringing local food from the farm to the table for not only crops but fish, honey, dairy, and many others.

OBSERVE THE FRUITS (5 MINUTES) *elaborate*

Begin a letter to a farmer that vends at a local farmers market, thanking them for all of the steps they carefully complete from seed to plant and from farm to market. Students can finish this for homework or in their classrooms.

Note:
Similar to the reflection prompts at the end of most lessons, this letter can be used to assess student understanding of content learning objectives.

REFLECT (5 MINUTES) *evaluate*

1. Recognize specific students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they appreciate and respect the diversity throughout their state.
2. Review the steps of the local food system with students by allowing volunteers to present their letters to local farmers.

ADAPTING FOR INDOORS

In the case of inclement weather, this lesson in its entirety can occur inside the classroom.

CONNECTIONS TO KITCHEN LESSONS

Prepare a dish in the kitchen featuring key crops from your state. For each crop, highlight the region it was grown and discuss all of the people that got it to where it is now.

POSSIBLE EXTENSIONS

Community: Create a market stand and sell (or give away!) your food products, for example in front of the school at the end of the school day.

ADDITIONAL RESOURCES

- *Sustainable Table, What is a Food System?*
  http://www.sustainabletable.org/254/local-regional-food-systems
- *USDA Local Food Systems Resources*
  https://www.nal.usda.gov/afsic/local-food-systems
- *EPA Ecoregions of North America*
  https://www.epa.gov/eco-research/ecoregions-north-america

SEED TO TREE

YOU ARE A LITTLE SEED,
JUST PLANTED IN THE GROUND.

SEED TO TREE

WITH WARMTH AND WATER,
YOU GROW...

SEED TO TREE

...AND GROW.

SEED TO TREE

THEN YOUR STEM COMES UP OUT OF THE GROUND.

SEED TO TREE

YOUR ROOTS DIG DOWN INTO THE EARTH
AS YOUR LEAVES STRETCH UP TOWARDS THE SUN.

SEED TO TREE

WITH THE SOIL HOLDING YOU TIGHT AND PROVIDING YOU WITH NUTRIENTS,
YOU STAND STRONG.

GARDEN AND KITCHEN MATH

Garden

EST. TIME 45 minutes SEASON spring

GRADE 4 | LESSON #14

ESSENTIAL QUESTION(S)

- How can we multiply a recipe to serve many?
- How can we calculate how much produce to grow to accommodate a recipe?

MATERIALS

- ❒ *Minnie's Diner: A Multiplying Menu* by Dayle Ann Dodds
- ❒ Clipboards (1 per every student)
- ❒ Pencils (1 per every student)
- ❒ **Simple Salsa**, *There's a Chef in My Soup!*
- ❒ Handout: *Garden and Kitchen Math Worksheet*

VOCABULARY

- Multiply, multiplier

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (15 MINUTES)

To prepare for this lesson, gather materials and read *Minnie's Diner: A Multiplying Menu* by Dayle Ann Dodds to develop comprehension questions for read aloud.

TEACHER BACKGROUND

Farmers, gardeners, and chefs use math every day as they make crop plans, measure ingredients, scale orders up and down, and the like. Therefore, growing and cooking food provides students with meaningful opportunities to apply the mathematical practices they're learning in school, and to enjoy the results! To make more or less of a recipe (to adjust the yield), you need to know what the recipe conversion factor is. To do this, divide the original recipe yield by the desired yield. The desired yield and the original yield must be expressed the same unit of measurement.

LESSON DESCRIPTION

In this lesson, students will read *Minnie's Diner: A Multiplying Menu* to introduce the scenario of multiplying recipes. Then, students will use the recipe for Simple Salsa from *There's a Chef in My Soup!* and walk step-by-step through determining how much they will need to multiply the recipe by to serve all of the students in the class and how much of each ingredient they will need. Finally, students will estimate how many of each plant they will need to grow in order to make the recipe to serve all of the students in the class.

LEARNING OBJECTIVES

Content Learning Objectives

GPM.4.2 Calculate amounts of produce to grow in school garden.

Life Skills Learning Objectives

CLS.1 Students demonstrate problem solving and resolve conflict as a team.

ACADEMIC STANDARD CONNECTIONS

CCSS.MATH.CONTENT.4.OA.A.3

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

CCSS.ELA-LITERACY.W.4.2.D. Use precise language and domain-specific vocabulary to inform about or explain the topic.

CULTIVATE CURIOSITY (10 MINUTES) *engage*

1. Read aloud *Minnie's Diner: A Multiplying Menu* to introduce the scenario of doubling the amount of food to prepare.
2. Explain to students that they are going to use a recipe for Simple Salsa and work together to **multiply** the quantities of the ingredients to accommodate the full class.

ROOT AROUND (10 MINUTES) *explore*

1. First, demonstrate for students how to determine what the **multiplier** should be for the recipe in order to provide a serving for each student.
2. Direct students to the first section of the Garden and Kitchen Math Worksheet handout to guide their thinking.

GROW UNDERSTANDING (10 MINUTES) *explain*

1. Next, challenge students to work in small groups at their tables to multiply each ingredient amount by the multiplier.
2. Direct students to the second section of the handout to guide their thinking.

OBSERVE THE FRUITS (10 MINUTES) *elaborate*

1. Lastly, challenge students to work independently to determine how much produce will be needed to create the recipe to serve all of the students.
2. Direct students to third section of the handout to guide their thinking.
3. When they have finished their calculations independently, provide time for students to share as a group and compare responses. Encourage a group dialogue to come to a final conclusion as a group.
4. As students work together, acknowledge observed behaviors that align with the life skills learning objectives, such as demonstrating problem solving as a team. Also, use the observational checklist to assess students' current development of the life skills.

REFLECT (5 MINUTES) *evaluate*

1. Recognize specific students' behaviors that aligned with the community and personal life skills. Specifically, ask students to reflect on how they solved problems as a team.
2. Review with students:
   - What strategies did you use to figure out how many tomatoes we would need? Did anyone else use a different strategy?
   - What strategies did you use to figure out how many tomato plants we would need to plant? Did anyone else use a different strategy?

ADAPTING FOR INDOORS

In the case of inclement weather, this lesson in its entirety can occur inside the classroom.

CONNECTIONS TO KITCHEN LESSONS

In **Lesson #16: Planting for a Feast**, students will plant the produce planned for in this lesson. Then in **Grade 5 Kitchen Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole** students use the produce they planted together. At this time, they can reflect on how accurately they estimated the yields when they planted.

POSSIBLE EXTENSIONS

Classroom: Have students write word problems about farmers and chefs calculating produce amounts.

GARDEN AND KITCHEN MATH WORKSHEET

STUDENT NAME: _____ DATE: _____

Use this handout with the recipe ***Simple Salsa*** from ***There's a Chef in My Soup!***

How much should we multiply the recipe by to serve all of the students in the class?

1. Look at your recipe. What is the approximate yield? _____ cup(s)

2. If one serving is 2 tablespoons and there are 16 tablespoons in a cup, how many servings are there in one cup? _____ servings

Show your work here:

3. How many servings does the recipe yield? _____ servings

Show your work here:

4. How many students are in the class? _____ students

5. What would you have to multiply the recipe by to ensure that there are at least enough servings for each student in the class? Round up to the nearest whole number _____

Show your work here:

How much of each ingredient will we need to create this recipe to serve all of the students? Simplify any measurements to larger units if possible. For example, 9 teaspoons can be simplified to 3 Tablespoons.

ORIGINAL RECIPE: MAKES ____ CUP(S). SERVES ____	X ____	MULTIPLIED RECIPE: MAKES ____ CUP(S). SERVES ____	SIMPLIFIED MEASUREMENT
• 2 medium tomatoes	X ____	____ medium tomatoes	_____
• ½ teaspoon of salt	X ____	____ teaspoons of salt	_____
• ½ teaspoon of minced garlic	X ____	____ teaspoons of minced garlic	_____
• 1 tablespoon minced yellow onion	X ____	____ tablespoons of minced yellow onion	_____
• 1 tablespoon minced green bell pepper	X ____	____ tablespoons of minced green bell pepper	_____
• 1 tablespoon lime juice	X ____	____ tablespoons of lime juice	_____
• ½ teaspoon of hot-pepper sauce	X ____	____ teaspoons of hot-pepper sauce	_____

GARDEN AND KITCHEN MATH WORKSHEET CONTINUED

How much produce will we need to grow to create this recipe to serve all of the students?

1. If we assume that 1 garlic clove yields approximately ½ teaspoon of minced garlic,

how many garlic cloves will we need? _____

Show your work here:

2. If we assume that 1 onion yields approximately 16 tablespoons of minced onion,

how many onions will we need? _____

Show your work here:

3. If we assume that 1 bell pepper yield approximately 8 tablespoons of minced bell pepper,

how many bell peppers will we need? _____

Show your work here:

4. Collect all of your answers on the list below.

Produce List:

_____ tomatoes

_____ garlic cloves (assuming 1 teaspoon minced = 1 fresh garlic clove)

_____ onions (assuming 1 tablespoon minced = 1/16 of an onion)

_____ green bell peppers (assuming 1 tablespoon minced = 1/8 bell pepper)

How many of each plant do you think we would need to plant to yield enough produce to create this recipe for all of the students in the class?

_____ tomato plants _____ garlic plants _____ onion plants _____ green bell pepper plants

SAVING BEAN SEEDS

Garden

EST. TIME 45 minutes SEASON fall

GRADE 5 | LESSON #3

ESSENTIAL QUESTION(S)

- What are the benefits of seed saving?

MATERIALS

- ❒ Beans
- ❒ *Gregor Mendel: The Friar Who Grew Peas* by Cheryl Bardoe
- ❒ Coin envelopes or paper to make origami seed envelopes (1 per student)
- ❒ Blank paper and clipboard (1 per student)
- ❒ Writing and coloring supplies (enough for each student)

VOCABULARY

- Inherit
- Traits
- Seed saving

ASSESSMENT

- Observational checklist
- Create a Guide

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (15 MINUTES)

To prepare for this lesson, gather materials and read *Gregor Mendel: The Friar Who Grew Peas* by Cheryl Bardoe to develop comprehension questions for read aloud. Also, ensure there are bean plants in the garden for harvesting.

TEACHER BACKGROUND

Seed saving is an ancient method for cultivating desired genetic traits and preserving biodiversity. This practice can save gardeners money from buying seeds each year, and the sharing of special seeds can build community with neighbors.

LESSON DESCRIPTION

In this lesson, students will read *Gregor Mendel: The Friar Who Grew Peas* by Cheryl Bardoe to explore in what way Mendel discovered how genetic traits are passed down. The students will use that knowledge to select and harvest the healthiest bean plants from the garden, and they will save those seeds for the Grade 4 students to plant in the spring. Students will also provide a growing guide to accompany the seeds.

LEARNING OBJECTIVES

Content Learning Objectives

P.5.1 Understand how to identify and cultivate genetic traits in plants.

Life Skills Learning Objectives

CLS.3 Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-LITERACY.W.5.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Social Studies: Citizenship, Cultural Traditions.

See "Teaching Strategies" in Appendix section for information on how to lead Think-Pair-Share.

CULTIVATE CURIOSITY (10 MINUTES) *engage*

1. Read aloud selections from *Gregor Mendel: The Friar Who Grew Peas* aloud and discuss what Mendel learned through being curious and experimenting with pea plants—that plants **inherit** and pass down **traits**.
2. Ask students to think-pair-share and consider how that knowledge may affect the way they choose what to plant in the garden.

ROOT AROUND (10 MINUTES) *explore*

1. Position the class so they surround a garden bed full of dry beans. Have students look closely at the beans and share their ideas for how to identify the healthiest looking bean pods. Once consensus is reached, model how to harvest and have each student harvest four healthy looking beans.

GROW UNDERSTANDING (10 MINUTES) *explain*

1. Explain to students that we are going to save the beans (seeds) from the four healthy beans they chose in a process commonly called **seed saving** in an attempt to save the desirable traits for the garden the following year.
2. Model for students how to shell beans and place them in a coin envelope or an origami seed envelope. If students are making origami envelopes, demonstrate that process here.

OBSERVE THE FRUITS (10 MINUTES) *elaborate*

1. Explain to students that these seeds will be passed down to the Grade 4 class to plant in the spring, so we need to provide them with information about how, when, and where to plant the beans.

This activity can be used to assess student understanding of content learning objectives.

2. Provide students with store-bought seed packets for the same variety of bean or hand-held devices to conduct research. Have them combine their research with their knowledge of growing these beans to create a guide for the Grade 4 students on a separate sheet of paper. Encourage them to provide information on how, when, and where to plant and care for the beans (ensuring the plants' needs of water, nutrients, sunlight, temperature, and space are met). Guides can be decorated with scientific drawings of the bean plants at maturity or describe the positive traits that the seeds are being saved for.
3. As students work on their guides, acknowledge observed behaviors that align with the life skills learning objectives, such as applying principles of fairness while sharing resources. Also, use the observational checklist to assess students' current development of the life skills.

REFLECT (5 MINUTES) *evaluate*

1. Recognize individual student behaviors that aligned with being the best for themselves, their communities, and their environment. Ask students to reflect on how they were able to share the space and the materials with equity and fairness.
2. Review the value of seed saving with students by allowing volunteers to present their planting guides and rationale for saving their seeds to the Grade 4 students.

ADAPTING FOR INDOORS

In the case of inclement weather, the Cultivate Curiosity, Grow Understanding, and Observe the Fruits sections of this lesson can occur inside the classroom. The bean collection in the Root Around section should take place in the garden on the next garden day that the weather allows.

CONNECTIONS TO KITCHEN LESSONS

Use the rest of the beans in **Kitchen Lesson #10: Cooking Beans** and **Kitchen Lesson #11: Beans Galore Salad.**

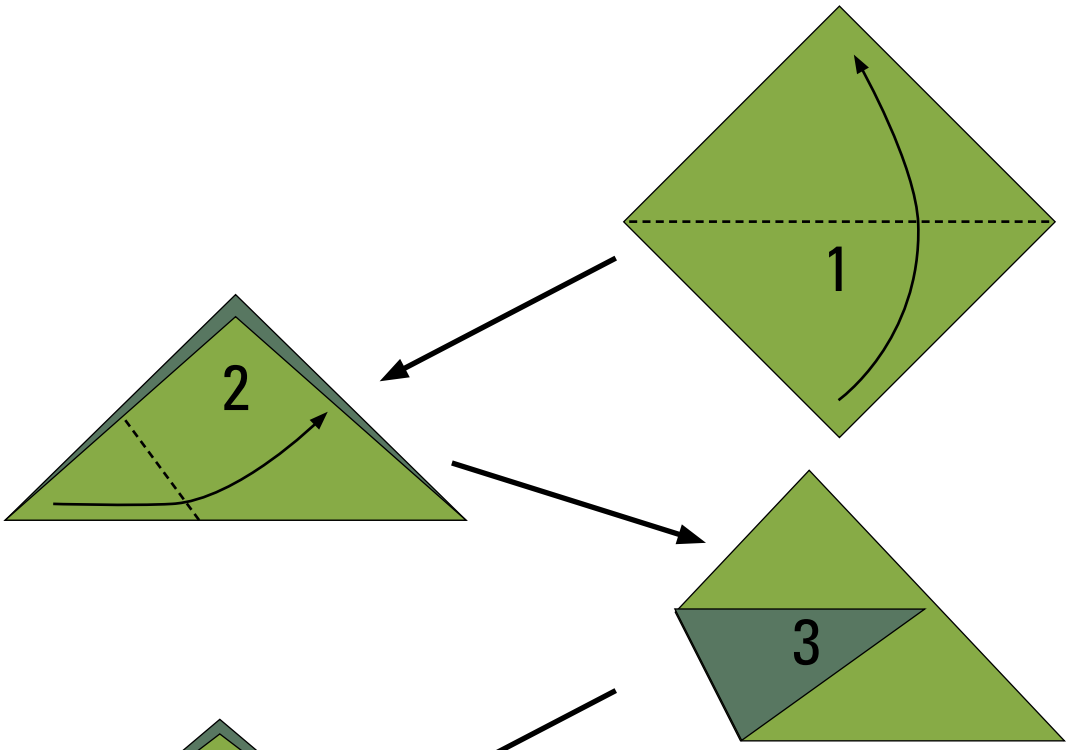
POSSIBLE EXTENSIONS

Classroom: Create a class card to give to Grade 4 students along with the beans telling them what they have to look forward to in garden class this year.

ADDITIONAL RESOURCES

- *Seed to Seed: Seed Saving and Growing Techniques for Vegetable Gardeners* by Suzanne Ashworth
- *Seed Saving: A Beginner's Guide to Heirloom Gardening* by Caleb Warnock
- *The Seed Garden: The Art and Practice of Seed Saving* by Lee Buttala
- Seed Savers Exchange http://www.seedsavers.org/
- Farmers Almanac, Seed Saving Guide https://www.almanac.com/content/how-save-vegetable-seeds-seed-saving-guide

ORIGAMI SEED ENVELOPES



Fold over one corner so top edge is parallel to bottom edge.

Fold over other flap corner.

Fill the envelope.

Fold two free tips at top into the pocket formed by the outside flap.

Diagram adapted from ourpermaculturelife.com.

WELCOME TO THE GARDEN

Garden

EST. TIME 45 minutes SEASON fall

GRADE 6 | LESSON #1

ESSENTIAL QUESTION(S)

- How can I be my best self in the garden?
- How can I be my best for my community?
- How can I be my best for my environment?

MATERIALS

- ❒ Any crop from the garden ready to harvest
- ❒ Chart paper, easel
- ❒ Post-it notes (3 per student)
- ❒ Pencils (1 per student)
- ❒ Colanders
- ❒ Poster-size school year calendar
- ❒ Markers
- ❒ Handout: *Welcome to the Garden Scavenger Hunt*

VOCABULARY

- Present, Attentive, Aware, Engaged
- Responsibility
- Empathy
- Respect

ASSESSMENT

- Observational checklist

PREPARATION (10 MINUTES)

Write one of the following sentences along the top of 3 pieces of chart paper:

- "How can we be our best for ourselves?"
- "How can we be our best for our community?"
- "How can we be our best for our garden?"

Post chart paper in 3 different places around the garden or classroom.

TEACHER BACKGROUND

The development of expectations for the garden space happens collaboratively with students in this lesson. This is a process that encourages students to reflect on how they impact their own learning, their community, and the environment along with what behaviors they can agree to as a class to ensure their shared goals are met.

LESSON DESCRIPTION

In this lesson, students will observe the peaceful garden area and consider how they will be a part of it. Students will discuss and then share ideas on how they can be the best for themselves, their community, and their environment in this garden space. Then they will have the opportunity to explore and enjoy the space on their own while modeling those behaviors. Introduce the poster-size school year calendar as a tool that students will use throughout the year to track planting, amending soil, harvesting, and the like. At the end of the lesson, students will consider what it looks like to take care of themselves, their community, and their environment in different settings at home and school. These conclusions will serve as enduring understandings throughout the year.

LEARNING OBJECTIVES

Life Skills Learning Objectives

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

Create Your Own!

Use the lesson template to create your own and share with us!

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.
PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.
PLS.5 Students develop the ability to make informed and responsible decisions.
PLS.6 Students actively seek creative and resourceful solutions.
CLS.5 Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.

CULTIVATE CURIOSITY (10 MINUTES) *engage*

1. Lead students to a comfortable sitting position in a central gathering area in the outdoor classroom space (in a circle, if possible).
2. Welcome students to the garden and provide them with a few minutes to breathe, look, listen, and take in the space. Allow each student's voice to be heard by having them say aloud their names and one thing they see, hear, or feel that they believe makes the space special.
3. Lead students to recognizing how peaceful the space is without our interaction. Encourage students to consider how we can interact with the space in a way that enhances it.

ROOT AROUND (10 MINUTES) *explore*

1. Explain to students that as we consider how we interact with this environment, we are also going to consider how we interact with each other and with ourselves.
2. Introduce the following questions about time spent in the garden, each written on a separate piece of chart paper:
   - How can we be our best for ourselves?
   - How can we be our best for our community?
   - How can we be our best for the environment?
3. Provide students with the chance to talk about their ideas for each question as pairs or in small groups. Walk around the groups, listening, guiding, and challenging the discussions while distributing one pencil and 3 post-it notes for each student.
4. Instruct each student to write one idea per post-it note for each of the questions and then stick them to the appropriate piece of chart paper.

GROW UNDERSTANDING (10 MINUTES) *explain*

1. Review responses as a class, adding any additional ideas and defining key terms that were not considered by students, to result in a comprehensive list of answers to the essential questions.

ESSENTIAL QUESTIONS	EXAMPLES
How can I be my best self in the garden? • How can we be our best for ourselves? - What does it mean to be self-aware? How can we show respect and caring for our own needs? • How can we make informed, responsible decisions and keep ourselves safe in the garden? • What does it look like to be an active and engaged listener? • Why is it important to show up on time prepared to learn?	• being active and **engaged** • being aware of our thoughts, feelings, and needs • being in control of our bodies • sharing our thoughts, feelings, and needs, with others • considering the impact of our choices • taking **responsibility** for our choices • making choices that keep us safe • using tools safely
How can we be our best for our community? • How can we show respect, empathy, and caring for others? • How can we keep others safe in the garden? • How can we contribute to the learning of the community? • Why is it important to participate? • How can we work together to seek creative, resourceful solutions and make informed, responsible decisions?	• being **present** and **attentive** • being **aware** of others' thoughts, feelings, and needs • showing **empathy** for others' feelings • showing **respect** for others' thoughts • interacting with our classmates in a gentle way with our bodies and language • considering the impact of your choices on others • being honest with others • including all team members in small group work • joining the group for whole group discussions • listening with a still body and attentive eyes
How can we be our best for our environment? • How can we show respect and caring for the environment?	• showing caring and respect for all of the living and nonliving parts of the environment • considering the impact of your choices on the environment • making responsible decisions

OBSERVE THE FRUITS (10 MINUTES) *elaborate*

1. Explain to students that they will have time to practice these behaviors as they conduct a scavenger hunt in pairs. Assign pairs. Remind students of the garden boundaries and the callback signal to let them know to return to the group gathering space. Distribute the handout Garden Scavenger Hunt.
2. As students explore and enjoy the garden area, acknowledge observed behaviors that align with the enduring understandings, such as being active and engaged learners or showing care for the environment. Also, use the observational checklist to assess students' current development of the life skills.

3. Provide the call back signal, and as each student returns to the group gathering space, welcome them by name back into the group.
4. Introduce a poster-size calendar where they'll be recording their planting and harvest dates throughout the year.
5. Have each student share one crop they found that looked ready to harvest.
6. Have students recall what they know about safe food handling practices and add anything important that they may have missed.
7. Choose one item that is abundant and good raw, such as cherry tomatoes, to harvest, wash and enjoy together.
8. Record "Harvested cherry tomatoes" on today's date on the calendar together.
9. At the end of each class hereafter, provide a few minutes for students to record planting, germination, and first harvest dates on the class-wide garden calendar.

REFLECT (5 MINUTES) *evaluate*

1. Review with students the behaviors that they exhibited that aligned with the enduring understandings that they developed together with the goal of being the best for themselves, their communities, and their environment.
2. Together, discuss why these behaviors are so important to a productive, safe, and positive experience in the garden.
3. Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

ADAPTING FOR INDOORS

The Cultivate Curiosity, Root Around, and Grow Understanding sections of this lesson can occur inside the classroom in the case of inclement weather. The Observe the Fruits section should take place in the garden area on the next garden day that the weather allows.

CONNECTIONS TO KITCHEN LESSONS

Compare agreements created in **Kitchen Lesson #1: Welcome to the Kitchen** to those created in the garden.

POSSIBLE EXTENSIONS

Community: Compare planting and harvesting calendars with those of local farmers. Volunteer at a local farm to help harvest or glean their crops.

ADDITIONAL RESOURCES

For more information on group management and group development of procedures and parameters, see:

- *Tools for Teaching* by Fred Jones
- *Rethinking Classroom Management* by Patricia Belvel

NAME:_____ DATE:_____

GARDEN SCAVENGER HUNT	
Find a tool you don't yet know the name of. Draw it here. Based on its structure, what do you think it might be for?	Find an organism living in the compost pile. Draw and label it here.
Find the plant with the largest diameter. Measure the diameter and record the plant name and diameter here.	List 5 crops that look ready for harvest here.
Note one thing that has changed in the garden since the last time you were here.	Find a pest in the garden. Identify it if you can. Describe what it's doing here this year.

TEACHING EACH OTHER

HOW TO PLANT SEEDS

Garden

EST. TIME 45 minutes SEASON spring

GRADE 6 | LESSON #16

ESSENTIAL QUESTION(S)

- How can information about growing a garden be found?
- How can information about growing a garden be shared?

MATERIALS

- ❒ *A Seed is Sleepy* by Dianna Aston
- ❒ Seed packets for 4 different seasonal crops that can be direct sowed
- ❒ Trowels (1 for every student)

VOCABULARY

- Seasonal
- Direct seed

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (15 MINUTES)

To prepare for this lesson, gather materials and read *A Seed is Sleepy* by Dianna Aston to develop comprehension questions for read aloud. Also, ensure there are 4 garden beds prepared for planting.

TEACHER BACKGROUND

Seed packets often include a picture, a written description (including common and scientific names, plant height, days to harvest, etc.), and planting directions (with recommendations on when to plant along with planting depth, spacing, sun requirements, and basic directions for care of the plant).

LESSON DESCRIPTION

In this lesson, students will work in 4 teams to gain information from a seed packet about planting a specific seasonal crop. Then students will be divided into new groups and rotate around the 4 garden beds to plant the 4 seasonal crops. Each student will have the opportunity to be the teacher and the student.

LEARNING OBJECTIVES

Content Learning Objectives

P.6.1 Interpret directions on seed packets.

Life Skills Learning Objectives

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

ACADEMIC STANDARD CONNECTIONS

NGSS.6.LS2.A Interdependent Relationships in Ecosystems

CCSS.ELA-LITERACY.SL.6.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

CULTIVATE CURIOSITY (10 MINUTES) *engage*

1. Read *A Seed is Sleepy*. As the story is read, have students access their prior knowledge and describe why seeds fit each of the adjectives the book presents.

ROOT AROUND (5 MINUTES) *explore*

1. Divide students into 4 teams of up to 8 students (same teams as **Lesson #15: Preparing a Bed for Planting**).
2. Provide each team with seed packets for something **seasonal** to **direct seed** in the garden (such as beans, carrots, beets, sunflowers, or greens). Explain that "direct seeding" means planting seeds directly into the ground, as opposed to planting them in containers. The seed packet will indicate if the seeds inside are for direct seeding or sowing in containers.
3. Instruct each team to work together to read their seed packet, focusing on planting depth and spacing. Have them prepare to lead other students in the class on how to plant their seeds in the beds that were prepared in the prior lesson.

GROW UNDERSTANDING (30 MINUTES) *explain*

1. Divide students into a new configuration of 4 groups, with 2 students from each original team. This can be done by having students in each team count off 1-2-3-4, then grouping students by their numbers.
2. Rotate the new groups through the 4 planting areas. At each bed, the team members who learned about that seed will explain (team-teach) to the rest of the group how to plant their seeds.
3. Students will work together to plant each bed, then move to the next bed, until they have rotated through all 4 beds, planted 4 sets of seeds, and all students have helped lead their group. Use the observational checklist while students are working to assess development of Personal and Community Life Skills.
4. Have students note on the class-wide calendar together what was planted on today's date.

OBSERVE THE FRUITS (EMBEDDED ABOVE) *elaborate*

Throughout each group's rotations to each bed described above, 2 students will be "explaining" how to plant that specific seed according to the seed packet, while the rest of the students will be "elaborating" on their understanding of how to plant seeds using information from a seed packet.

See "Teaching Strategies" in the Appendix section for information on how to lead Think-Pair-Share

REFLECT (5 MINUTES) *evaluate*

1. Recognize specific students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they were able to show empathy for each other and the environment.
2. Invite students to think-pair-share about their experience today—not only about what they learned about growing seeds, but also, how they gained the information they needed to grow seeds and what strategies they used to share that information. Encourage students to consider what they observed in the roles of both the teacher and the student of 3 other groups of teachers.
3. Review the value of finding information and being equipped with methods to share information with the intention of advocacy for small-scale gardens. Discuss with students the benefits of having small-scale gardens in the community. Brainstorm opportunities to practice these skills in the community.

ADAPTING FOR INDOORS

In the case of inclement weather, the Cultivate Curiosity, Root Around, and Reflect sections of this lesson could occur inside the classroom. The Grow Understanding and Observe the Fruits sections should take place in the garden area on the next garden day that the weather allows.

CONNECTIONS TO KITCHEN LESSONS

Plant crops in this lesson that will be useful in the fall of Grade 7, such as herbs to include in **Grade 7 Kitchen Lesson #2: Making Preserves**.

POSSIBLE EXTENSIONS

Community: Organize a garden workday at another community garden or at another school garden to teach a group of volunteers (or students) to plant in the same way.

ADDITIONAL RESOURCES

- Sowing Seeds in the Ground
  http://www.sunset.com/garden/garden-basics/sowing-seeds
- *The Magic School Bus Plants Seeds* by Joanna Cole and Bruce Degen
- *Plants* by DK Publishing
- *Seeds* by Susan H Gray

BUSINESS INCOME AND EXPENSES *Garden*

EST. TIME 45 minutes SEASON spring

GRADE 7 | LESSON #16

ESSENTIAL QUESTION(S)

- How is a basic income and expense model created?

MATERIALS

- ❒ Resources for students to research local market price (technology, grocery store advertisements, etc.)
- ❒ Chart Paper, Easel, Markers
- ❒ Student Journals
- ❒ Clipboards (1 per student)
- ❒ Pencils, Colored Pencils, Handheld Sharpeners

VOCABULARY

- Local market price
- Income
- Expenses
- Profit
- Yield
- Unit price

ASSESSMENT

- Observational checklist

PREPARATION (APPROXIMATELY 15 MINUTES)

To prepare for this lesson, gather materials listed on the left.

TEACHER BACKGROUND

An income and expense model shows projected revenues along with projected expenses during a particular period of time or for a specific project. Combined, those result in expected net income or net profit.

LESSON DESCRIPTION

In this lesson, students will work together to create a basic income and expense model for their business plans developed in the winter. After listing all expenses, they will determine an appropriate unit price based on their goal for profit and the market price in their local community.

LEARNING OBJECTIVES

Content Learning Objectives

BP.7.3 Create basic income/expense model.

Life Skills Learning Objectives

PLS.5 Students develop the ability to make informed and responsible decisions.

ACADEMIC STANDARD CONNECTIONS

Social Studies: Economics.

CCSS.MATH.CONTENT.7.NS.A.3. Solve real-world and mathematical problems involving the four operations with rational numbers.

Create Your Own!

Use the lesson template to create your own and share with us!

CULTIVATE CURIOSITY (5 MINUTES) *engage*

1. Revisit student business plans created in **Lesson #9: Planning Our Business, Part 1**, for creating a food business project to generate profit for the school garden gift in Grade 8.

ROOT AROUND (10 MINUTES) *explore*

1. Guide students in exploring what some **local market prices** are for the product they intend to sell. Ensure that information on the size and unique features of each company's product is collected as well in order to determine the different factors that may have led to pricing.

GROW UNDERSTANDING (2 MINUTES) *explain*

1. Explain to students that they are going to build a basic **income** and **expense** model to collect information that will guide them in pricing their product and help ensure they will make a profit to go toward their garden gift in Grade 8.

OBSERVE THE FRUITS (25 MINUTES) *elaborate*

1. First, students will start to calculate their **yield** (how much of the product will be possible to make) by reviewing their planting list, anticipated harvest, and recipe yields. This will guide their understanding of the quantity of each additional product they will need.
2. Then, students will begin to explore their **expenses** (or how much it will cost to make their product). Their only known expenses so far should be the cost of the plants. Challenge students to consider other inputs that have gone into growing the plants beyond just the such as time, energy, resources (tools, beds, soil), etc. Inform students that they will not be putting a dollar value on those inputs today but it's important to consider when planning a business.
3. Then, have students consider all of the other materials they will need (i.e., jars, labels, etc.), each listed with a price and priced around the quantity that they determined in Step 2 (above).
4. Now, with a full list of expenses of both plants and materials, divide the amount that must be spent by how many units of the product will be produced with these plants and materials. That will give you a minimum **unit price** (or what each unit should cost). Consider that at this price, no **profit** will be made (or no money above the expenses will be made).

5. With students, consider how much they would like their **income** (or the money they make) to be to ensure that it is high enough above the expenses to make a profit. Students should also consider the market price from earlier in the lesson, to determine a price that is feasible for their product.
6. When students have agreed on how much to sell their product for, have them subtract their total expenses from their total income to determine their total profit that will go toward their Grade 8 garden gift. Throughout this work session, use the observational checklist while they are working to assess development of Personal and Community Life Skills.

REFLECT (5 MINUTES) *evaluate*

1. Recognize students behaviors that aligned with being the best for themselves, their communities, and their environment. Ask students to reflect on how this process will help them make informed, responsible decisions.
2. Challenge students to consider creative ideas on how to increase income and/or decrease expenses to increase profit.

ADAPTING FOR INDOORS

In the case of inclement weather, this lesson in its entirety can occur indoors.

CONNECTIONS TO KITCHEN LESSONS

Students will make the product for the business planned here in **Grade 8 Kitchen Lesson #2: Preparing the Product for Our Business.**

POSSIBLE EXTENSIONS

Community: Interview value-added product vendors about the decisions they have made to lower their expenses so their business can be more profitable.

ADDITIONAL RESOURCES

- Biz Kids, Young Entrepreneurs
  http://bizkids.com/episode/understanding-income-and-expenses
- Investopedia, Income and Expenses
  http://www.investopedia.com/university/teaching-financial-literacy-tweens/teaching-financial-literacy-tweens-income-and-expenses.asp

LOCAL VERSUS IMPORTED FOODS

Garden

EST. TIME 45 minutes SEASON winter

GRADE 8 | LESSON #12

ESSENTIAL QUESTION(S)

- What are the impacts of importing food versus eating locally?

MATERIALS

- ❒ Any local, seasonal vegetable growing in the garden
- ❒ A local, regional, and imported example of a specific vegetable
- ❒ Post-it notes
- ❒ Sharing and tasting supplies for the vegetables
- ❒ Handouts: *article about benefits of eating local food*

VOCABULARY

- Local
- Regional
- Imported
- Seasonal
- Post-harvest

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (15 MINUTES)

To prepare for this lesson, research and print an article listing the benefits of eating local foods. Gather materials. Label the local, regional, and imported vegetables with the name of the region or country where they were grown.

TEACHER BACKGROUND

Food systems comprise all aspects of food production and food distribution from planting to harvest to post-harvest production (packaging, transporting, etc.). This lesson explores the differences between local, regional, and imported foods. It should be noted that there is no agreed upon definition or mileage radius for the terms "local" or "regional." The impacts of a more local food system include environmental sustainability, improved health and nutrition, and support for local economies.

LESSON DESCRIPTION

In this lesson, students will research the impact of buying locally, regionally, and importing foods from across the world. They will then investigate a local, regional, and imported example of a specific vegetable, making inferences and learning as much as they can about the vegetable only from its place of origin. Finally, students will taste test the vegetables to determine the difference in taste, texture, and freshness.

LEARNING OBJECTIVES

Content Learning Objectives

GFS.8.3 Describe and characterize the differences between foods grown locally and those imported from other parts of the United States and the world.

Life Skills Learning Objectives

PLS.5 Students develop the ability to make informed and responsible decisions.

ACADEMIC STANDARD CONNECTIONS

Social Studies: Economics.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 1: Students will comprehend concepts related to health promotion and disease prevention to enhance health.

CULTIVATE CURIOSITY (5 MINUTES) *engage*

1. Display for students an example of a **local**, **regional**, and **imported** vegetable that is **seasonal** at the time for your area. Have labels that say "local," "regional," and "imported." Work with students to define each word. Then have students try to match the correct label with each vegetable and justify their ideas.

ROOT AROUND (10 MINUTES) *explore*

1. Reveal which vegetable is local, which is regional, and which is imported. Add labels to each that say where they were grown.
2. Provide students time to look at the different vegetable samples and read the article you selected for the lesson that lists the benefits of eating local food.

GROW UNDERSTANDING (5 MINUTES) *explain*

1. Have students share their findings with the group. Discuss the potential differences between local, regional, and imported vegetables. The differences can range from the quality of the food (freshness, nutrients, taste) to the environmental impacts to the economic impacts.
2. Guide students to understand that imported food travels further to get to our plates. Imported food is not as fresh and has used more fossil fuels on its journey.

OBSERVE THE FRUITS (15 MINUTES) *elaborate*

1. Lead students in closely investigating each of the local, regional, and imported vegetables. Have them research about how many miles each traveled, and have them infer about how long it would have taken them to travel that far. Remind students to take into account **post-harvest** steps, such as packing, weighing, delivery, and the like. Student work may look like:
    - Locally grown vegetable / harvested 1 day ago / 50 miles (worth of emissions)
    - Regionally grown vegetable / harvested 3 days ago / 500 miles (worth of emissions)
    - Imported vegetable / harvested 7 days ago / 5000 miles (worth of emissions)

While we likely will not have concrete numbers, their educated guesses will suffice.

2. Then lead students in a careful scientific drawing of the appearance of each vegetable, noting similarities and differences.
3. Guide students to wash, prepare, and taste each vegetable, comparing and describing the taste, texture, and freshness of each. Use Culinary Flavor and Texture concepts and adjectives learned in the kitchen.
4. As students work, use the observational checklist while they are working to assess students development of Personal and Community Life Skills.

REFLECT (5 MINUTES) *evaluate*

1. Recognize student behaviors aligned with being the best for themselves, their communities, and their environment. ask students to reflect on how they were able to gain knowledge that will help them make informed decisions.
2. Challenge students to consider why each of the options of local, regional, and imported may be preferable at different times (if a food cannot grow within a region or at a specific time).
3. Challenge students to consider what strategies they could use in their food business to ensure they are serving the highest quality ingredients.

ADAPTING FOR INDOORS

In the case of inclement weather, this lesson in its entirety can occur indoors.

CONNECTIONS TO KITCHEN LESSONS

As students prepare foods in the kitchen, have them identify which ingredients are local and which are imported.

POSSIBLE EXTENSIONS

Community: Interview farmers market customers about why they choose to buy locally.

ADDITIONAL RESOURCES

- Farmer's Almanac, Planting Dates
  https://www.almanac.com/gardening/planting-dates
- Greenopedia, Why is Local Healthier?
  http://greenopedia.com/local-food-is-healthier/

LESSON PLANS

Kitchen

WELCOME TO THE KITCHEN

Kitchen

EST. TIME 45 minutes SEASON fall TYPE cooking concept

GRADE K | LESSON #1

ESSENTIAL QUESTION(S)

- How can I be my best self in the kitchen?
- How can I be my best for my community?
- How can I be my best for my environment?

MATERIALS

- ❒ *Eating the Alphabet* by Lois Elhert
- ❒ Chart paper, easel, and markers
- ❒ Seasonal finger-food snack divided onto plates, such as carrot sticks or apple slices (1 plate per table)

VOCABULARY

- Community
- Environment
- Fruit
- Vegetable

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (20 MINUTES)

Prepare a seasonal finger-food snack with enough for 1 per student, divided onto plates (1 per table). Store as necessary for the snack.

TEACHER BACKGROUND

The development of expectations for the kitchen space happens collaboratively with students in this lesson. This is a process that encourages students to reflect on how they impact their own learning, their community, and the environment along with what behaviors they can agree to as a class to ensure that their shared goals are met.

LESSON DESCRIPTION

In this lesson, students will play a name game while exploring a variety of fruits and vegetables and showing whether or not they have tasted them before. As a whole group, students will discuss how to be the best for themselves, their community, and their environment in this kitchen space as they experience new things together. The teacher will guide them to cohesive language around these understandings before modeling behaviors that align with these understandings. Finally, students will enjoy a snack together while practicing these behaviors.

LEARNING OBJECTIVES

Content Learning Objectives

FP.K.1 Demonstrate ability to properly handle, wash and prepare fruits and vegetables

Life Skills Learning Objectives

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.

PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.

PLS.5 Students develop the ability to make informed and responsible decisions.
PLS.6 Students actively seek creative and resourceful solutions.
CLS.5 Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-LITERACY.SL.K.6 Speak audibly and express thoughts, feelings, and ideas clearly.

IGNITE INTEREST (10 MINUTES) *engage*

1. Welcome students to the kitchen and explain that we are first going to explore the wide variety of fruits and vegetables that we may have tasted before and some that we may taste together this year.
2. Read aloud *Eating the Alphabet* by Lois Elhert. As fruits and vegetables for each lesson are listed, request that students show a silent thumbs up or thumbs down to show whether they have tasted that fruit or vegetable before. Record how many students have tried each fruit or vegetable and how many have not to use as a pre-assessment for comparison at the end of the year.
3. At the conclusion of the book, explain that we are going to play a name game. Instruct students to say their name and a fruit or vegetable that begins with the same letter as their name. During the game, if they need help, they can gesture a telephone for "phone a friend" then choose one of the other students that is silently raising their hand to get ideas. If the class is stuck, they can refer back to *Eating the Alphabet*.
4. At the conclusion of the name game, express interest in students' previous unique experiences with foods and excitement for what they will experience together in the class that year.

See "Teaching Strategies" in Appendix section for information on how to lead Think-Pair-Share.

STIR DISCOVERIES (10 MINUTES) *explore*

1. Explain to students that throughout these new experiences this year, it will be essential that each student is their best for themselves, their community, and their environment. Each student is unique and has something special to contribute and we will welcome the best in each individual to our community.
2. For each of the Essential Questions, provide 1 minute for students to think about their answers independently, 2 minutes to discuss their ideas with a partner sitting next to them (pair), before selecting a few students to share their ideas with the whole group—a process referred to as "think-pair-share".
3. As the enduring understandings emerge from the group discussions, write them on a new sheet of chart paper for students to view. Add in anything important from the chart below that they don't mention.

ESSENTIAL QUESTIONS	ENDURING UNDERSTANDINGS TO REITERATE DURING GROUP DISCUSSION
How can we be our best for ourselves?	Make choices that keep you safe. (for example: work with tools carefully)
How can we be our best for our community?	Show respect for each other. (for example: join the group for the callback, listen and share)
How can we be our best for our environment?	Show respect for the kitchen we share. (for example: keep areas clean and tidy)

CLARIFY NEW IDEAS (10 MINUTES) *explain*

1. Explain to students that they are going to practice learning in the kitchen in a way that keeps them safe, shows respect for each other, and shows respect for the kitchen.
2. Model for students behaviors that are examples and counterexamples of the 3 enduring understandings, asking students to show thumbs up / thumbs down if the model behaviors align with the enduring understandings.
3. Then, allow students to volunteer modeling examples and counterexamples for classmates to observe and decide if they align with the enduring understandings.

ENDURING UNDERSTANDINGS	EXAMPLES	COUNTEREXAMPLES
Make choices that keep you safe.	• work with tools carefully • be in control of your body	• carelessly work with tools • carelessly move around the kitchen
Show respect for each other.	• interacting with classmates in a gentle way with our bodies and language • joining the group at the callback signal • listening with a still body and attentive eyes • sharing ideas	• interacting with classmates in an aggressive way with our bodies and language • continuing to wander after the callback signal • showing active or distracted behaviors when others are sharing
Show respect for the kitchen and dining room we share.	• keep areas clean and tidy • discarding compost, recycling, and trash appropriately	• carelessly leaving food or tools around the kitchen • carelessly discarding trash

WATCH IT RISE (10 MINUTES) *elaborate*

1. Explain to students that they will have time to practice these behaviors in their small groups through sharing a snack.
2. Explain that first they will focus on practicing the behavior of keeping themselves safe by washing their hands. Model how students will line up and each wash their hands, and then allow students to practice.
3. When students have returned to their seats, model how to move carefully through the room, pick-up a plate with the selected snack from a specific area, and carry it with 2 hands back to the table. Then, select a student from each table to follow the instructions.
4. Instruct each student to select gently and carefully a snack (reminding students to "touch one, take one") but not to taste it yet.
5. Explain to students that once they taste their snack, they are encouraged to share their thoughts with the others at their table, showing respect for others' thoughts (reminding students "don't yuck someone's yum"). Allow students to taste their snack together and practice talking about their experience.
6. As students taste and talk, acknowledge observed behaviors that align with the life skills learning objectives, such as being engaged learners and being respectful of others. Also, use the observational checklist to assess students' current development of the life skills.
7. Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket), and select a student from each table to follow the instructions.

REFLECT (5 MINUTES) *evaluate*

1. Recognize students' behaviors that aligned with the enduring understandings that they developed together with the goal of being the best for themselves, their communities, and their environment.
2. Ask students to reflect silently on what it means to be the best for themselves, their communities, and their environment beyond the garden, perhaps in the environment they are preparing to return to in school or in their home environment.
3. Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

CONNECTIONS TO GARDEN LESSONS

The essential questions explored in this lesson align directly with the essential questions explored in the **Grade K Garden Lesson #1: Welcome to the Garden**. This way of thinking can be practiced in the context of both the garden and the kitchen to make the understanding of each stronger.

POSSIBLE EXTENSIONS

Classroom: Compare group agreements for the kitchen with those students have in the classroom. How are behavior expectations similar in both places? How are they different?

ADDITIONAL RESOURCES

For more information on group management and group development of procedures and parameters, see:

- *Tools for Teaching* by Fred Jones
- *Rethinking Classroom Management* by Patricia Belvel

EAT A RAINBOW

Kitchen

EST. TIME 45 minutes SEASON fall TYPE cooking concept

GRADE K | LESSON #2

ESSENTIAL QUESTION(S)

- What does it mean to "Eat a Rainbow"?
- Why is it important to eat a variety of colors of fruits and vegetables?

MATERIALS

- ❒ 1 piece of poster board
- ❒ Chart paper, easel, and colored markers
- ❒ Neutral-colored post-it notes (at least 2 per each student)
- ❒ Colored pencils or crayons (at least 2 boxes per each table of 10 students)
- ❒ Handout: *Color Poems* (1 copy to display as posters)

VOCABULARY

- Vitamins, nutrients
- Nourish

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (5 MINUTES)

Gather materials and cut the poster board into 6 equal rectangles. On each rectangle, write the name of a color (red, orange, yellow, green, blue, and purple). Use a marker of that color to write the word (i.e., write "red" in red ink).

TEACHER BACKGROUND

Health guidelines recommend half of each meal be made up of fruits and vegetables. In addition, eating a variety of fruits and vegetables ensures consumption of a variety of vitamins and minerals. One strategy is to eat a rainbow of fruits and vegetables. This is particularly effective because phytonutrients, the compounds that give fruits and vegetables their unique colors, play a wide range of roles in keeping our body healthy. By eating a rainbow, we ensure that we are consuming a variety of phytonutrients to support overall health. If at your school another first or second language is commonly spoken or taught, add the names of the colors in that language to the color poems.

LESSON DESCRIPTION

Students will review the variety of fruits and vegetables they explored in **Lesson #1: Welcome to the Kitchen** and will draw them and then sort them by color to begin a collaborative art project. Students will kinesthetically model what part of the body is nourished by many fruits and vegetables of each color. Then, students will echo read a poem about colors, go on a kitchen scavenger hunt, and explore books and magazines about food to find more foods of each color to add to their collaborative art project depicting a rainbow of different fruits and vegetables.

LEARNING OBJECTIVES

Content Learning Objectives

HC.K.2 Explain what Eat a Rainbow means.

Life Skills Learning Objectives

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-LITERACY.L.K.5.A Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent.
CCSS.MATH.CONTENT.K.MD.B.3 Classify objects into given categories; count the number of objects in each category and sort the categories by count.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

IGNITE INTEREST (5 MINUTES) *engage*

1. Remind students that, as discussed in **Lesson #1: Welcome to the Kitchen**, they each have something special to contribute to the class, and we welcome those unique qualities to our community. In the same way, each fruit and vegetable has special or unique qualities, to contribute to our experience of food or to the **nourishing** of our bodies. State that just as we need every student and their unique qualities to be our best community, we need a variety of fruits and vegetables and their unique qualities—**vitamins** and **nutrients**—to be our best selves.
2. Review student names and the fruits and vegetables they chose in **Lesson #1: Welcome to the Kitchen** (that begin with the same letter as their name). Go around the class in a circle, working together as a group to remember the students' names and the fruits or vegetables they chose. If the class is stumped on the fruit or vegetable, the student can provide clues such as color, shape, size, taste, etc.

STIR DISCOVERIES (15 MINUTES) *explore*

1. Provide each student with a neutral-colored post-it note and each table of 10 students with at least 2 boxes of colored pencils or crayons. Instruct students to first select the colored pencil or crayon that matches the color of the fruit or vegetable they chose. Then, instruct students to think about the shape of that fruit or vegetable. When they have had a chance to select their color and consider the shape, instruct students to draw their fruit or vegetable on the post-it note.

See "Teaching Strategies" in Appendix section for information on transitioning between whole and small groups effectively.

2. Distribute each of the small posters labeled with each color, placing 2 on each of the 3 tables of 10 students. Instruct students to stand from their seats, move around the classroom, and stick their post-it note drawing to the poster labeled with the matching color before returning to their seats.
3. When all students have returned to their seats, invite them to explore the color poster that's in front of them at their table with their small group of 5. Have them name the fruits and vegetables they recognize and count the total number on their poster.

CLARIFY NEW IDEAS (5 MINUTES) *explain*

1. Explain to students that each group of fruits and vegetables are similar in color and may also have similar unique qualities that **nourish** our bodies.

   Group by group, explain how each color group may nourish our bodies and model a hand motion for students to remember it by:

   - **Red fruits and veggies:** help keep your heart strong. (hands over heart)
   - **Orange fruits and veggies:** help keep your eyes healthy. (point to eyes)
   - **Yellow fruits and veggies:** help keep you from getting sick. (point to everything!)
   - **Green fruits and veggies:** help make your bones and teeth strong. (point to teeth)
   - **Blue and purple fruits and veggies:** help your memory. (point to brain)

2. In conclusion, explain that if students eat a variety of fruits and vegetables ("Eat a Rainbow"), they'll eat a variety of colors, and a variety of their body parts will be nourished from their heart, to eyes, to muscles, to teeth, to brain, and everything in between.

See "Teaching Strategies" in Appendix section for information on how to lead an echo read.

WATCH IT RISE (15 MINUTES) *elaborate*

1. Echo read the color poems (below) with students and challenge students to point to the body part that is likely nourished by that color food.
2. Provide each group with more post-it notes and challenge them to draw more fruits or vegetables that match their color (including those they heard in the poem). For inspiration, they can explore the kitchen or look through a selection of books or magazines about food. As students work together to draw their fruits and vegetables, acknowledge observed behaviors that align with the life skills learning objectives, such as cooperating and communicating well with each other. Also, use the observational checklist to assess students' current development of the life skills.
3. When each of the individual posters are filled with post-it notes of different fruits and vegetables of that color, hang them together in rainbow order on a wall in the classroom for students to view. New fruits and vegetables can be added throughout the year as they are introduced.
4. Read to students the following prompt to complete in their journal:

Note:
Draw a square to represent a shopping bag and draw a fruit or vegetable of each color that you would want to buy from your farmers market to "eat a rainbow."

REFLECT (5 MINUTES) *evaluate*

1. Recognize specific students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they cooperated and communicated with each other during the activity today.
2. Review with students:
   - What does it mean to Eat a Rainbow?
   - Why is it important to eat a variety of colors of fruits and vegetables?
3. Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

CONNECTIONS TO GARDEN LESSONS

Go on a rainbow scavenger hunt in the garden, looking for fruits and vegetables of every color.

POSSIBLE EXTENSIONS

Cafeteria: Go on a rainbow scavenger hunt in the cafeteria or at the salad bar, finding fruits and vegetables of every color.

ADDITIONAL RESOURCES

- Whole Kids Foundation, Eat a Rainbow
  https://www.wholekidsfoundation.org/kids-club/eat-a-rainbow/
- American Heart Association, Eating the Rainbow
  https://www.heart.org/-/media/healthy-living-files/healthy-for-life/eat-a-rainbow_english.pdf
- *I Eat a Rainbow* by Bobbie Kalman
- *Eat a Rainbow: Healthy Foods* by Susan Temple Kesselring and Tatevik Avakyan

COLOR POEMS

RED

Red is an apple.
Red is a cherry.
Red is a rose.
And a ripe strawberry.

COLOR POEMS

ORANGE

Orange is an orange,
Orange is a carrot,
Orange is the color
Of the beak of a parrot.

COLOR POEMS

YELLOW

Yellow are lemons,
pineapples and squash,
Bananas and corn,
All healthy, by gosh!

COLOR POEMS

GREEN

Bright green tomatoes
Are bitter to the tongue
But spinach and broccoli-
I eat them up, yum!

COLOR POEMS

BLUE

Blue is the ocean.
Blue is the sky.
Blue are the blueberries
I put into the pie.

COLOR POEMS

PURPLE

Purple are grapes.
Purple are flowers.
Purple is lavender
That smells good for hours.

COMPARATIVE TASTE TESTS

Kitchen

EST. TIME 45 minutes SEASON fall TYPE cooking concept

GRADE 1 | LESSON #2

ESSENTIAL QUESTION(S)

- What words can we use to describe taste?
- What are some examples of foods that have the following tastes: sweet, bitter, sour, or salty?

MATERIALS

- ❒ Handouts / Visual Aids
- ❒ Equipment
- ❒ Ingredients

VOCABULARY

- Adjectives
- Taste, texture, opinion
- Sweet, sour, salty, bitter

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (30 MINUTES)

To prepare for this lesson, gather materials listed above and distribute foods onto plates (with student help if possible).

TEACHER BACKGROUND

While there are many words to describe food, this lesson focuses on the experience of four of the five main tastes: sweet (the presence of sugars), sour (acidity), salty (the presence of salt), bitter (sharp or pungent). The fifth taste sensation, which is not explored in this lesson, is umami (savory or meaty).

LESSON DESCRIPTION

In this lesson, students will describe fruits and vegetables they are familiar with using adjectives that describe the food's look, taste, texture, and their opinion of it. Then as a class, four of the five main tastes (sweet, bitter, sour, salty) are explored by tasting certain foods that represent each and brainstorming others that would fit. After developing a deeper understanding of these four main tasting adjectives, students will do a comparative tasting of 2 different apple varieties, describing the apple's look, taste, texture, and their opinion of each variety.

LEARNING OBJECTIVES

Content Learning Objectives

CFT.1.1 Describe the differences between a number of same fruits or vegetables.

CFT.1.2 Name and describe taste sensations.

Life Skills Learning Objectives

CLS.4 Students appreciate and are respectful of differences and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-LITERACY.L.1.5 With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings.

CCSS.ELA-LITERACY.L.1.5.C Identify real-life connections between words and their use (e.g., note places at home that are cozy).

LESSON MATERIALS

Materials for Lesson Introduction

Handout

- ❒ Food Observation Tool (1 per student)

Equipment

- ❒ Index cards (1 per student)
- ❒ Colored pencils or crayons (at least 2 boxes per each table of 10 students)
- ❒ Chart paper, easel, and colored markers
- ❒ 4 sets of plates per table (10 samples on each)
- ❒ 2 sets of plates (10 slices on each)

Ingredients

- ❒ Sweet foods (i.e., banana, fig, grape)
- ❒ Bitter foods (i.e., arugula, dandelion greens)
- ❒ Sour foods (i.e., lemon, lime, grapefruit)
- ❒ Salty foods (i.e., salted beet greens, seaweed)
- ❒ Red apple (i.e., Red Delicious, Gala)
- ❒ Green apple (i.e., Granny Smith)

IGNITE INTEREST (5 MINUTES) *engage*

1. Provide each student with an index card and each table of 10 students with at least 2 boxes of colored pencils and crayons. Instruct students to draw and write their favorite fruit or vegetable.
2. Allow as many students as possible to share their favorite fruit or vegetable, along with why it is their favorite and how they would describe it to someone who has never tasted it before. Encourage students to describe its look (green), **taste** (sour), and **texture** (crispy), along with their **opinion** of it (delicious). Explain to students that all of the words they used to describe their favorite foods are called **adjectives**.

STIR DISCOVERIES (20 MINUTES) *explore*

1. Explain to students that there are five main taste sensations, and that we will explore four of them closely today.
2. Have students bring a plate of sweet foods to each table without providing any information. Ask students to taste the samples silently and to pay close attention to their tongues. After a few moments, have students share words to describe the taste. Add any new adjectives to the chart paper.

CLARIFY NEW IDEAS (20 MINUTES, TOTAL WITH THE PRIOR SECTION)) *explain*

1. When the word **sweet** is mentioned, circle it on the chart paper.Repeat those steps for **bitter**, **sour**, and **salty** foods until the chart paper is full of varied adjectives and the main four tastes are circled.
2. Brainstorm with students other foods that fit the four main taste categories and write or draw them around their circle on the chart paper to be a reference for students.

WATCH IT RISE (15 MINUTES) *elaborate*

1. Explain to students that sometimes even the same food can have varieties that have a very different look, taste, or texture and therefore our opinions may be different too. This is a good reminder to be open to trying new things since you may like a variety of a certain fruit or vegetable but not another.
2. Model for students how they will taste 2 different varieties of apples (one red, one green) and guide students in completing the Food Observation Tool comparing the two.
3. As students taste and reflect together, acknowledge observed behaviors that align with the life skills learning objectives, such as respecting the diversity in each other's opinions. Also, use the observational checklist to assess students' current development of the life skills.

Note:
Similar to the reflection prompts at the end of most lessons, this Food Observation Tool can be used to assess student understanding of content learning objectives.

REFLECT (5 MINUTES) *evaluate*

1. Recognize specific students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they appreciated and respected each other's differences of opinions in the foods the tasted.
2. Review with students:
   - What words can we use to describe taste?
   - What are some examples of foods that taste sweet, bitter, sour, and salty?
3. Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

CONNECTIONS TO GARDEN LESSONS

- Use produce from the garden, if possible. Conduct the tasting in the garden, right where the crop is growing (for example, conduct an apple tasting under the apple trees).
- Bring compost out to the garden.

POSSIBLE EXTENSIONS

Classroom: Use the descriptive language on the Food Observation Tool to create poems or sentences describing the foods together.

ADDITIONAL RESOURCES

- *Yum! A Book about Taste* by Dana Meachen Rau
- *What's That Taste? All About My Senses* by Adam Bellamy
- *What is Taste?* By Jennifer Boothroyd
- *The Sense of Taste* by Mari Schuh
- Flavor 101: The Five Basic Tastes https://parade.com/396983/johnmcquaid/flavor-101-the-five-basic-tastes/
- The 5 Tastes and How to Cook with Them https://food52.com/blog/12326-the-5-tastes-how-to-cook-with-them
- Are There More Than Five Basic Tastes? http://www.npr.org/2017/01/20/510621715/are-there-more-than-five-basic-tastes

FOOD OBSERVATION TOOL

COMPARATIVE TASTE TEST

Name of Student: _____ **Name of Food:** _____

LOOK	CIRCLE THE COLOR	red orange yellow green blue purple brown tan white	red orange yellow green blue purple brown tan white
	DRAW THE SHAPE		
TASTE	CIRCLE THE TASTE ADJECTIVE	sweet sour bitter salty	sweet sour bitter salty
	CIRCLE THE TEXTURE ADJECTIVE	soft chewy crispy crunchy	soft chewy crispy crunchy
	CIRCLE YOUR OPINION		
ANYTHING ELSE?			

INDIAN NAAN BREAD

Kitchen

EST. TIME 45 minutes SEASON spring TYPE cooking

GRADE 2 | LESSON #18

ESSENTIAL QUESTION(S)

- What are some common flatbreads around the world?
- How do grains nourish our bodies?
- How is bread made?

MATERIALS

- ❒ Recipe
- ❒ Handouts/ Visual Aids
- ❒ Equipment
- ❒ Ingredients
- ❒ Tableware
- ❒ Cleaning Tools

VOCABULARY

- Grains
- Flatbread
- Leavened, unleavened
- Yeast
- Naan
- Sifter

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (30 MINUTES)

- Gather materials, equipment, and ingredients listed above.
- Pre-make six batches of dough to be used with the first class so that it can rise for about an hour before being rolled out and baked. Then the dough that the first class mixes will rise for about an hour and be used by the second class, and so forth.
- Heat water on the stovetop to 100–110 degrees F (at least ½ cup for each small group).
- Prepare and warm clarified butter (at least ½ cup for each small group).

Note:
See Recipe for **Indian Naan Bread** in Recipe Section for instructions on how to make clarified butter.

TEACHER BACKGROUND

Naan is a flatbread from India, similar to pita bread. Flatbreads are made around the world and often do not use yeast (they are "unleavened") but in this lesson students will use yeast for a puffy naan bread.

LESSON DESCRIPTION

In this lesson, students will share what they know about bread and learn about flatbreads from around the world. Students will learn about yeast and how to properly use a sifter while making naan together in their small groups. The naan will be served as part of the school-wide Feast Around the World.

LEARNING OBJECTIVES

Content Learning Objectives

RC.2.1 Describe how traditional foods and recipes function in social contexts of families and communities, and cultural traditions and celebrations.

KTE.2.1 Use tools introduced in previous grades independently.

KTE.2.2 Name, identify, locate, and safely use new tools (sifters).

KTE.2.3 List tools in recipes.

KTE.2.4 Select the correct tool to perform and complete a task with minimal instructor input.

KTE.2.5 Explain the reason for selecting a tool for a task.

Life Skills Learning Objectives

CLS.2 Students cooperate and communicate well with each other.

CLS.3 Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.

ACADEMIC CONTENT STANDARD CONNECTIONS

CCSS.MATH.CONTENT.2.MD.A.1

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Social Studies: Diversity and Culture.

Social Studies: Geography.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

LESSON MATERIALS

Materials for Lesson Introduction

Handouts

- ❒ **Indian Naan Bread**, *There's a Chef in My World!* (recipe, 1 copy per small group)
- ❒ Flatbread Image Flashcards
- ❒ Tool Card (1 per small group)

Equipment

For Each Small Group (of about 5 students):

- ❒ 1 set of measuring cups
- ❒ 1 set of measuring spoons
- ❒ 1 glass measuring cup
- ❒ 1 spoon
- ❒ 1 sifter
- ❒ 5 small bowls for ingredients
- ❒ 1 large mixing bowl
- ❒ 1 small mixing bowl
- ❒ 1 roll of plastic wrap
- ❒ 1 large baking sheet
- ❒ 1 paper towel (for greasing baking sheet)
- ❒ 1 rolling pin
- ❒ 2 oven mitts

For Whole Class:

- ❒ 1 instant-read thermometer
- ❒ Kettle or saucepan (to warm water)
- ❒ Oven
- ❒ Oven timer

Ingredients

For Each Small Group (of about 5 students):

- ❒ 1 teaspoon active dry yeast
- ❒ ½ teaspoon sugar
- ❒ ½ cup of warm water (100-110 degrees F on instant-read thermometer)
- ❒ 1 ¼ cups all-purpose flour (for dough)
- ❒ ¼ cup all-purpose flour (for kneading dough)
- ❒ ½ teaspoon salt
- ❒ ¼ cup of warm clarified butter (for dough)
- ❒ 1 teaspoon of clarified butter (for oil)
- ❒ 1 small tab of butter for (greasing baking sheet)

Materials for Enjoying or Storing the Food

- ❒ Air-tight plastic bag

Materials for Cleaning Up

- ❒ Dish soap
- ❒ Scrubber (for dishes)
- ❒ Drying rack
- ❒ Kitchen towels
- ❒ Sponge (for counters)
- ❒ Broom and dustpan

PREPARE TO COOK (5 MIN)

Have students tie hair back, wash hands, put on aprons (if relevant) and take their seats.

RECIPE INTRODUCTION (5 MINUTES)

1. Explain to students that they will be baking bread and review the main ingredients to make dough for the bread: flour and water. Then, introduce the concept of flavor enhancers and explain how salt and butter, which is a fat, can be used to enhance flavor. Next, explain how leavening agents are added to dough to make it rise. Leavening agents create gas which gets trapped in the dough to form tiny bubbles. When the dough is heated in the oven, the tiny gas bubbles rise like hot air balloons and make the "bread rise". One leavening agent is called yeast. **Yeast** is a tiny living fungus (like mushrooms!) that likes to eat sugar. When yeast eats sugar, it releases carbon dioxide (humans release carbon dioxide when they breathe out or exhale).
2. Remind students that **grains** nourish our bodies by providing energy in the form of carbohydrates. It is recommended that grains make up a quarter of your plate for each meal.
3. Explain to students that they will be making a certain type of bread called a **flatbread**. Many flatbreads are **unleavened**, meaning they do not use yeast (however, the recipe used today will include yeast).
4. Show students images of flatbreads from around the world using the flatbread flashcards.
5. Explain to students that today they will be making **naan**, a flatbread from India.

FLATBREAD	COUNTRY OF ORIGIN
Foccacia	Italy
Lavash	Armenia
Pita Bread	Greece
Roti	Pakistan
Chipati	India
Arepa	Columbia
Tortilla	Mexico
Naan	India

See "Teaching Strategies" in Appendix section for more information on helping students divide up tasks effectively.

REVIEW FAMILIAR SKILLS (7 MINUTES)

1. Model for students where to find and how to collect the tools their group will need, listed on their tool card. Have students work as a team to retrieve all tools and bring them back to their cooking station.
    - 1 set of measuring cups
    - 1 set of measuring spoons
    - 1 spoon
    - 1 sifter
    - 5 small bowls for ingredients
    - 1 large mixing bowl
    - 1 small mixing bowl
    - 1 roll of plastic wrap
    - 1 large baking sheet
    - 1 rolling pin
2. Model for students where to find and how to measure each of the ingredients to place in small bowls at their cooking stations.
    - 1 teaspoon active dry yeast
    - ½ teaspoon sugar
    - ½ cup of warm water (100–110 degrees F on instant read thermometer)
    - 1 ¼ cups all-purpose flour (for dough)
    - ¼ cup all-purpose flour (for kneading dough)
    - ½ teaspoon salt
    - ¼ cup of warm clarified butter (for dough)
    - 1 teaspoon of clarified butter (for oil)

    Have students work as a team to measure all ingredients and bring them back to their cooking station. When all of the groups have collected their ingredients, ingredients should be put back away where they are stored.
3. Introduce the idea of "mise en place" to the teams. It refers to the setup required before cooking, and is often used in kitchens to refer to organizing and arranging the ingredients that a cook will need to complete the menu. Provide time for small groups to create their "mise en place" at their cooking station to be prepared to move forward with directions.

(MEEZ ahn plahs) is a French culinary phrase which means "putting in place" or "everything in its place."

Note:
While the teams are working, scoop ½ cup of warm water from the stovetop (100–110 degrees F) into glass measuring cups and deliver to each small group.

DEMONSTRATE NEW TOOLS AND SKILLS (5 MINUTES)

1. Review with students how the naan will use yeast to rise. The carbon dioxide released by yeast causes the dough to to expand as the gas forms pockets or bubbles. When the dough is baked, the yeast dies and the air pockets "set," giving the baked product a soft and spongy texture.
2. Model for students how to combine the yeast and sugar, then add the warm water and stir well. Explain to students that they will then let the mixture rest until it's foamy, for about 5–10 minutes. Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group.
3. Explain to students that a **sifter** is a tool used to separate and break up clumps in dry ingredients such as flour, as well as to mix ingredients and mix in air.
4. Model for students how to sift together the flour and salt into the large mixing bowl. Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group.

DIVVY UP TASKS (10 MINUTES)

1. Model for students how to make a well in the center of the flour with clean hands and pour the yeast mixture and ¼ cup of clarified butter into the center. Demonstrate how to mix together with your fingers until a smooth dough forms that is slightly sticky (add a small amount of extra flour, if needed).
2. Model for students how to lightly flour their surface before transferring the dough to knead for about 3 minutes.
3. Model for students how to oil a small mixing bowl with the remaining 1 teaspoon of clarified butter. Then place the dough in the bowl and turn to coat. Lastly, cover the bowl with plastic wrap and put it aside for it to rise. Explain to students that the dough they created will almost double in size and will be ready for the next class to bake.

Note:
Provide students time in their small groups after each step in DIVVY UP TASKS to divide and then execute tasks before returning their attention back to the whole group.

COOK! (8 MINUTES)

1. Explain to students that the last class (or you) made the dough for them to bake and it has been rising for about an hour. It should be about double the size of the dough they set aside.
2. Show students how to position the rack in the center of the oven and preheat the oven to 400 degrees F. Then, model for students how to lightly grease a large baking sheet using butter and a paper towel. Model for students how to divide the dough into 6 equal pieces, transfer it to their lightly floured work surface, and gently roll them with a lightly floured rolling pin until they are in a circle of about 5 or 6 inches diameter. Lastly, model for students how to transfer the dough circles to the prepared baking sheet. Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group.
3. As students work in their small groups, remember to use the cooking and cleaning observational checklist to assess students' mastery of cooking skills.
4. When all of the dough circles are place on the prepared baking sheet, carefully put the baking sheets in the oven, and set the timer for 12 minutes for their first check (it may take up to 15 minutes to bake).

CLEAN UP (5 MINUTES)

1. As the naan is in the oven, model clean up tasks for students, such as washing dishes, wiping cooking stations, sweeping the floor around the cooking station, etc. Demonstrate specifically how to clean new tools, such as the sifters. Also, model for students how to prepare the naan for storage when it comes out of the oven. Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group.

Note:
As soon as naan cools, store in the refrigerator for up to 3 days in airtight plastic bag so that it doesn't have time to dry out. Reheat in foil pouches over open flame or reheat in oven at 350 degrees F for 10 to 12 minutes.

2. As students work in their small groups, remember to use the cooking and cleaning observational checklist to assess students' mastery of cleaning skills.

ENJOY!

Remove naan from oven, cool and store to enjoy with Vegetable Curry at the Feast Around the World.

REFLECT (5 MINUTES)

1. Recognize specific students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they showed cooperation and how they communicated in their small groups.
2. Review the essential question, "How is Bread Made?" by providing partner groups with this list of nouns to include in a description of the process.
   - yeast
   - sugar
   - water
   - salt
   - flour
   - butter
   - rolling pin
   - sifter
   - baking sheet
   - oven

   Ask students to list the verbs they used in their description.

CONNECTIONS TO GARDEN LESSONS

Offer fresh herbs from the garden as an optional garnish on the side, particularly if you grew any herbs common in India in your Herbs of the World bed. Bring compost out to the garden. Serve the final feast out in the garden.

POSSIBLE EXTENSIONS

Community: Ask students if they have family members from India. If so, invite them in to share a favorite recipe from the region.

ADDITIONAL RESOURCES

- *The River Cottage Bread Handbook* by Daniel Stevens
- *The Hot Bread Kitchen Cookbook: Artisanal Baking from Around the World* by Jessamyn Waldman Rodriguez and Julia Turshen

FLATBREAD FLASHCARDS

FRONT

BACK

FLATBREAD FLASHCARDS

FRONT

LAVASH

BACK

ARMENIA

FLATBREAD FLASHCARDS

FRONT

PITA BREAD

GREECE

BACK

FLATBREAD FLASHCARDS

FRONT

BACK

FLATBREAD FLASHCARDS

FRONT

BACK

FLATBREAD FLASHCARDS

FRONT

AREPA

COLUMBIA

BACK

FLATBREAD FLASHCARDS

FRONT

BACK

FLATBREAD FLASHCARDS

FRONT

NAAN

BACK

INDIA

TOOL CARD

set of measuring cups

set of measuring spoons

spoon

sifter

small bowls for ingredients

large mixing bowl

small mixing bowl

roll of plastic wrap

large baking sheet

rolling pin

GETTING STARTED WITH PARING KNIVES

Kitchen

EST. TIME 45 minutes SEASON fall TYPE cooking

GRADE 3 | LESSON #3

ESSENTIAL QUESTION(S)

- How are tools used to make tasks easier?
- How can we be mindful with our bodies and energy level to keep ourselves safe when using tools?

MATERIALS

- ❒ Handouts / Visual Aids
- ❒ Equipment
- ❒ Ingredients
- ❒ Tableware
- ❒ Cleaning Tools

VOCABULARY

- Knife
- Wedge
- Tip, edge, handle
- Slice (verb), slice (noun)

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (15 MINUTES)

- Gather materials, equipment, and ingredients listed above.
- Peel each banana and cut it in half lengthwise to create a flat surface.

TEACHER BACKGROUND

While cooking can be a highly engaging and educational activity, it can also be dangerous. This is particularly true when using kitchen knives. Nonetheless, by effectively establishing procedures at the outset and sufficiently supervising students, students can safely use kitchen knives to participate in a wide variety of food preparation activities. When students are using knives, particularly for the first time, we recommend having them work in groups of 10 or fewer with 1 or more adults. You can do this by running a cutting station while other students work independently on a separate project, or by inviting other adult volunteers to supervise small groups.

Note:
The appropriate grade level to introduce knives and knife safety is at the discretion of the school and its instructors. Schools should always inform parents when students will be handling knives in class, especially for the first time.

LESSON DESCRIPTION

In this lesson, students will explore tools that are used for different tasks including those they have used in the garden and the kitchen. They will then learn about knives—their different parts and how they function as simple machines. Then, the techniques of "claw and slaw" and "low and slow" will be modeled by the teacher before the students utilize knives to slice a banana to eat as a snack.

LEARNING OBJECTIVES

Content Learning Objectives

RC.3.2 Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment.

KTE.3.1 Use tools introduced in previous grades independently.

KTE.3.2 Name, identify, locate and safely use new tools (paring knife).

KTE.3.3 Explain form and function of new tools/equipment (paring knife).

KTE.3.4 Select the correct tool to perform and complete a task with minimal instructor input.

Life Skills Learning Objectives

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC CONTENT STANDARD CONNECTIONS

NGSS Crosscutting Concept: Structure and Function

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks

LESSON MATERIALS

Materials for Lesson Introduction

Visual Aids

- ❒ *The Tool Book* by Gail Gibbons

Equipment

- ❒ Cutting boards (1 per student)
- ❒ Paring knives (1 per student)
- ❒ Small bucket to hold clean knives (1 per cook station)
- ❒ Small bucket to hold dirty knives (1 per cook station)

Ingredients

- ❒ Bananas (1 for every 2 students)

Materials for Enjoying or Storing the Food

- ❒ Presentation plate (1 for every 2 students)

Materials for Cleaning Up

- ❒ Dish soap
- ❒ Scrubber (for dishes)
- ❒ Drying rack
- ❒ Kitchen towels
- ❒ Sponge (for counters)
- ❒ Broom and dustpan

PREPARE TO COOK (5 MIN)

Have students tie hair back, wash hands, put on aprons (if relevant) and take their seats.

RECIPE INTRODUCTION (5 MINUTES)

Read aloud *The Tool Book* by Gail Gibbons, noticing tools that different professionals use to help them complete their tasks.

REVIEW FAMILIAR SKILLS (7 MINUTES)

1. Ask students what tools they have used so far in the garden and write a list on a piece of chart paper or on the board.
2. Ask students what tools they have used so far in the kitchen and write a list on a different piece of chart paper in one color.
3. Then ask students what other tools they can think of that chefs use and add that to the chart paper or board in a different color. If no one mentions knives, add knives to the list.

See "Best Practices and Guidelines" in the Getting Started section for information on how to practice safety first in any kitchen.

DEMONSTRATE NEW TOOLS AND SKILLS (5 MINUTES)

1. Explain that a **knife** is a useful tool in the kitchen for cutting. The knife itself is a **wedge**, which is a type of simple machine. When a wedge is placed on an object and force is applied, the wedge drives the object apart into 2.
2. Reiterate to students that to use tools, it is important to understand how they work and how to use them safely, particularly if the tools are sharp and could be dangerous, like knives. Explain to students that using knives is a privilege, and if anyone is playing with them or not being safe, that privilege will be taken away in order to keep everyone safe.
3. Show students one of the knives that they will be using and draw a model of it on chart paper. Identify the parts (structures) and label on the model.
    - **tip**
    - **edge**
    - **handle**

    Explain that the only part of the knife that students will touch is the handle. It may be useful to wrap the handle in a certain color electrical tape as a visual cue.

DIVVY UP TASKS (5 MINUTES)

1. Make sure knives are out of reach of students while you introduce and discuss them. Demonstrate how to pick up and hold a knife properly, then return it to its "home base" (the cutting board). Model for students—does the knife go on the counter? on the floor? on your notebook? on a friend? on your lap? (No, only on the cutting board). They only other place it will go is in the cleaning bucket when students are completely finished with their task.
2. Also, demonstrate how their other hand will be holding their fruit or vegetable like a "claw" with their fingers tucked. Students can remember these 2 cues by the phrase "claw and saw." Another helpful phrase to encourage a safe motion with the knife is "low and slow." Students may have seen cooking shows where chefs use a fast chop but remind students that in our class we will be using a "claw and saw" and will be doing it "low and slow."
3. Request that one student per each group of 10 retrieve cutting boards for all of the students at their table. When everyone has returned to their seats, deliver a bucket of knives to each table.
4. Demonstrate for students how to slice their banana approximately every ½ inch. Introduce the vocabulary **slice** which is a specific way to cut something (can be used as either a verb or a noun to describe the result of this cut). On your cue, provide time for students to slice their bananas and then carefully place their knives in the bucket when they are finished.

COOK! (5 MINUTES)

1. As students are slicing their bananas, remember to use the cooking and cleaning observational checklist to assess students' mastery of cooking skills.
2. Pick up the buckets of dirty knives from each table and place by the sink, explaining to students that the teacher will clean them and that they should not touch them.

ENJOY! (5 MINUTES)

1. Demonstrate for students where to choose a plate for the presentation of their banana slices and provide time for a student in each partner group to retrieve a plate to bring back to the table.
2. Provide students with time to arrange their half-circle banana slices in any way that they feel is beautiful on their plate.
3. On your cue, allow students to enjoy their bananas with their group. Provide groups with conversation prompts to practice conversation skills while they snack. Prompts could include:
    - What profession might you want to pursue?
    - What tools might you use in that profession?

CLEAN UP (5 MINUTES)

1. Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group.
2. As students work in their small groups, remember to use the cooking and cleaning observational checklist to assess students' mastery of cleaning skills.

REFLECT (5 MINUTES)

1. Recognize specific students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they showed cooperation and how they communicated in their small groups.
2. Review with students:
    - How are tools used to make tasks easier?
    - How can we be mindful with our bodies and energy level to keep ourselves safe when using tools?

CONNECTIONS TO GARDEN LESSONS

Compare guidelines for safe knife use with guidelines for safe garden tool use.

POSSIBLE EXTENSIONS

Cafeteria: Invite in your food service director to discuss and demonstrate knife safety.

Community: Invite in a local chef to discuss and demonstrate knife safety.

Classroom: Make the connection between structures and functions of the knife parts (i.e., an edge to cut, a handle to hold) with other examples of structure and function, such as structures of a seed or insect.

ADDITIONAL RESOURCES

- The Parts of a Kitchen Knife: http://www.knifeplanet.net/the-parts-of-kitchen-knife/

SWEET AND SPICY PICKLES

Kitchen

EST. TIME 45 minutes SEASON fall TYPE cooking

GRADE 4 | LESSON #4

ESSENTIAL QUESTION(S)

- How are pickles made?
- Why was preserving food important in the past and why is it important today?

MATERIALS

- ❒ Recipe
- ❒ Handouts / Visual Aids
- ❒ Equipment
- ❒ Ingredients
- ❒ Tableware
- ❒ Cleaning Tools

VOCABULARY

- Preserves, preserving
- Pickles
- Brine

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (30 MINUTES)

- Gather materials, equipment, and ingredients listed above.
- Learn how to preserve foods safely if this is a new skill for you. Safety is critical in canning foods. The National Center for Home Food Preservation provides great online resources.
- Pre-make 3 bowls of cucumber, onion, and pickling salt mixture to be used with the first class so that it can soak for at least 2 hours before being pickled. The pickling veggies that the first class prepares will soak for about an hour and then be used by the second class, and so forth.
- Sterilize jars.
- Fill a large pot (for canning) with water.
- Recruit adult volunteers to support each table group in using the stoves.

TEACHER BACKGROUND

Pickling is a process of preserving or expanding the lifespan of food by either fermentation in brine or immersion in vinegar. Pickling can preserve perishable foods for months. Antimicrobial herbs and spices, such as mustard seed, garlic, cinnamon, or cloves, are often added to pickled products.

LESSON DESCRIPTION

In this lesson, students will read a narrative article about the history, purpose, and culture around preserving foods. Then they will work together in their table groups to prepare jars of pickles. Because pickles need to sit in brine for at least 2 hours, this lesson requires a set of pickles to be prepared ahead of time for the first class. The following classes can use the pickles prepared by the class that preceded them.

LEARNING OBJECTIVES

Content Learning Objectives

CFT.4.2 Create basic flavor combinations using international cuisines.
FP.4.2 Describe and perform food preservation processes such as drying, freezing, pickling.
RC.4.2 Demonstrate the ability to follow recipe instructions with increased independence.
KTE.4.1 Use tools introduced in previous grades independently.
KTE.4.2 Name, identify, locate, and safely use new tools.
KTE.4.3 Demonstrate proper care and storage of tools/equipment.
KTE.4.4 Practice various tool techniques with increasing independence.

Life Skills Learning Objectives

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

ACADEMIC CONTENT STANDARD CONNECTIONS

CCSS.ELA-LITERACY.RI.4.3
Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

LESSON MATERIALS

Materials for Lesson Introduction

Handouts

- ❒ **Emeril's Homemade Sweet and Spicy Pickles**, *Emerils.com* (recipe, 1 copy per small group)
- ❒ Brine Group Tool Cards (1 per cooking station)
- ❒ Brine Group Instruction Cards (1 per cooking station)
- ❒ Veggie Group Tool Cards (1 per cooking station)
- ❒ Veggie Group Instruction Cards (1 per cooking station)

Equipment

For Each Group of 10:

- ❒ 5 cutting boards
- ❒ 1 large, non-reactive bowl
- ❒ 5 knives
- ❒ 2 small buckets
- ❒ 1 set of measuring spoons
- ❒ 1 set of measuring cups
- ❒ 1 small bowl
- ❒ 1 medium saucepan
- ❒ 1 roll of plastic wrap
- ❒ 1 gallon plastic, re-sealable bag
- ❒ 1 glass measuring cup
- ❒ 1 colander
- ❒ 4 pint jars, with lids and metal rings
- ❒ 1 ladle
- ❒ 2 towels
- ❒ 1 large canning pot
- ❒ 1 pair of canning tongs
- ❒ Adhesive labels (2 per student)
- ❒ 1 set of markers (for decorating labels)

For Whole Class:

- ❒ Stovetop

Ingredients

For Each Group of 10:

- ❒ 3 cups white vinegar
- ❒ 1 ½ cups apple cider vinegar
- ❒ 3 ½ cups sugar
- ❒ 2 tablespoons yellow mustard seeds
- ❒ ½ teaspoons turmeric
- ❒ 4 whole cloves
- ❒ 24 dried cayenne peppers
- ❒ ½ cup of pickling salt

Check the Garden for:

- ❒ 6 medium cucumbers, sliced into ¼ inch thick slices
- ❒ 2 medium onions, sliced
- ❒ 30 cloves of garlic, roughly chopped

Materials for Cleaning Up

- ❒ Dish soap
- ❒ Scrubber (for dishes)
- ❒ Drying rack
- ❒ Kitchen towels
- ❒ Sponge (for counters)
- ❒ Broom and dustpan

PREPARE TO COOK (5 MIN)

Have students tie hair back, wash hands, put on aprons (if relevant) and take their seats.

RECIPE INTRODUCTION (5 MINUTES)

Briefly introduce the purpose, history, and cultural significance of **preserving** food (see Additional Resources below for more information). Have students share examples of preserved foods that they enjoy (pickles, jams, etc).

REVIEW FAMILIAR SKILLS (7 MINUTES)

1. Divide each table into 2 equal groups of students (Each table should have no more than 10 students). Explain to students that they will work together to make **pickles**—one group will be slicing the vegetables and the other will be measuring the ingredients for the **brine**, which is what we commonly think of as the "pickle juice." Each group will be observing the other group at their table to learn the full method for the recipe.
2. Have students work as a team to locate and bring the tools listed on the group tool cards back to their cooking station. When students have returned to their seats, deliver knife buckets to tables.
3. Model for students where to gather and how to prepare each of the ingredients.
    - **Veggie Group:** Remind students to wash their cucumbers before they begin. Model how to slice cucumbers into ¼-inch thick slices, how to slice the onions, and how to roughly chop the garlic. Request that they leave their veggies on their cutting boards when they are done.
    - **Brine Group:** Request that they measure and pour all of their ingredients into the medium saucepan except for the ½ cup of pickling salt, which should be placed in their small bowl. Remind students to return their ingredients to where they are stored after they have measured what they need.

DIVVY UP TASKS (10 MINUTES)

1. Have students divide and execute the tasks within their groups. Once complete, have students return their attention to the whole group.
2. Ask the veggie group and the brine group at each table to trade the 30 cloves of garlic for the ½ cup of pickling salt. Ask the brine group to add the garlic to their saucepan. Model for the veggie group how to place the cucumbers, onions, and pickling salt in their large, non-reactive bowl and pour 6 cups of water over them before covering.
3. Explain that these will soak for 2 hours and be ready for the next class that day. Explain to students that the class before them that day sliced and soaked the vegetables they'll be using. Using a colander, model for students how to drain the water from the onions and cucumbers, and rinse them well for 5 minutes. Have students work as a team to drain and rinse the veggies for their table.

DEMONSTRATE NEW TOOLS AND SKILLS (15 MINUTES)

1. Demonstrate for students how to heat the brine over high heat on the stove. When it boils, the heat should be reduced to medium. Review with students the idea that heat is always changing and specifically demonstrate what a **boil** and **simmer** look like. Have students bring their brine to a simmer.
2. Demonstrate for students how to safely add some cucumbers and onions without splashing. Have students bring pickle mixture to a simmer, then remove from heat.
3. Demonstrate for students how to fill each of the hot sterilized pint-size preserving jars with the pickle mixture, adding enough of the liquid to come within 1/2-inch of the top. Show students how to wipe the rim with a clean damp towel and fit each jar with a hot lid before screwing on the metal ring just until the point of resistance is met. Have students carefully follow this step.
4. Demonstrate for students **how to process the jars safely and properly** in a hot-water bath. You will start this process with students, but finish it after they have left class.
5. When jars are processed, use tongs to remove the jars, place on a towel, and let cool.
6. Allow the jars to stand at room temperature overnight or until the lids pop. Then tighten the rings and store in a cool dry place. Let the pickles age for at least 2 weeks before eating.

COOK!

After each mini-demonstration above, have students complete the task (i.e., bring to a simmer, add cucumbers, etc.) at their tables, with the help of an adult.

Note:
Enjoy pickles together at least 2 weeks after preparing them. When you eat them, note the flavor combination (sweet and spicy) and brainstorm other foods that use a similar combination, such as mango with chili powder, barbecue sauce, and the like.

CLEAN UP (5 MINUTES)

1. Engage students in their clean up tasks: washing dishes, wiping cooking station, sweeping floor around cooking station, placing cucumber scraps in the compost, etc. Provide a gallon re-sealable plastic bag for tables to save their onion and garlic peels to place in the freezer for a vegetable stock in the winter. Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group.
2. As students work in their small groups, use the cooking and cleaning observational checklist to assess students' mastery of cleaning skills.

REFLECT (5 MINUTES)

1. While jars are processing, recognize specific students' behaviors that aligned with being the best for themselves, their communities, and their environment. Specifically, ask students to reflect on how they showed cooperation and how they communicated in their small groups.
2. Either in class or for homework, review the essential question, "How are pickles made?" by providing students with this list of nouns to include in a description of the process.

cucumbers	onions	garlic	vinegar	sugar
salt	jar	lid	ring	tongs

   Ask students to list the verbs they used in their description.
3. Review the essential question, "Why was preserving food important in the past and why is it important today?"

CONNECTIONS TO GARDEN LESSONS

Use cucumbers, onions, and garlic, from your garden. Bring compost out to the garden.

POSSIBLE EXTENSIONS

Community: Make jars of pickles as gifts for loved ones.

BAM! Box Activity: Bring home a jar of pickles and come up with a fun way to enjoy them, such as on crackers or sandwiches. Take photos and share your pickle ideas with the class.

ADDITIONAL RESOURCES

- Williams Sonoma Pickle Guide
  https://www.williams-sonoma.com/pages/basics-of-pickling.html
- Globalization: A Pickle's Tale
  https://www.theatlantic.com/international/archive/2016/10/globalization-a-pickles-tale/501398/
- Artisanal Pickle Makers
  http://www.nytimes.com/2012/02/19/magazine/adam-davidson-craft-business.html
- *101 Things to Do with a Pickle* by Eliza Cross
- *The Joy of Pickling* by Linda Ziedrich
- *Asian Pickles* by Karen Solomon

TOOLS AND INGREDIENTS CARDS

SWEET AND SPICY PICKLES	SWEET AND SPICY PICKLES
VEGGIE GROUP—TOOLS	VEGGIE GROUP—INGREDIENTS
• 5 cutting boards • 1 large, non-reactive bowl • 1 glass measuring cup	• 6 medium cucumbers, sliced into ¼ inch thick slices • 2 medium onions, sliced
	• 30 cloves of garlic, roughly chopped

FRONT BACK

TOOLS AND INGREDIENTS CARDS

SWEET AND SPICY PICKLES	SWEET AND SPICY PICKLES
BRINE GROUP—TOOLS	**BRINE GROUP—INGREDIENTS**
• 1 set of measuring spoons • 1 set of measuring cups • 1 small bowl • 1 medium saucepan	• 3 cups white vinegar • 1 ½ cups apple cider vinegar • 3 ½ cups sugar • 2 Tbsp yellow mustard seeds • ½ tsp tumeric • 4 whole cloves • 24 dried cayenne peppers
	• ½ cup of pickling salt
FRONT	BACK

FIESTA QUESADILLAS
WITH SIMPLE SALSA AND HOLY MOLY GUACAMOLE

Kitchen

EST. TIME 45 minutes SEASON fall TYPE cooking

GRADE 5 | LESSON #5

ESSENTIAL QUESTION(S)

- How are quesadillas made?
- How are salsa and guacamole made?

MATERIALS

- ❒ Recipe
- ❒ Handouts / Visual Aids
- ❒ Equipment
- ❒ Ingredients
- ❒ Tableware
- ❒ Cleaning Tools

VOCABULARY

- Quesadilla
- Salsa
- Guacamole

ASSESSMENT

- Observational checklist
- Student Journals

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (30 MINUTES)

- Gather materials, equipment, and ingredients listed in the lesson material sheet on page 3.
- Chop and sauté a variety of seasonal vegetables, including at least 1 onion.
- Divide the sautéed vegetables, the chopped onion, and the grated cheeses each into 3 bowls (1 bowl of each for each table).
- Recruit an adult volunteer to heat quesadillas or to support a student volunteer in heating quesadillas.

Note:
If schedule allows, have students assist with harvesting and chopping vegetables and/or grating the cheese in preparation for assembling the quesadillas.

TEACHER BACKGROUND

In the central and southern regions of Mexico, a quesadilla is a tortilla, warmed and typically filled with cheese. The quesadilla is then cooked until the cheese has completely melted. It is cooked without the addition of oil. Often quesadillas are served with green or red salsa, chopped onion, and guacamole. They can also include cooked vegetables, such as potatoes or mushrooms, or different types of cooked meat, such as chicken, beef, or pork. In some places, quesadillas are topped with ingredients such as avocado or guacamole, chopped onion, tomato, serrano chiles, and cilantro. Salsas may also be added as a topping.

LESSON DESCRIPTION

In this lesson, students will learn to assemble quesadillas featuring seasonal sautéed vegetables. While the quesadillas are cooking, students will prepare salsa and guacamole. At the end of class, everyone will enjoy the quesadillas with the salsa and guacamole together.

LEARNING OBJECTIVES

Content Learning Objectives

HC.5.3 Describe the benefits of a nutrient rich diet.

RC.5.2 Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment.

KTE.5.1 Use tools introduced in previous grades independently.

KTE.5.2 Name, identify, locate and safely use new tools.

KTE.5.3 Select the correct tool and explain the reason for selecting the tool.

KTE.5.4 Practice tool skills with increasing independence

Life Skills Learning Objectives

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-LITERACY.W.5.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

LESSON MATERIALS

Materials for Lesson Introduction

- ❒ **Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole,** *There's a Chef in My World* (recipe, 1 copy per small group)
- ❒ *The Tortilla Factory* by Gary Paulson
- ❒ **Simple Salsa,** *There's a Chef in My World* (recipe, 1 copy per small group)

Equipment

For Each Group of 10:

For Quesadillas

- ❒ 3 medium bowls (1 for each veggies, onions, cheese)
- ❒ 3 serving spoons (1 for each veggies, onions, cheese)
- ❒ 1 platter (or tray, baking sheet)

For Guacamole and Salsa

- ❒ Cutting boards (1 for each student)
- ❒ Knives (1 for each student)
- ❒ 1 small bucket for clean knives
- ❒ 1 small bucket for dirty knives
- ❒ 2 medium bowls
- ❒ 2 serving spoons
- ❒ 2 forks
- ❒ 2 sets of measuring spoons

For Whole Class:

- ❒ Stovetop
- ❒ Medium skillet (at least 1)
- ❒ Olive oil

Ingredients

For Quesadillas

- ❒ Seasonal veggies (from garden, if possible), chopped, sautéed
- ❒ 1 onion, chopped
- ❒ 16 oz of Monterey jack cheese, grated
- ❒ 16 oz of cheddar cheese, grated
- ❒ 24, 6-inch tortillas

For Guacamole and Salsa

- ❒ 6 medium tomatoes
- ❒ 3 avocados
- ❒ 3 limes
- ❒ 1 onion, quartered
- ❒ 1 green bell pepper, quartered
- ❒ 6 garlic cloves
- ❒ 3 teaspoons of salt
- ❒ 2 teaspoon of hot pepper sauce

Check the Garden for:

- ❒ Seasonal veggies

Materials for Enjoying the Food

- ❒ 6 platters
- ❒ Napkins

Materials for Cleaning Up

- ❒ Dish soap
- ❒ Scrubber (for dishes)
- ❒ Drying rack
- ❒ Kitchen towels
- ❒ Sponge (for counters)
- ❒ Broom and dustpan

PREPARE TO COOK (5 MINUTES)

Have students tie hair back, wash hands, put on aprons (if relevant) and take their seats.

RECIPE INTRODUCTION (5 MINUTES)

1. Read *The Tortilla Factory* by Gary Paulson to review the cycle from seed to plant to tortilla.
2. Explain to students in the central and southern regions of Mexico, a quesadilla is a tortilla, warmed and typically filled with cheese. The quesadilla is then cooked until the cheese has completely melted. It is usually cooked without the addition of oil. Often quesadillas are served with green or red salsa, chopped onion, and guacamole. They can also include cooked vegetables, such as potatoes or mushrooms, or different types of cooked meat, such as chicken, beef, or pork. In some places, quesadillas are topped with ingredients such as avocado or guacamole, chopped onion, tomato, serrano chiles, and cilantro. Salsas may also be added as a topping.

REVIEW FAMILIAR SKILLS (5 MINUTES)

1. Explain to students they will be making Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole and their first task will be assembling **quesadillas**.
2. Provide each table of 10 students with a bowl of sautéed vegetables, a bowl of chopped onions, and a bowl of grated cheese (each with a serving spoon). Also, provide each table with a platter and 8 (6-inch) tortillas.
3. Review safe food handling practices and knife skills with students.

DEMONSTRATE NEW TOOLS AND SKILLS (5 MINUTES)

1. Model for students how to assemble quesadillas by layering cheese, onions, and vegetables on a tortilla before layering another tortilla on top. Request that students arrange assembled quesadillas on the platter and when all are complete, deliver to the stove. Have students work as a team to assemble 4 quesadillas and carefully deliver the quesadillas from their table to the counter by the stove to be heated on the stove by an adult or by a student volunteer with the help of an adult.

DIVVY UP TASKS (10 MINUTES)

1. Explain to students they will now be making the Simple Salsa and Holy Guacamole to go with the quesadillas. **Salsa** simply means "sauce" in Spanish, and **guacamole** is an avocado dip. Divide each table group into 2 smaller groups of 5, one that will work on the **salsa** and one that will work on the **guacamole**.
2. Model for students where to find and how to collect the tools their group will need: cutting boards, bowls, forks, sets of measuring spoons. Have students work as a team to retrieve all tools and bring them back to their cooking station. When students have returned to their seats, deliver knives to their tables and place in their buckets again.
3. Model for students where to find and how to measure or chop each of the ingredients listed on their recipe. Have students work as a team to retrieve and prepare all ingredients as listed in their recipes. Challenge students to consider the different food groups and how each of these ingredients nourishes their bodies.
4. When students have their bowl of salsa and bowl of guacamole prepared, pick up buckets of knives.

COOK! (10 MINUTES)

1. As they're working, call up a student at a time to flip a quesadilla, with help from an adult.

ENJOY! (5 MINUTES)

1. Distribute platters of quesadillas, already sliced, back to tables.
2. On your cue, allow students to enjoy their quesadillas with their group. Provide groups with conversation prompts to practice table manners and conversation skills while eating.
   Prompts could include:
   - How would you make the quesadillas, salsa, or guacamole to fit your taste?
   - How would you make the quesadillas in a different season?

CLEAN UP (5 MINUTES)

1. Remind students of their clean up tasks: washing dishes, wiping the cooking station, sweeping the floor around the cooking station, etc. Additionally, model how to put any fruit or vegetable scraps in the compost. Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group.
2. As students work in their small groups, use the cooking and cleaning observational checklist to assess student mastery of cleaning skills.

REFLECT (5 MINUTES)

1. Recognize individual students' behaviors aligned with being the best for themselves, the community, and the environment. Ask students to reflect on how they practiced safe and conscientious behaviors.
2. Review the essential question, "How are quesadillas made?" by providing time for students in class or for homework to independently record some Cook's Notes in their journals.

CONNECTIONS TO GARDEN LESSONS

Incorporate fresh vegetables from the garden, such as onion, chard, and zucchini, if available, add additional vegetables to the quesadillas. Add avocados, tomatoes, garlic, onions, bell peppers, and limes for the salsa and guacamole. Garnish with cilantro on the side if you have it growing. Bring your food scraps out to the compost.

POSSIBLE EXTENSIONS

BAM! Box Activity: Challenge students to make quesadillas for their family at home and share the recipe they created or any photos they take with the class.

ADDITIONAL RESOURCES

- *Quesadillas* by Donna Kelly
- *The Tortilla Book* by Diana Kennedy
- *The Day it Snowed Tortillas* by Joe Hayes
- "Tortilla History" https://whatscookingamerica.net/History/Tortilla_Taco_history.htm

WELCOME TO THE KITCHEN

Kitchen

EST. TIME 45 minutes SEASON fall TYPE cooking concept

GRADE 6 | LESSON #1

ESSENTIAL QUESTION(S)

- How can I be my best self in the kitchen?
- How can we make informed, responsible decisions and keep ourselves safe in the kitchen?
- How can I be my best for my community?
- How can I be my best for my kitchen environment?

MATERIALS

- ❒ Chart paper (2 sheets, easel, markers)
- ❒ 2 seasonal foods to taste (2 plates per table)
- ❒ 2 sheets or poster boards

VOCABULARY

- Present, attentive, aware, engaged
- Responsibility
- Empathy
- Respect

ASSESSMENT

- Observational checklist

PREPARATION (20 MINUTES)

Prepare 2 plates of different seasonal food for each table of 10 students, (for example, a plate of basil leaves and a plate of apple slices for each table). Before class, hide all of the plates from view. Hide the plates with the same type of produce in one location and those with the other produce in another location.

TEACHER BACKGROUND

The development of expectations for the kitchen space happens collaboratively with students in this lesson. This is a process that encourages students to reflect on how they impact their own learning, their community, and the environment along with what behaviors they can agree to as a class to ensure shared goals are met.

LESSON DESCRIPTION

In this lesson, students will share summer memories related to food. Then, as a class, students will discuss how to be the best for themselves, the community, and their environment in this kitchen space as they experience new things together. These conclusions will serve as enduring understandings throughout the year. The teacher will guide them to cohesive language around these understandings before modeling behaviors that align with these understandings. Finally, students will experience a blind taste test game together while practicing these behaviors.

Create Your Own!

Use the lesson template to create your own and share with us!

LEARNING OBJECTIVES

Content Learning Objectives

CFT.6.2 Understand the relationship between smell and taste in culinary practices.

FP.6.1 Demonstrate knowledge of safe food handling practices.

Life Skills Learning Objectives

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.

PLS.4 Students are active and engaged learners who show up on time, prepared to learn and participate, and able to manage their time.

PLS.5 Students develop the ability to make informed and responsible decisions.

PLS.6 Students actively seek creative and resourceful solutions.

CLS.5 Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.

IGNITE INTEREST (10 MINUTES) *engage*

1. Welcome students to the kitchen. Have each student share a summer memory involving food. Express interest in their previous unique experiences with foods and excitement for what they will experience together in the class that year.

STIR DISCOVERIES (10 MINUTES) *explore*

1. Explain to students to get the most of the new experiences this year, it is essential each student is best for themselves, the community, and the environment.
2. Introduce the following questions, each written on a separate piece of chart paper:
   - How can we be our best for ourselves?
   - How can we be our best for our community?
   - How can we be our best for the environment?
3. Provide students time to discuss ideas for each question as pairs or in small groups. Walk around the groups, listening, guiding, and challenging the discussions while distributing 1 pencil and 3 post-it notes for each student.
4. Instruct each student to write 1 idea for each of the questions on each post-it note and then stick them to the appropriate piece of chart paper.

CLARIFY NEW IDEAS (10 MINUTES) *explain*

1. Review responses as a class, adding any additional ideas that were not considered by students to result in a comprehensive list of what it means to be our best for ourselves, our community, and our environment in the kitchen.

ESSENTIAL QUESTIONS	EXAMPLES

What does it mean to be self-aware? How can we show respect and caring for our own needs?
• How can we be our best for ourselves?
  - What does it mean to be self-aware?
  - How can we show respect and caring for our own needs?
• How can we make informed, responsible decisions and keep ourselves safe in the garden?
• What does it look like to be an active and engaged listener?
• Why is it important to show up on time prepared to learn?
	• being active and **engaged**
	• being aware of our thoughts, feelings, and needs
	• being in control of our bodies
	• sharing our thoughts, feelings, and needs, with others
	• considering the impact of our choices
	• taking **responsibility** for our choices
	• making choices that keep us safe
	• using tools safely

How can we be our best for our community? • How can we show respect, empathy, and caring for others? • How can we keep others safe in the garden? • How can we contribute to the learning of the community? • Why is it important to participate? • How can we work together to seek creative, resourceful solutions and make informed, responsible decisions?	• being **present** and **attentive** • being **aware** of others' thoughts, feelings, and needs • showing **empathy** for others' feelings • showing **respect** for others' thoughts • interacting with our classmates in a gentle way with our bodies and language • considering the impact of your choices on others • being honest with others • including all team members in small group work • joining the group for whole group discussions • listening with a still body and attentive eyes
How can we be our best for our environment? • How can we show respect and caring for the environment?	• showing caring and respect for all of the living and nonliving parts of the environment • considering the impact of your choices on the environment • making responsible decisions

WATCH IT RISE (10 MINUTES) *elaborate*

1. Explain to students they will have time to practice these behaviors in pairs through participating in a blind taste test game.
2. Demonstrate the blind taste test game with a volunteer. Each pair will have a Taster and a Guide. The Tasters will close their eyes and plug their noses. The other student in the pair will be the Guide. At each table, have a Guide go get the plate of food, making sure the Tasters keep their eyes closed.
3. Model how to move carefully through the room, pick-up a plate of the selected snack from a specific area, and carry it back to the table. Then, select a student from each table to follow the instructions.
4. Once foods are at tables, have each Guide give the Taster a piece of food to taste, with eyes closed and nose plugged. Have Tasters keep their eyes closed as they guess what it was that they tasted. Then have them open their noses but keep their eyes closed, and try again.
5. Have Tasters open their eyes and discuss how smell and taste are related senses.
6. Have students switch roles and repeat with the other type of food.
7. As students play the game, acknowledge observed behaviors that align with the Life Skills Learning Objectives, such as being engaged learners and being respectful of others. Also, use the observational checklist to assess student current development of the life skills.
8. Model the appropriate clean-up instructions and select a student from each table to follow the instructions.

REFLECT (5 MINUTES) *evaluate*

1. Recognize individual student behaviors aligned with the enduring understandings they developed together with the goal of being the best for themselves, the community, and the environment.
2. Ask students to reflect silently on what it means to be the best for themselves, the community, and the environment beyond the kitchen—perhaps in school or in their home environment.
3. Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

CONNECTIONS TO GARDEN LESSONS

For the smelling and tasting activity, use aromatic herbs or produce from the garden. Bring compost out to the garden.

POSSIBLE EXTENSIONS

Classroom: Write a poem about a dish, describing it using all of your senses and then revealing the name and origin of the dish in the end.

ADDITIONAL RESOURCES

For more information on group management and group development of procedures and parameters, see:

- *Tools for Teaching* by Fred Jones.
- *Rethinking Classroom Management* by Patricia Belvel

HOMEMADE YOGURT

Kitchen

EST. TIME 45 minutes SEASON winter TYPE cooking

GRADE 6 | LESSON #10

ESSENTIAL QUESTION(S)

- How are dairy products made?
- What is the impact of sourcing dairy products locally?
- How does yogurt nourish our bodies?

MATERIALS

- ❒ Recipe
- ❒ Handouts / Visual Aids
- ❒ Cooking Equipment
- ❒ Ingredients
- ❒ Tableware
- ❒ Cleaning Tools

VOCABULARY

- Dairy
- Calcium
- Protein
- Probiotics

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (15 MINUTES)

- Gather materials, equipment, and ingredients listed in the lesson materials sheet.
- Sterilize all equipment in boiling water before using.
- Pre-warm thermos for each group immediately before class.

TEACHER BACKGROUND

Yogurt is a food produced by bacterial fermentation of milk. The bacteria used to make yogurt are known as "yogurt cultures." Fermentation of lactose by these bacteria produces lactic acid, which acts on milk protein to give yogurt its texture and characteristic tart flavor. Cow's milk is commonly available worldwide and is most commonly used to make yogurt. Milk from water buffalo, goats, ewes, mares, camels, and yaks is also used to produce yogurt where available locally.

LESSON DESCRIPTION

In this lesson, the role of dairy in a healthy diet will be discussed and local sources for dairy will be identified. Then students will work in small groups to make homemade yogurt. After a few days, students will enjoy their yogurt and can choose to sweeten it with sugar, honey, and/or berries.

LEARNING OBJECTIVES

Content Learning Objectives

FP.6.1 Demonstrate knowledge of safe food handling practices.
FP.6.2 Name and describe basic cooking techniques and use them as instructed to prepare recipes.
HC.6.4 Identify where products from different food groups are sourced locally.
HC.6.6 Demonstrate knowledge of whole foods, minimally processed foods and processed foods.
KTE.6.1 Use tools introduced in previous grades independently.
KTE.6.2 Name, identify, locate, and safely use new tools.
KTE.6.3 Match tools to tasks and explain selection process.
KTE.6.4 Demonstrate proper and safe use of tools and equipment with independence.

Life Skills Learning Objectives

PLS.5 Students develop the ability to make informed and responsible decisions.

ACADEMIC STANDARD CONNECTIONS

NGSS.MS.PS1.B. Chemical Reactions - Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants. **(MS-PS1-2), (MS-PS1-3), (MS-PS1-5)**

HEALTH STANDARD CONNECTIONS

National Health Education Standard 5: Students will demonstrate the ability to use decision-making skills to enhance health.

LESSON MATERIALS

Materials for Lesson Introduction

Handouts

- ❒ **Homemade Yogurt**, *Emerils.com* (recipe, 1 copy per small group)

Equipment

For Each Group of 10:

- ❒ 1 large thermos
- ❒ 1 candy thermometer
- ❒ 1 medium saucepan
- ❒ 1 whisk
- ❒ 1 small bowl
- ❒ 1 wooden spoon

For Whole Class:

- ❒ Stovetop

Ingredients

For Each Group of 10:

- ❒ 1 quart milk
- ❒ 3 heaping tablespoons commercial plain yogurt
- ❒ Sugar or honey, to sweeten to taste

Check the Garden for:

- ❒ 1 pint raspberries (or other berries)

Materials for Enjoying the Food

Enjoy 1-4 days after making.

Materials for Cleaning Up

- ❒ Dish soap
- ❒ Scrubber (for dishes)
- ❒ Drying rack
- ❒ Kitchen towels
- ❒ Sponge (for counters)
- ❒ Broom and dustpan

PREPARE TO COOK (5 MINUTES)

Have students tie hair back, wash hands, put on aprons (if relevant) and take their seats.

RECIPE INTRODUCTION (10 MINUTES)

1. Explain to students **dairy**, the food group containing milk and milk products, is an important component of the MyPlate food groups model. The nutrients in dairy products include **calcium**, potassium, vitamin D, and **protein**. They provide many health benefits, such as improved bone health.
2. Explain to students that yogurt specifically has not only the calcium, potassium, vitamins, and protein of other dairy products, but also includes **probiotics**, or "good" bacteria that are naturally present in the digestive system. Evidence suggests that some strains of probiotics can help boost the immune system and promote a healthy digestive tract. This is why many people eat yogurt to repopulate their digestive systems and support digestive health, particularly after taking antibiotics, which can kill not only infectious bacteria but also "good" bacteria that help us digest food.

REVIEW FAMILIAR SKILLS (5 MINUTES)

1. Explain to students that they will be making yogurt on the stovetop and review with them stove safety.
2. Remind students of where to find and how to collect the tools each group will need. Have students work as a team to retrieve the following tools and return to the cooking station.
   - 1 large thermos
   - 1 candy thermometer
   - 1 medium saucepan
   - 1 whisk
   - 1 small bowl
   - 1 wooden spoon
3. Have students find and measure the following ingredients:
   - 1 quart milk
   - 3 heaping tablespoons commercial plain yogurt

DEMONSTRATE NEW TOOLS AND SKILLS (4 MINUTES)

1. Instruct students to bring the milk to a boil. As the milk is heating, recall with students other dairy products they have had in various dishes from diverse cultures.
2. Model for students how to use a candy thermometer to measure the temperature of the milk until it is cooled to 100 degrees F.

DIVVY UP TASKS (1 MINUTE)

1. Encourage students to take turns with tasks to ensure equity as they cook.

COOK! (10 MINUTES)

1. Provide students time to cool milk to 100 degrees F before returning their attention back to the class.
2. Model for students how to carefully measure ¼ cup of warm milk and pour it into a small bowl, then whisk in the yogurt. Afterward, whisk the mixture back into the rest of the warm milk. Provide small groups time to work together to add the yogurt to the warm milk before returning their attention back to the whole group.
3. Model for students how to carefully pour the warm milk into a pre-warmed thermos and explain it will be set aside in a warm place for 7 hours. Provide small groups time to work together to pour the milk into a thermos before returning their attention back to the class.
4. As students work, use the cooking and cleaning observational checklist to assess students' mastery of cooking skills.
5. Explain to students that after school, you will turn yogurt out into a bowl, set it into another bowl of ice water, and stir it to quicken cooling. Then you will cover and refrigerate the yogurt so it can thicken.

CLEAN UP (5 MINUTES)

1. Review for students the clean up tasks: washing dishes, wiping cooking station, sweeping floor around cooking station, etc. Provide students time in small groups to divide then execute tasks before returning their attention back to the whole group.
2. As students work in small groups, use the cooking and cleaning observational checklist to assess student mastery of cleaning skills.

REFLECT (5 MINUTES)

1. Recognize individual student behaviors aligned with being the best for themselves, the communities, and the environment.
2. Look with students at food labels for a variety of store-bought yogurts (including some sweetened flavors) to compare and discuss the differences. Have students explore the amount of particular nutrients and sugars in each example. Also discuss any differences in where or how each is produced, asking how this information might impact a student's decision making when choosing a store-bought yogurt.

ENJOY! (NOT DURING THIS CLASS TIME)

Enjoy yogurt together 1-4 days after preparing (ideally at the Breakfast Party in **Lesson #11: Breakfast Party Preparation**). Before tasting, yogurt can be sweetened with sugar or honey. Yogurt can also be served with seasonal berries.

CONNECTIONS TO GARDEN LESSONS

Use berries (possibly some frozen in fall) from the garden; as you enjoy, trace ingredients back to their source.

POSSIBLE EXTENSIONS

Classroom: Have students read about and discuss the chemical processes involved in making yogurt, using a resource such as "Semisolid Science: Growing Yogurt" from Scientific American.

ADDITIONAL RESOURCES

- My Plate, Dairy Food Group
  https://www.myplate.gov/eat-healthy/dairy
- WebMD, Benefits of Yogurt
  https://www.webmd.com/diet/health-benefits-yogurt

FALL QUINOA TABBOULEH

Kitchen

EST. TIME 45 minutes SEASON fall TYPE cooking

GRADE 7 | LESSON #6

ESSENTIAL QUESTION(S)

- How can local seasonality influence traditional cultural dishes from around the world?
- How can the appearance, smell, and taste of a dish be described?

MATERIALS

- ❒ Recipe
- ❒ Handouts / Visual Aids
- ❒ Equipment
- ❒ Ingredients
- ❒ Tableware
- ❒ Cleaning Tools

VOCABULARY

- Tabbouleh
- Mezze
- Quinoa

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (30 MINUTES)

Gather materials, equipment, and ingredients listed in the lesson materials section. Pre-cook the quinoa. On a stove top, heat olive oil and liquid (water, or broth for extra flavor) over medium heat until it comes to a boil. Salt the water, add the quinoa, and stir. Bring it back to a boil then turn down the heat to low and simmer, covered, until the quinoa absorbs all of the water (about 20 minutes). Remove it from the heat and set aside for 10 minutes, still covered, to allow quinoa to fully absorb water and become fluffy. Quinoa takes about 2 cups of liquid to every 1 cup of quinoa. Also, 1 cup of dry quinoa equals about 3 cups of cooked quinoa. Quinoa can be stored in a sealed container in the refrigerator for a few days.

TEACHER BACKGROUND

Tabbouleh is a cold Mediterranean salad that is often served as part of "mezze," similar to a selection of appetizers. Tabbouleh is typically made with bulgur but in this lesson will be made with quinoa. Quinoa has been cultivated in South America for years but has recently grown in popularity due to its nutty taste, health benefits, and its easy preparation.

LESSON DESCRIPTION

In this lesson, students will be introduced to tabbouleh, a cold salad from the Mediterranean. They will learn how to prepare quinoa and the health benefits of quinoa before learning to chop and measure the rest of the ingredients for the salad. When the salad is combined, they will enjoy the salad together and discuss how the recipe may be altered to include local ingredients during different seasons throughout the year.

Caution:
Contains tree nuts.

LEARNING OBJECTIVES

Content Learning Objectives

CFT.7.1 Utilize taste sensations: sweet, sour, bitter, and salty in a series of lunch items for the class.

CFT.7.2 Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples.

HC.7.1 Demonstrate an understanding of how seasonality influences traditional cultural dishes.

HC.7.3 Relate seasonality to availability of ingredients.

RC.7.1 Compare and contrast recipes from various world cultures.

RC.7.3 Follow a recipe with increased independence and make modifications with the ingredients.

KTE.7.1 Use tools introduced in previous grades independently.

KTE.7.2 Name, identify, locate, and safely use new tools/equipment.

KTE.7.3 Match tools to tasks and explain selection process.

KTE.7.4 Demonstrate ability to use tools and equipment independently.

New Tools: Stove, pots, pans, skillets, steamer insert, and griddle

Life Skills Learning Objectives

CLS.4 Students appreciate and are respectful of differences and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

Social Studies: Geography, Cultural Traditions, Diversity and Community.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

LESSON MATERIALS

Materials for Lesson Introduction

- ❒ **Fall Quinoa Tabbouleh**, *Emerils.com* (recipe, 1 copy per small group)

Handouts

- ❒ Image of a mezze (1 copy per small group or projected)
- ❒ Image of a quinoa plant (1 copy per small group or projected)

Visual Aids

- ❒ White, red, and black quinoa grains

Equipment

- ❒ 3 large mixing bowls
- ❒ 3 wooden spoons
- ❒ 3 small mixing bowls
- ❒ 3 whisks
- ❒ 6 sets of measuring cups
- ❒ 3 sets of measuring spoons

Ingredients

- ❒ 9 cups cooked quinoa
- ❒ 3 cup toasted walnuts
- ❒ 1 ½ cup pomegranate seeds
- ❒ 1 ½ cup walnut oil 1 cup apple cider vinegar
- ❒ 6 tablespoons honey
- ❒ 3 teaspoon pomegranate molasses
- ❒ 1 ½ teaspoon sumac
- ❒ kosher salt and freshly ground pepper to taste

Check the Garden for:

- ❒ 3 medium bunches flat leaf parsley (to equal 3 cups finely chopped)
- ❒ 3 medium apples, preferably Honey Crisp or Pink Lady (to equal 3 cups cored and diced)
- ❒ 3 small red onions (to equal 1 ½ cup finely diced)

Materials for Enjoying the Food

- ❒ 3 serving spoons
- ❒ Bowls (1 for every student)
- ❒ Spoons (1 for every student)

Materials for Cleaning Up

- ❒ Dish soap
- ❒ Scrubber (for dishes)
- ❒ Drying rack
- ❒ Kitchen towels
- ❒ Sponge (for counters)
- ❒ Broom and dustpan

PREPARE TO COOK (5 MIN)

Have students tie hair back, wash hands, put on aprons (if relevant) and take their seats.

RECIPE INTRODUCTION (10 MINUTES)

1. Introduce to students that they will be making a Mediterranean salad called **tabbouleh**. The word tabbouleh is derived from the Arabic word tabil, meaning "seasoning" or more literally "dip." Connect to prior knowledge in **Lesson #4: Researching Nutrients**.
2. Show an image of a traditional mezze and explain that tabbouleh is traditionally served as part of a **mezze** in the Arab world, though variations are made by the Armenians and Turks and its popularity is growing in Western cultures too.
3. Show students an image of a **quinoa** plant. Explain that it is a whole grain that originated in South America and is grown for its edible seeds. After harvest, the outer coating of the seeds are removed and then the seeds are cooked like rice.
4. Show students what uncooked white, red, and black quinoa look like. Explain that while there are 1,800 different varieties, these are the 3 that are most common. We will be cooking with white quinoa because it has the most neutral flavor while the red and black quinoa are bolder and earthier tasting.
5. Explain that you have pre-cooked the quinoa that they will use for this recipe.

REVIEW FAMILIAR SKILLS (3 MINUTES)

1. Divide each table into 2 groups of 5 students. Explain to students that one group will be chopping the fruits, vegetables, herbs, and nuts while the other will be measuring the ingredients for the dressing. Each group will be observing the other to learn the full method for the recipe.
2. Review safe use of tools and equipment, reminding students of where to find and how to collect the tools their group will need.
3. Have students work as a team to retrieve all tools and bring them back to their cooking station. When students have returned to their seats, deliver knife buckets to tables.

CHOPPING GROUP	MEASURING GROUP
• 5 cutting boards • 1 large mixing bowl • 1 wooden spoon • 1 set of measuring cups	• 1 small mixing bowl • 1 whisk • 1 set of measuring cups • 1 set of measuring spoons

DEMONSTRATE NEW TOOLS AND SKILLS (6 MINUTES)

1. Model for students where to find, how to gather and how to prepare each of the ingredients. Review knife safety and model how to finely chop parsley, how to core then dice an apple, how to chop walnuts, and how to finely dice an onion.

DIVVY UP TASKS (6 MINUTES)

1. **Chopping Group:** Remind students to wash their parsley and apple before they begin. On your cue have the group follow the chopping instructions. Students may place their chopped ingredients into the large mixing bowl when they are finished.
2. **Measuring Group:** Have students pour all measured ingredients in the small mixing bowl and mix well with a whisk. Remind students to return their ingredients to the proper storage location.

CHOPPING GROUP	MEASURING GROUP
• 1 bunch of flat leaf parsley, finely chopped to equal 1 cup • 1 large apple, cored and diced to equal 1 cup • 1 cup toasted walnuts, chopped • 1 small red onion, finely diced to equal ½ cup	• 1/2 cup pomegranate seeds • 1/2 cup walnut oil • 1/3 cup apple cider vinegar • 2 tablespoons honey • 1 teaspoon pomegranate molasses • 1/2 teaspoon sumac • kosher salt and freshly ground pepper to taste

3. Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group. As students work, use the cooking and cleaning observational checklist to assess students' mastery of cooking skills.

If you clean as you cook, your tools will be ready the next time you need them, you will have more space to cook and you won't have so many dishes to clean after you enjoy!

COOK! (3 MINUTES)

1. Have a student from the measuring group collect 3 cups of cooked quinoa for the table. Model for students how to carefully add the quinoa to the parsley, apples, walnuts, and onion and mix well with a wooden spoon. Then model for students how to toss the quinoa with the dressing to let is sit before serving.
2. Provide students time for small groups to work together to complete these tasks before returning their attention back to the whole group.

ENJOY! (5 MINUTES)

1. Have students find and gather bowls, spoons, and the serving spoon their group will need to serve the quinoa tabbouleh. Have students work as a team to retrieve all items and bring them back to their cooking station.
2. Explain that each student will serve himself or herself from the bowl and then pass the bowl to the left, ensuring that there is enough for everyone at the table to have a taste. Ask students wait until everyone is served before eating.
3. On your cue, students can enjoy the tabbouleh with classmates.
4. As students enjoy the tabbouleh, explain how tabbouleh is traditionally made (with bulgur, a whole grain from the Middle East) rather than quinoa, and tomatoes rather than apples. Parsley and onion are common in tabbouleh and are often accompanied by mint, olive oil, lemon juice, and salt instead of walnut oil, apple cider vinegar, honey, sumac, along with pomegranate seeds and molasses.
5. Ask students to consider how the appearance, smell, and taste of this dish they created may compare to that of the traditional version described. Challenge students to consider further how world trade and the exchange of ideas and goods has influenced traditional dishes in different regions.

CLEAN UP (5 MINUTES)

1. Review clean up tasks, such as washing dishes, wiping cooking station, sweeping floor around cooking station, etc. Model how to put any parsley, apple, or onion scraps in the compost. Provide students time in small groups to divide then execute tasks before returning their attention back to the class.
2. As students work in their small groups, remember to use the cooking and cleaning observational checklist to assess student mastery of cleaning skills.

REFLECT (5 MINUTES)

1. Recognize individual student behaviors aligned with being the best for themselves, the community, and the environment. Ask students to reflect on the value of diversity as it relates to their experiences in class that day.
2. Challenge students to consider not only how this dish may change with traditions around the world but also how it may change with the seasons in your area. For homework, ask students to write a simple recipe for a winter or spring tabbouleh that could be made with ingredients growing in the garden at that time.

CONNECTIONS TO GARDEN LESSONS

Use apples and onions from the garden. Add in other produce from the garden, such as sugar snap peas, corn, or cherry tomatoes. Deliver compost to the garden. As you enjoy, trace ingredients back to the garden.

POSSIBLE EXTENSIONS

Community: Share the Fall Quinoa Tabbouleh with school administration and staff with recipe cards.

ADDITIONAL RESOURCES

- A Brief History of Tabbouleh, Lebanon's National Food https://theculturetrip.com/middle-east/lebanon/articles/a-brief-history-of-tabbouleh-lebanons-national-food
- My Jewish Learning, Tabbouleh http://www.myjewishlearning.com/recipe/tabbouleh/
- *Modern Flavors of Arabia: Recipe and Memories from My Middle Eastern Kitchen* by Suzanne Husseini
- *Flavors from the French Mediterranean* by Gerald Passedat

MEZZE

Did you know tabbouleh is traditionally served as part of a mezze?

DESCRIPTION

Mezze is a selection of small dishes and is often served at the beginning of multi-course meals. The word "mezze" comes from the Persian word mazze, meaning "taste, snack." Depending on the region, mezze could consist of hummus, olives, cheeses, melons, nuts, rice-stuffed leaves or vegetables, raw meatballs, dried cured pastrami, pita bread, yogurt with herbs, cucumber or garlic, as well as other cold salads.

QUINOA PLANT

Did you know quinoa is closely related to beetroot and spinach?

DESCRIPTION

Quinoa is known for its nutty taste and superfood qualities, such as its high protein content. It has the perfect balance of all nine amino acids essential for human nutrition. This complete protein is rarely found in plant foods, though it is common in meats. Quinoa also offers a good dose of fiber and iron.

Quinoa has been cultivated in the Andes for over 5,000 years (and was called “the mother grain” or “the gold of the Incas” but its popularity has grown recently because of its nutritional value and it is easy and quick to cook

MY FOOD CART, PART 3

Kitchen

EST. TIME 45 minutes SEASON winter TYPE cooking concept GRADE 8 | LESSON #10

ESSENTIAL QUESTION(S)

- What should be considered in menu design?
- How do season, budget and culture affect decisions around menu design?

MATERIALS

- ❒ Post-it notes (1 for every student)
- ❒ Selection of menus from local restaurants or food businesses
- ❒ Menu Planning Worksheet (1 for every student)

VOCABULARY

- Menu
- Appetizers
- Entrees

ASSESSMENT

- Observational checklist

Create Your Own!

Use the lesson template to create your own and share with us!

PREPARATION (30 MINUTES)

Gather materials and collect menus or photos of menus from local restaurants or food businesses. Select menus representing a diversity of cultures, themes, price ranges and restaurant styles.

TEACHER BACKGROUND

Menus are typically organized into: starters / appetizers, entrees, sides, desserts. In selecting dishes for a high-quality menu, often the following are considered: a central theme around a world culture; dishes with local, seasonal ingredients; and a variety of dishes to accommodate many diets, appetites, and price ranges.

LESSON DESCRIPTION

In this lesson, students will explore menus from a variety of local restaurants and food businesses to determine qualities that make a cohesive, diverse, high-quality menu. Then they will use the Menu Planning Worksheet to guide their creative process as they draft options for a fall and spring menu of their food cart.

LEARNING OBJECTIVES

Content Learning Objectives

CFT.8.3 Create a menu that includes combinations of basic textures and taste sensations from a variety of cultures.

HE.8.1 Design and produce a week of healthy and seasonal recipes and meals on a budget using a world culture.

HC.8.1 Design a seasonal menu plan that reflects the foods grown in your bio-region/state.

MD.8.1 Create a menu using world culture theme.

Life Skills Learning Objectives

CLS.4 Students appreciate and are respectful of differences and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

Social Studies: Economics, Geography, Cultural Traditions, Diversity and Community

HEALTH STANDARD CONNECTIONS

National Health Education Standard 5: Students will demonstrate the ability to use decision-making skills to enhance health.

IGNITE INTEREST (5 MINUTES) *engage*

1. Distribute a post-it note to every student and ask them to write the name of their favorite dish. It can be anything the class cooked together, a dish they like to make at home, or an item from a restaurant. On your cue, ask students to stick their post-it note to the board.
2. Consider with students, would this make a good **menu** at a restaurant? Challenge students to explain why or why not.
3. If necessary, ask leading questions: Is there a central theme or culture represented? Are all of the dishes within the season? Is there enough diversity on the menu to have plenty of options for all diets?

STIR DISCOVERIES (5 MINUTES) *explore*

1. Distribute or project a selection of menus from local restaurants or food businesses.
2. Challenge students to consider what they like about each of the menus or what they would add or improve to each of the menus.

CLARIFY NEW IDEAS (5 MINUTES) *explain*

1. Explain to students there are many factors to consider in menu design. Today, they will build 2 menus for their hypothetical food carts, 1 for fall and 1 for spring. They will start by identifying a world culture theme. Then, they will consider what types of dishes they would like to offer that incorporate local, seasonal ingredients in the fall and in the spring.
2. Make clear to students that the Menu Planning Worksheet is organized into sections to get them started, but they are allowed to omit, add, or rename categories as appropriate for their restaurant or style. In other words, they can use the worksheet as a jumping off point, but can feel free to "make it their own." For example, the section labeled "Starters" on the worksheet could be titled "Mezze" for a Mediterranean restaurant; "Antipasti" for an Italian restaurant; just **Appetizers** if the student prefers; or "To Share" for a creative twist. Likewise, some menus may include a section for soups and salads but others may replace that with a section with selections for a meat and cheese board, or the like.
3. Explain to students that while there is much creativity in designing the menu structure and selecting dishes, there are also standards to ensure a high-quality menu. Explain that you will be looking for these standards:
   - a central theme that connects all of the dishes to a world culture
   - dishes that feature local, seasonal ingredients
   - a variety of dishes to accommodate many diets, appetites, price ranges, and ages

WATCH IT RISE (25 MINUTES) *elaborate*

1. Provide time for students to work individually on the menu worksheet. As students are working, use the observational checklist to assess student development of Personal and Community Life Skills.
2. As students complete their drafts, have them trade with other students, reviewing one another's work for the 3 qualities of a high-quality menu: a central world culture theme, seasonal ingredients reflecting what's available in fall and spring, and a variety of dishes.

REFLECT (5 MINUTES) *evaluate*

1. Recognize individual student behaviors aligned with being the best for themselves, the communities, and the environment. Specifically, ask students to reflect on the value of diversity.
2. Provide time for students to give feedback to others at the table about their menus, checking that each student menu is cohesive and diverse, sharing creative ideas, and adding to their drafts when appropriate.

CONNECTIONS TO GARDEN LESSONS

Have students work together to recall what's in abundance in their garden each season. Have them use this list to guide their menu ideas for each season.

POSSIBLE EXTENSIONS

Community: Explore a variety of menus from your local restaurants and talk to the chefs to understand how they determine their menu.

MENU PLANNING WORKSHEET

STUDENT NAME: _____ DATE: _____

CHEF NAME:

RESTAURANT NAME:

WORLD CULTURE THEME:

LOCAL REGION:

SEASON

STARTERS:

Soups:

Salads:

ENTREES:

Sides:

DESSERTS:

MENU PLANNING WORKSHEET CONTINUED

BEVERAGES:

KIDS MENU:

RECIPES

Emeril's
CULINARY GARDEN &
TEACHING KITCHEN

MY FIRST WATERMELON GRANITA

Kitchen

YIELD: 8 to 10 servings

GRADE K

This is the first granita I ever made, way back when. I still remember how excited I was to see how easy and fun it was to make this delicious frozen dessert, similar to a sorbet or Italia ice, without any special machines or gadgets. You'll see—it's like a little bit of magic.

Ingredients

- 6 cups peeled and seeded watermelon chunks (from about a 4 pound slice of watermelon)
- ¾ cup sugar
- 2 tablespoons plus 1 teaspoon freshly squeezed lime juice

Tools

- ❒ cutting board
- ❒ paring knife
- ❒ measuring cups and spoons
- ❒ medium mixing bowl
- ❒ chef's knife
- ❒ reamer or juicer
- ❒ blender or food processor
- ❒ fork

Directions

1. Place the watermelon chunks in the bowl of a blender or food processor, replace the top, and blend on high speed until very smooth, about 1 ½ to 2 minutes. Turn the blender off.
2. Transfer the watermelon puree to a mixing bowl and add the sugar and lime juice.
3. Stir with a wooden spoon until the sugar is completely dissolved, 2 to 3 minutes.
4. Transfer the mixing bowl to the freezer and freeze for 30 minutes.
5. Remove the bowl from the freezer and use a fork to scrape any ice crystals from the sides of the bowl. Stir to incorporate the crystals. Return to the freezer.
6. Repeat this scraping procedure every 30 minutes, or until the consistency is "snowy" when scraped with a fork or spoon, at least 4 hours. Scoop into bowls or dessert glasses and serve.

Adapted and used with permission from *There's a Chef in My Family!*, pg 202

Emeril's CULINARY GARDEN & TEACHING KITCHEN

YUMMY WAKE-UP SMOOTHIES

Kitchen

YIELD: 8 to 10 servings

GRADE K

This is one surefire way to get you started in the morning! And good for you, too! (Hey, if you like this as much as I bet you will, you'll also want it for snacks.) Don't worry, go right ahead, because all this fresh fruit and yogurt will pick you up just about any time of the day!

Ingredients

- 2 large ripe bananas, peeled and sliced
- 2 cups washed strawberries, stem and hull removed
- 1 cup raspberries, or peeled and sliced kiwi (about 2 kiwis)
- 2 cups plain yogurt
- ½ cup orange juice
- ¼ cup honey

Contains dairy

Tools

- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ paring knife
- ❒ blender

Directions

1. Place all of the ingredients in the blender and process on high speed until smooth, about 30 to 45 seconds.
2. Pour into glasses and serve.

Make sure the blender lid is on snugly!

Note:
Feel free to substitute or add other fruits, such as blueberries, mangoes or peaches. And feel free to substitute pineapple juice for the orange juice—it'll work just as well!

Adapted and used with permission from *There's a Chef in My Soup!*, pg 52

SUGAR-AND-SPICE ACORN SQUASH

Kitchen

YIELD: 6 to 12 servings

GRADE K

I love squash! Any kind! But in the chilly fall and winter months, baked acorn squash is one of my favorite side dishes. It makes for an attractive presentation at holiday time, too. If you can't find acorn squash, try butternut squash—it is very similar in taste and texture and will work just fine for this dish. Oh, and be careful cutting the squash—they're quite hard, and, if you're not sure you can do it yourself, ask an adult to help!

Ingredients

- 3 acorn squash, about 1 ½ pounds each
- 9 tablespoons unsalted butter, softened
- 4 ½ tablespoons maple syrup
- 4 ½ tablespoons light brown sugar
- 1 teaspoon ground cinnamon
- ½ teaspoon ground allspice
- Pinch ground cloves
- Pinch grated nutmeg
- ½ teaspoon plus a pinch salt
- ¼ teaspoon freshly ground black pepper

Contains dairy

Tools

- ❒ chef's knife
- ❒ spoon
- ❒ small rubber spatula
- ❒ two 9- by 13-inch baking dishes
- ❒ oven mitts
- ❒ slotted spoon
- ❒ cutting board
- ❒ small mixing bowl
- ❒ measuring spoons
- ❒ aluminum foil
- ❒ pastry brush

Continued on next page

Adapted and used with permission from *There's a Chef in My Family!*, pg 166

Directions

1. Preheat the oven to 375 degrees F.
2. On a cutting board, cut the squash in half lengthwise.
3. Scrape the seeds and fibers from the squash with the spoon.
4. Cut each squash half in two and place the quarters in the baking dishes so that they fit an even layer, skin side down.
5. In a small mixing bowl, combine the butter, honey, brown sugar, cinnamon, allspice, cloves, nutmeg, and a pinch of salt. Mix until smooth with a rubber spatula.
6. Divide the butter mixture among the squash quarters, about 1 tablespoon each. Season the squash evenly with the remaining ½ teaspoon of salt and the black pepper.
7. Cover tightly with aluminum foil.
8. Bake, covered, until the squash can be easily pierced with a fork, about 45 minutes.
9. Remove from the oven and carefully remove the foil.
10. With the pastry brush, brush the butter inside each squash evenly over the surface.
11. Return to the oven and bake, uncovered, for 20 to 30 minutes, or until golden brown around the edges.
12. Remove from the oven.
13. Transfer to serving plates with a slotted spoon.
14. Serve hot.

Note:
If smaller portion sizes are acceptable, 2 squash might be enough for up to 10 students. This is subjective, you can make the call and it's easy enough to scale down if desired.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

HERBED MEDITERRANEAN YOGURT CHEESE SPREAD

Kitchen

YIELD: 8 to 10 servings

GRADE K

I just love this appetizer! Yogurt is very popular in Mediterranean countries. Dress yours up by using garlic or chili-infused olive oil. Or, a squeeze of fresh lemon juice will give the cheese a tangy flavor. Use any fresh herbs you like best, such as basil or dill. I also serve this alongside fresh veggies like carrot sticks, radishes, and celery. For the creamiest results, use whole-milk yogurt instead of the low-fat versions.

Ingredients

- 3 cups plain yogurt
- 1 ½ teaspoons kosher or other coarse-grain salt
- Freshly ground black pepper
- ¾ teaspoon chopped fresh thyme
- ¾ teaspoon chopped fresh oregano
- 1 ½ teaspoons chopped fresh parsley
- 2 tablespoons extra-virgin olive oil, plus more if desired
- Pita wedges, carrot sticks, radishes, celery sticks, cucumber slices, and Kalamata olives, for garnish (optional)

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ medium mixing bowl
- ❒ plastic wrap
- ❒ cutting board
- ❒ colander or wire-mesh strainer
- ❒ cheesecloth
- ❒ serving plate

Continued on next page

Adapted and used with permission from *There's a Chef in My World!*, pg 58

Directions

1. Place a colander or wire-mesh strainer over a medium mixing bowl. (Make sure that there is enough room between the bottom of the colander or strainer and the bowl for about an inch of liquid to drain off the yogurt.) Fold a large piece of cheesecloth in half and place inside the colander, draping the edges over the sides.
2. Pour the yogurt into the cheesecloth, and cover the entire bowl with plastic wrap. Place the yogurt in the refrigerator and chill overnight. (The longer the yogurt sits in the colander, the thicker the cheese will be!)
3. Remove the yogurt from the cheesecloth and place on a serving plate. Season with salt and freshly ground black pepper. Sprinkle the thyme, oregano, and parsley over the top of the cheese and drizzle with olive oil.
4. Serve the yogurt cheese with pita bread wedges, veggies, and Kalamata olives. The yogurt cheese will keep, covered, in the refrigerator for 3 to 4 days.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

FRESH-AND-FRUITY FRESH POPS
WITH SIMPLE SYRUP

Kitchen

GRADE K

YIELD: 10 servings, 2 ¼ cups Simple Syrup

Use whatever fruit is in season and whatever fruits you like best for these treats...I made these with strawberries, raspberries, and blueberries, but what you use is up to you! Oh, and if it's that in-between time of year and you can't get fresh berries, use frozen 100% natural fruit with no syrup added for the same great results; just pop the frozen berries in the blender.

Ingredients

For the Freeze Pops:

- 3 ¾ cups sliced strawberries (sliced lengthwise, about ¼-inch thickness)
- 1 ¼ cups raspberries
- 1 ¼ cups blueberries
- 1 ¼ cups Simple Syrup, recipe follows

For the Simple Syrup:

- 1 ½ cups sugar
- 1 ½ cups water

Tools

For the Freeze Pops:

- ❒ measuring cups
- ❒ 10 (5-ounce) paper cups
- ❒ 10 4-inch squares of aluminum foil
- ❒ blender
- ❒ 10 popsicle sticks or plastic spoons

For the Simple Syrup:

- ❒ measuring cups
- ❒ 3-quart heavy saucepan
- ❒ sturdy airtight container

Continued on next page

Adapted and used with permission from *There's a Chef in My Soup!*, pg 208

Directions

For the Freeze Pops:

1. Place all of the ingredients in a blender and puree on high speed until well-blended and smooth, about 30 seconds.
2. Divide the fruit puree among 10 paper cups (about ½ cup puree per cup).
3. Stand 1 popsicle stick or plastic spoon in the center of each cup.
4. Poke a small hole in the center of each aluminum square and place aluminum foil squares over the cups, inserting the spoon handle through the hole, so that the spoon stands up straight.
5. Place the cups in the freezer standing up, and freeze until set, at least 8 hours or overnight.
6. Remove from the freezer and discard the aluminum squares. Gently tear the paper cups away from the fruit pops and serve.

For the Simple Syrup:

1. Combine the sugar and water in a medium, heavy saucepan.
2. Bring to a boil without stirring.
3. Remove the pan from the heat and let it cool.
4. Pour the syrup into an airtight container and place in the refrigerator to cool completely (about 2 hours) before using.
5. Use as needed.

Caution

Blender blades are sharp—keep your fingers away!
Make sure the lid is on tightly before pureeing the fruit!

Note:
Other fruit possibilities for pops are: mangoes, bananas, peaches, nectarines, pineapple, cherries. Use the fruits that you love.

MMMM-HMMM HUMMUS

Kitchen

YIELD: 4 cups

GRADE K

Hummus is a wonderful Middle Eastern dip made from chickpeas. Try it—it's delicious! Though I don't usually advocate using canned beans or peas, chickpeas are one of the few exceptions, and especially for this use, they work just great. Just make sure to drain and rinse them well. I like to eat my hummus with pita chips—but it also goes great with bagel chips or fresh veggies. If you're a lemon lover like I am, you might want to squeeze a little extra lemon juice over the top of the hummus just before serving!

Ingredients

- 2 (15-ounce) cans chickpeas, drained
- ½ cup extra-virgin olive oil
- 2 tablespoons fresh lemon juice, plus extra for serving, if desired
- 1 tablespoon ground cumin
- ½ cup chopped onion
- 1 teaspoon minced garlic
- ½ cup water
- ½ cup tahini
- 1 tablespoon red wine vinegar
- 1 tablespoon Baby Bam
- 1 ½ teaspoons salt
- ¼ teaspoon ground cayenne pepper

Tools

- ❒ measuring cups and spoons
- ❒ reamer
- ❒ chef's knife
- ❒ food processor
- ❒ cutting board
- ❒ rubber spatula

Continued on next page

Adapted and used with permission from *There's a Chef in My Family!*, pg 108

Directions

1. In the bowl of a food processor combine the chickpeas with 6 tablespoons of the olive oil, the lemon juice, cumin, onion, garlic, water, tahini, red wine vinegar, 2 teaspoons of the Baby Bam, salt and cayenne pepper. Process until the mixture is combined and mostly smooth, about 1 minute.
2. Using a rubber spatula, remove the hummus from the bowl of the food processor and transfer to an airtight container and refrigerate until chilled, at least 1 ½ to 2 hours and up to several days in advance.
3. When ready to serve, stir the hummus and transfer to a shallow serving bowl. Drizzle with the remaining 2 tablespoons of extra-virgin olive oil and sprinkle with the remaining teaspoon of Baby Bam. Serve with pita bread, pita chips, bagel chips or other chips of choice.

SHRIMP AND VEGGIE SUMMER ROLLS

Kitchen

YIELD: 10 rolls

GRADE K

This Vietnamese specialty is a cousin of a Chinese favorite, the egg roll, except it isn't fried. Don't let these rolls intimidate you! The secret is to have all the ingredients set out and ready, assembly line-style, so that they're easier to pull together. If you leave out the shrimp, these make a great vegetarian snack, too.

Ingredients

- 1 (3 ¾-ounce) package cellophane noodles
- 4 cups water
- 1 (2-inch) piece of ginger, peeled and thinly sliced
- 1 lemon, halved
- ¼ cup soy sauce
- ¼ cup sugar
- 4 bay leaves
- 1 tablespoon chopped green onion (green and white part)
- 1 teaspoon chopped garlic (about 2 small cloves)
- 1 teaspoon salt
- 1 teaspoon freshly ground black pepper
- ½ teaspoon cayenne
- 20 large shrimp, peeled and deveined
- 10 (8 ½-inch) round rice paper wrappers
- 40 small fresh mint leaves
- 40 small fresh cilantro leaves
- 3 romaine lettuce leaves, rinsed, patted dry, ribs removed, and torn into bite-size pieces
- 1 large carrot, peeled and shredded
- 1 recipe Asian Dipping Sauce

Contains shellfish

Continued on next page

Adapted and used with permission from *There's a Chef in My World!*, pg 48

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ box grater
- ❒ large mixing bowl
- ❒ medium saucepan
- ❒ small mixing bowl
- ❒ 9-inch shallow dish
- ❒ large plate
- ❒ damp towels (optional)
- ❒ cutting board
- ❒ paring knife
- ❒ vegetable peeler
- ❒ paper towels
- ❒ slotted spoon
- ❒ fine-mesh strainer
- ❒ clean, dry kitchen towel
- ❒ oven mitts or pot holders

Directions

1. Pour 2 cups hot water into a large mixing bowl and add the cellophane noodles. Soak the noodles until softened, about 20 to 30 minutes. Drain the excess water from the noodles and pat dry with paper towels. Cover and set aside.
2. In a medium saucepan, combine 4 cups water, the ginger, lemon halves, soy sauce, sugar, bay leaves, green onion, garlic, salt, black pepper, and cayenne. Bring the mixture to a boil over high heat.
3. Carefully add the shrimp to the boiling soy sauce mixture and boil for 2 minutes. Remove the pan from the heat and allow the shrimp to stand in the hot mixture for 2 more minutes, until cooked through.
4. Using a slotted spoon, remove the shrimp from the cooking liquid and place in a small mixing bowl. When the shrimp are cool enough to handle, slice in half lengthwise. Using a fine-mesh strainer, strain and reserve 1 cup of the shrimp cooking liquid for the Asian Dipping Sauce.
5. Fill a shallow dish (about 9 inches wide or larger) with warm water. Make sure it's not too hot or the rice paper will tear easily. Place a clean, dry kitchen towel next to the dish. Submerge 1 rice paper wrapper in the warm water and soak it briefly, until it is slightly softened, about 10 seconds. Carefully remove the rice paper wrapper from the water and lay it flat on the towel. It will continue to soften as it sits. (Don't worry about drying the top of the rice paper; the excess water will help it to stick together better.)

Continued on next page

6. Place 1/3 cup of the soaked cellophane noodles on the rice paper, about 1 inch from the bottom. Leave about 1 inch on each side, too. Arrange 4 mint leaves and 4 cilantro leaves over the noodles. Layer 4 shrimp halves on top of the herbs. Place 3 to 4 bite-size pieces of lettuce over the shrimp, and pile about 2 tablespoons of shredded carrots on top.
7. Pull the bottom inch of the rice paper over the filling and roll halfway up the rice paper. (Make sure that you wrap tightly, but be gentle so the wrapper doesn't tear.) Fold the sides over the filling and continue to roll up like an egg roll. Place the summer roll, seam side down, on a large plate and cover with a damp paper towel. Repeat the process with the remaining rice paper wrappers and filling.
8. Serve immediately with the dipping sauce, or refrigerate, covered with damp towels, for up to 1 hour before serving.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

CRISPY-CRUNCHY GRANOLA MUNCHIES

Kitchen

YIELD: 6 cups

GRADE 1

An airtight container is important—this will keep your granola fresh and crunchy!

This not only makes a terrific snack, but also doubles as an awesome breakfast cereal. Keep in mind that if you use salted nuts, you'll need to decrease the amount of salt used from ½ teaspoon to ¼ teaspoon. And hey, substitute whatever nuts and dried fruit you like best. This Nutty Granola will keep up to 1 week at room temperature if stored in an airtight container, but then I bet yours won't last that long!

Ingredients

- 1/3 cup honey
- 4 tablespoons unsalted butter
- 3 cups old-fashioned oats
- 1 cup assorted nuts, including slivered almonds and coarsely chopped pecans and walnuts
- ½ cup sweetened coconut flakes
- ¼ cup hulled green pumpkin seeds
- ¼ cup sunflower seeds or pine nuts
- ½ teaspoon salt
- ½ cup raisins or golden raisins, or a combination of the two
- ¼ cup dried cranberries or blueberries
- ¼ cup dried banana chips

Contains dairy and tree nuts

Tools

- ❒ knife
- ❒ small saucepan
- ❒ baking sheet
- ❒ large bowl
- ❒ fork
- ❒ air-tight container
- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ large wooden spoon
- ❒ oven mitts or potholders
- ❒ wire rack

Continued on next page

Adapted and used with permission from *There's a Chef in My Soup!*, pg 120

Directions

1. Preheat the oven to 325 degrees F and make sure the oven rack is in the center position.
2. Combine the honey and butter in a small saucepan. Heat over low heat and stir until melted. Remove from the heat.
3. Combine the oats, mixed nuts, coconut, pumpkin seeds, sunflower seeds, and salt in a large bowl. Stir with a large wooden spoon to combine.
4. Pour the honey-butter over the oat mixture and stir until well combined.
5. Spread the granola evenly in a thin layer on a baking sheet.
6. Bake, stirring every 5 minutes with a wooden spoon to prevent from sticking or burning, until golden brown and crisp, about 20 minutes. (Do not overcook—the granola will continue to crisp as it cools.)
7. Remove the baking sheet from the oven and place on a wire rack to cool. When completely cooled, transfer to a large bowl and stir in dried fruits.
8. Transfer to an airtight container and store at room temperature for up to one week.

Caution

Be very careful stirring the hot nut mixture!

Emeril's CULINARY GARDEN & TEACHING KITCHEN

YOUR FAVORITE FRUIT SALAD

Kitchen

YIELD: 8 to 10 servings (or 8 cups)

GRADE 1

Try serving your fruit salad with a scoop of ice cream or frozen yogurt, or even with a dollop of vanilla- or fruit-flavored yogurt, topped with a little crispy granola for crunch!

It's important to choose fruits that you really like as well as fruits that are in season for this simple salad. If you're lucky enough to get fruits at their peaks of ripeness, odds are you won't need to add anything extra to this salad to make it super yummy. However, if you're in the mood for something a little sweeter, try adding a tablespoon or two of honey—it should do just the trick.

Ingredients

- 8 cups of your favorite fruits, chopped, such as:
- 1 cup 1-inch cubes honeydew melon
- 1 cup 1-inch cubes cantaloupe
- 1 cup orange segments
- 1 cup red grapes
- 1 cup banana slices
- 1 cup cored and chopped apple
- 1 cup blueberries
- 1 cup hulled and sliced strawberries
- ½ cup plain yogurt
- 1 tablespoon fresh lemon juice
- 1 tablespoon fresh orange juice
- ½ cup toasted coconut

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ knife
- ❒ large mixing bowl
- ❒ cutting board
- ❒ corer
- ❒ large spoon

Directions

1. Combine all the fruit in a large mixing bowl.
2. Add the yogurt, lemon juice, and orange juice to the fruit and stir with a large spoon to combine.
3. Divide the fruit salad among serving plates and sprinkle each serving with some of the toasted coconut, and serve.

Adapted and used with permission from *There's a Chef in My Soup!*, pg 60

SALSA

Kitchen

YIELD: 2 cups

GRADE 1

Ingredients

- 6 ripe plum tomatoes (about 1 ½ pounds) or 2 (14-ounce) cans whole tomatoes, drained
- ½ cup chopped red or yellow onion
- ¼ cup minced cilantro leaves
- 2 cloves garlic, minced
- 4 teaspoons fresh lime juice
- ½ teaspoon salt
- ½ teaspoon Emeril's Hot Sauce or other red hot sauce

Tools

- ❒ food processor
- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ chef's knife
- ❒ juicer
- ❒ can opener (optional)
- ❒ plastic wrap (optional)

Directions

1. In the bowl of a food processor, combine all ingredients and pulse until the salsa is mostly smooth but still slightly chunky, about 7 pulses.
2. Transfer to a bowl. Serve immediately or cover with plastic wrap and set aside until ready to serve.

Adapted and used with permission from *There's a Chef in My Family!*, pg 96

Emeril's CULINARY GARDEN & TEACHING KITCHEN

EAT-A-PITA PIZZAS

Kitchen

YIELD: 10 servings

GRADE 1

When you're not in the mood or don't have the time to make your own pizza dough, try making some Pita Pizzas for a quick snack or dinner. Feel free to be creative and kick up yours with anything else you might have around, such as thinly sliced mushrooms, pepperoni slices, or even two or three different cheeses. Have fun—experiment—it's up to you! Make your pita pizza as unique as you are!

Ingredients

- 10 large pita breads
- 2 ½ cups Best Basic Red Sauce, see recipe on page 631, or store-bought pizza sauce
- 2 ½ cups grated Mozzarella cheese, or Monterey Jack cheese (12 ounces)

Contains dairy

Tools

- ❒ measuring cup and spoons
- ❒ oven mitts or potholders
- ❒ sharp knife or pizza wheel
- ❒ two baking pans
- ❒ metal spatula

Directions

1. Preheat the oven to 400 degrees F and make sure the oven rack is in the lower third of the oven.
2. Lay the pita bread rounds onto large baking sheets.
3. Spread ¼ cup of Best Basic Red Sauce on each round, and evenly spread with the back of a spoon. Top each with ¼ cup of grated cheese.
4. Bake until the cheese is bubbly and golden brown, about 8 minutes.
5. Remove from the oven.
6. Cut each pita pizza into 6 slices each with a sharp knife or pizza wheel, transfer to a plate using a metal spatula and serve immediately.

Pita Pizza For One:
For each pita bread, you'll need just ¼ cup of the Basic Red Sauce (recipe follows) or your favorite store-bought pizza sauce, and ¼ cup of your favorite grated cheese. Preheat a toaster oven to 400 degrees F and assemble your pita pizza as directed in recipe instructions. Carefully place your pita pizza in the toaster oven and cook for 6 to 8 minutes, until cheese is bubbly and golden brown. Using a large metal spatula, carefully transfer your pita pizza to a cutting board and cut into 6 slices with a sharp knife or pizza wheel. Transfer to a plate and serve immediately.

Adapted and used with permission from *There's a Chef in My Soup!*, pg 90

Emeril's CULINARY GARDEN & TEACHING KITCHEN

THREE BEAN SALAD

Kitchen

YIELD: 8 to 10 servings

GRADE 1

Ingredients

- 2 (15 oz.) cans black beans, drained and rinsed
- 2 (15 oz.) cans white beans, drained and rinsed
- 1 (15 oz.) can red kidney beans, drained and rinsed
- 2 poblano or anaheim chiles, roasted, seeded, and chopped
- 2 large tomatoes, seeded and chopped
- 1 red bell pepper, finely chopped
- 1 small red onion, finely chopped
- ½ cup chopped fresh cilantro
- 1 jalapeno pepper, finely chopped (optional)
- ¼ cup red wine vinegar
- juice of 1 lime
- juice of 1 lemon
- ½ cup grapeseed oil
- ¼ cup extra virgin olive oil
- 1 ½ teaspoons salt
- ¼ teaspoon crushed red pepper

Tools

- ❒ measuring cups and spoons
- ❒ strainer
- ❒ chef's knife
- ❒ large mixing bowl
- ❒ can opener
- ❒ cutting board
- ❒ juicer (optional)
- ❒ wooden spoon

Directions

1. Combine all ingredients in a large bowl and toss gently but thoroughly to combine. Allow salad to sit at least 30 minutes at room temperature for the flavors to blend.
2. Refrigerate any leftover salad for up to several days but allow to return to room temperature before serving.

Note:
You can substitute green peppers for the poblano and anaheim chiles to make the recipe less spicy

Adapted and used with permission from *There's a Chef in My Soup!*, pg 52

Emeril's CULINARY GARDEN & TEACHING KITCHEN

YOU-PICK-THE-GREENS-SALAD

WITH 3 SIMPLE DRESSINGS

Kitchen

YIELD: 8 to 10 servings

GRADE 1

Here's a recipe where you get to make all the decisions: what type of lettuce, what type of dressing, whether or not to add vegetables or croutons, and whether to serve the salad in a pretty bowl at the table, or to toss and plate up everything in the kitchen. Just make it up as you go along, remembering to add a little more dressing for each topping.

Ingredients

12 cups assorted salad greens, such as:

- romaine
- bibb
- green leaf
- mesclun
- endive
- iceberg
- red leaf
- watercress
- arugula

Optional Accompaniments

- carrot sticks or grated carrots
- sliced celery
- tomatoes
- thinly sliced onion rings
- peeled and sliced cucumber
- chopped or sliced red or green bell pepper
- croutons
- grated or crumbled cheese

Tools

- ❒ knife
- ❒ garlic press (if preferred)
- ❒ mixing bowls
- ❒ salad spinner or colander
- ❒ salad servers for tossing salad (or large fork and spoon)
- ❒ cutting board,
- ❒ whisk
- ❒ large salad bowl
- ❒ clean dish towel
- ❒ damp towel or plastic wrap

Continued on next page

Adapted and used with permission from *There's a Chef in My Soup!*, pg 64

Directions

1. Remove and discard any wilted, brown or discolored outer leaves from the lettuce.
2. Place the greens on a cutting board and cut off the stems or cores with a knife.
3. Fill a clean kitchen sink with cold water.
4. Separate the lettuce leaves and place in the sinkful of water.
5. Swirl the greens with your hands to remove any dirt or debris.
6. Place the washed greens on a clean dishtowel.
7. In batches, dry the greens in a salad spinner. (If you don't have a salad spinner, simply place the lettuce leaves in a colander and allow them to drain.)
8. Tear the greens with your hands into bite-sized pieces and place in a large mixing bowl or decorative salad bowl. Cover with a damp towel or plastic wrap and refrigerate until ready to serve.
9. Add optional ingredients as desired, toss with dressing and serve immediately.

TANGY VINAIGRETTE DRESSING

Kitchen

YIELD: 1 ¼ cups salad dressing

GRADE 1

Ingredients

- 1 teaspoon Baby Bam
- 1 teaspoon Emeril's Italian Essence (or Italian herb blend)
- 1 ½ teaspoons Dijon mustard
- 1 tablespoon sugar
- ¼ cup champagne or white wine vinegar
- 2 tablespoons finely chopped green onions (tops only)
- ¾ cup canola or vegetable oil

Tools

- ❒ measuring cups and spoons
- ❒ large mixing bowl
- ❒ metal whisk
- ❒ nonreactive container

Directions

1. In a large mixing bowl combine Baby Bam, Emeril's Italian Essence, mustard, sugar, vinegar, and green onions and whisk to combine.
2. While continuing to whisk, slowly drizzle the oil into vinegar mixture, little by little, until thoroughly combined.
3. Serve immediately over salad or transfer to a nonreactive container, cover tightly and refrigerate until ready to use, up to 1 week.

Adapted and used with permission from *Emerils.com*

QUICK AND CREAMY HERB DRESSING

Kitchen

YIELD: 1 ½ cups

GRADE 1

Ingredients

- ½ cup buttermilk
- ½ cup sour cream
- ¼ cup mayonnaise
- ¼ cup minced green onions (green tops only)
- 1 tablespoon minced fresh parsley
- 1/8 teaspoon ground black pepper
- ¾ teaspoon salt
- 1 teaspoon minced garlic
- 2 teaspoons fresh lemon juice
- ½ teaspoon Baby Bam

Contains egg

Tools

- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ knife
- ❒ garlic press (optional)
- ❒ large mixing bowl
- ❒ wire whisk
- ❒ airtight container

Directions

1. Place all the ingredients in a large mixing bowl.
2. Whisk until smooth.
3. Serve immediately over salad, or pour into a container, cover tightly, and refrigerate until needed, up to 1 week.

Adapted and used with permission from *Emerils.com*

Emeril's CULINARY GARDEN & TEACHING KITCHEN

EASY FRENCH DRESSING

Kitchen

YIELD: 1 ¼ cups

GRADE 1

Ingredients

- ½ cup mayonnaise
- ½ cup ketchup
- 1 tablespoon minced yellow onion
- 2 teaspoons white vinegar
- 2 teaspoons sweet paprika
- 1 teaspoon Worcestershire Sauce
- ½ teaspoon minced garlic
- ½ teaspoon Baby Bam

Contains egg

Tools

- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ knife
- ❒ garlic press (optional)
- ❒ large mixing bowl
- ❒ wire whisk
- ❒ airtight container

Directions

1. Place all the ingredients in a large mixing bowl.
2. Whisk until smooth.
3. Serve immediately over salad or pour into a container, cover tightly, and refrigerate until needed, up to 1 week.

Note:
These salad dressings are not only great on top of a green salad as we've suggested, but also work well as dips for veggies and spreads for extra-special sandwiches. Be creative!

Adapted and used with permission from *Emerils.com*

MINTY GREEN PEAS

Kitchen

YIELD: 8 to 10 servings (or 6 cups)

GRADE 1

This is a classic flavor combo that you've just gotta try! Kicked up with a little onion and rolling around in some butter—green peas never had it so good! Kids, this is pretty easy to make, so this is one you can do while your folks are making another dish to go with it, such as meatloaf or pork chops!

Ingredients

- 4 tablespoons unsalted butter
- ½ cup minced yellow onions
- 2 pounds frozen green peas
- 1 cup water
- 1 teaspoon salt
- 2 tablespoons finely chopped fresh mint leaves

Contains dairy

Tools

- ❒ 3- to 4-quart saucepan with a lid
- ❒ measuring cups and spoons
- ❒ wooden spoon
- ❒ cutting board
- ❒ chef's knife
- ❒ large slotted spoon
- ❒ oven mitts or pot holders

Directions

1. Melt the butter in a medium saucepan over medium-high heat.
2. Add the onion and cook, stirring, until soft, about 3 minutes.
3. Add the peas and water and bring to a boil.
4. Reduce the heat to medium-low, cover the saucepan, and simmer until tender, about 4 minutes.
5. Remove from the heat.
6. Add the salt and mint and stir.
7. Using a slotted spoon, transfer the peas to serving plates.
8. Serve hot.

Adapted and used with permission from *There's a Chef in My Family!*, pg 172

Emeril's CULINARY GARDEN & TEACHING KITCHEN

STRAWBERRY-RHUBARB IRISH CRUMBLE *Kitchen*

YIELD: 6 to 8 Servings

GRADE 1

Although fruit crisps and crumbles are made in several different countries, this one has a crunchy oatmeal topping and uses rhubarb, a vegetable often seen in Irish cooking. Fresh rhubarb peaks in late spring and early summer, which is perfect because it goes with the fresh strawberries that are harvested at the same time. If you're looking to make this dessert later in the year, try substituting frozen, sliced rhubarb.

Ingredients

- 6 tablespoons cold unsalted butter, diced, plus 2 teaspoons for greasing the pan
- 5 cups strawberries, washed, hulled, and quartered
- 3 cups sliced rhubarb, about 1/3 inch thick (fresh or frozen)
- ½ cup granulated sugar
- ¼ cup cornstarch
- 1 teaspoon fresh lemon juice
- ¾ cup all-purpose flour
- ¾ cup old-fashioned rolled oats
- 2/3 cup packed light brown sugar
- Pinch of salt
- Vanilla ice cream (optional)

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ paring knife
- ❒ 11- by 7-inch baking dish
- ❒ wooden spoon
- ❒ cutting board
- ❒ juicer (optional)
- ❒ 2 medium mixing bowls
- ❒ oven mitts or pot holders

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Adapted and used with permission from *There's a Chef in My World!*, pg 176

Directions

1. Position rack in center of oven and preheat the oven to 375 degrees F. Lightly grease an 11- by 7-inch baking dish with 2 teaspoons of the butter and set aside.
2. In a medium mixing bowl, combine the strawberries, rhubarb, granulated sugar, cornstarch, and lemon juice. Toss to coat. Pour the strawberry-rhubarb mixture into the prepared baking dish.
3. In a second medium mixing bowl, add the flour, oats, light brown sugar, and salt, stirring to combine. Add the diced butter to the flour mixture and, using your fingers, work the mixture until it resembles coarse crumbs. Sprinkle the crumb mixture evenly on top of the strawberry mixture.
4. Place the baking dish in the oven and bake for 40 minutes, until the filling is bubbly and the topping is golden brown.
5. Using oven mitts or pot holders, remove the crumble from the oven and allow to cool for 10 minutes before serving.
6. Serve warm with vanilla ice cream, if desired.

Substitutions

1. You can substitute berries (blackberries, blueberries or raspberries) or stone fruit (peaches and/or plums) for rhubarb. Frozen rhubarb also works well.
2. If using only berries, the liquid that the fruits exude while cooking might change which means that the crumble might be wetter and may require more starch to bind the juices.

SUPER-STUFFED BURRITOS

Kitchen

YIELD: 10 (8-inch) burritos

GRADE 1

Burrito means "little donkey" in Spanish, and it is a favorite Mexican dish, especially in the U.S. These small but super-packed burritos are fantastic—with rice and beans, cheese, salsa and sour cream—but feel free to kick yours up by adding any other favorite ingredients. Leftover roast chicken or meat, cut into bite size pieces, make a wonderful addition, as do roast veggies or cooked spinach. Or, try a dollop of guacamole or cubed avocado. Make it your way!

Ingredients

- 2 tablespoons vegetable oil
- ½ cup chopped onion
- ¼ cup chopped bell pepper
- 1 teaspoon minced garlic
- ¾ teaspoon salt
- ¼ teaspoon ground cumin
- ¼ teaspoon dried oregano
- ½ cup long-grain white rice
- 1 cup water
- 1 (15 ounce) can black beans, drained and rinsed
- 10 (8-inch) flour tortillas
- 1 to 1 ½ cups grated Monterey Jack, Pepper Jack or Cheddar cheese
- 2 cups salsa
- 1 ½ cups sour cream
- ¼ cup chopped cilantro, optional
- Bottled hot sauce, optional

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ wooden spoon
- ❒ strainer
- ❒ box grater
- ❒ cutting board
- ❒ medium saucepan with lid
- ❒ can opener
- ❒ spoon
- ❒ oven mitts or pot holders

Adapted and used with permission from *There's a Chef in My World!*, pg 82

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Directions

1. In a medium saucepan heat the vegetable oil over medium-high heat until hot. Add the chopped onion and bell pepper and cook until the vegetables are soft, about 4 minutes. Add the garlic, salt, cumin, and oregano and cook for 1 minute, stirring constantly. Add the rice and cook, stirring, until fragrant, about 2 minutes.
2. Add the water and drained beans and bring to a boil. Stir well, reduce the heat to low, and cover the saucepan. Cook for 20 minutes, undisturbed, until the rice is tender and has absorbed all of the liquid. Remove from the heat and let stand, undisturbed, for 5 minutes before serving.
3. Heat the flour tortillas according to package directions.
4. Divide the cooked rice and bean mixture evenly among the tortillas, placing a line down the center of each. Top each mound of rice with some of the grated cheese and roll the bottom side of the tortilla over the filling. Fold both of the side edges up over the filling, then roll the tortilla to form a cylinder shape.
5. Spoon 3 tablespoons of salsa over the top of each burrito and then top each with 2 tablespoons of the sour cream. Garnish each burrito with some of the chopped cilantro and serve with hot sauce, if desired.

ANTS ON A LOG

Kitchen

YIELD: 40 pieces

GRADE 2

Ingredients

- 1 bunch celery
- 1 (16-ounce) jar natural, sugar-free peanut butter
- 1 cup raisins

Contains peanuts

Directions

1. Clean celery and then cut into two-inch pieces. Fill groove of celery with a generous teaspoon of peanut butter. Place three raisins at the beginning, middle, and end of the peanut butter-filled celery piece.

Adapted and used with permission from *Emerils.com*

Emeril's CULINARY GARDEN & TEACHING KITCHEN

MAKE-YOURSELF-SOME APPLESAUCE

Kitchen

YIELD: 6 servings (or 2½ cups)

GRADE 2

I like my applesauce sweet, but not too sweet. Depending upon your taste, you might find this just right. But hey, if it needs more sugar for your liking, go ahead and add more, a little bit at a time. I use red apples to make this applesauce and I don't peel them first, so the applesauce ends up a nice pink color. You probably won't be able to eat all 2½ cups the same day you make this, so transfer your applesauce to a large, clean jar where it will keep in the refrigerator for up to one week.

Ingredients

- 6 Rome apples, cored, seeded, and cut into eighths
- 1 cup water
- 1 tablespoon lemon juice
- ¾ teaspoon ground cinnamon
- ¼ cup sugar

Tools

- ❒ apple corer
- ❒ cutting board
- ❒ large wooden or metal spoon
- ❒ coarse mesh strainer
- ❒ measuring cup and measuring spoons
- ❒ knife
- ❒ heavy 3-quart saucepan
- ❒ potato masher
- ❒ metal ladle,
- ❒ rubber spatula

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Adapted and used with permission from *There's a Chef in My Soup!*, pg 212

Directions

1. Place an apple on a cutting board. Hold the apple on the board with one hand, and carefully insert an apple corer over the stem into the center. Push down on the corer to remove the core, stem, and seeds. Repeat with the remaining apples.
2. Cut one apple in half lengthwise. Place the cut halves flat on the cutting board, and cut each half into quarters lengthwise. Place the apple pieces in a heavy 3-quart saucepan. Repeat with the remaining apples.
3. Add the remaining ingredients to the apples and bring to a boil over high heat, stirring frequently.
4. Reduce the heat to medium-low, cover, and simmer, stirring occasionally, until the apples become very soft and begin to break apart.
5. Remove the pan from the heat and mash the apples with a potato masher until smooth.
6. Spoon the apples into a coarse metal strainer set over a large bowl.
7. Using a heavy metal ladle or spoon, push the apples against the strainer to push out as much apple puree as possible. Discard the peels.
8. Transfer the applesauce to the refrigerator to cool, stirring frequently. Once cooled, serve the applesauce or cover tightly and refrigerate for up to one week.

Caution

Be careful mashing the hot apples with the potato masher.

Note:
If you don't have an apple-corer, don't worry—it's easy to core halved apples with either a paring knife or a melon-baller. To use a paring knife, carefully work the tip of the knife in a circular motion around the seeds, holding the knife at an angle so that you end up removing a cone-shaped piece of apple that contains all of the seeds. Or, even easier, simply use a melon baller to scoop out the center, seeded portion of the apple half. Easy as pie!

EAT-A-PITA PIZZAS

Kitchen

YIELD: 10 servings

GRADE 2

When you're not in the mood or don't have the time to make your own pizza dough, try making some Pita Pizzas for a quick snack or dinner. Feel free to be creative and kick up yours with anything else you might have around, such as thinly sliced mushrooms, pepperoni slices, or even two or three different cheeses. Have fun—experiment—it's up to you! Make your pita pizza as unique as you are!

Ingredients

- 10 large pita breads
- 2 ½ cups Best Basic Red Sauce, recipe follows, or store-bought pizza sauce
- 2 ½ cups grated Mozzarella cheese, or Monterey Jack cheese (12 ounces)

Contains dairy

Tools

- ❒ measuring cup and spoons
- ❒ oven mitts or potholders
- ❒ sharp knife or pizza wheel
- ❒ two baking pans
- ❒ metal spatula

Directions

1. Preheat the oven to 400 degrees F and make sure the oven rack is in the lower third of the oven.
2. Lay the pita bread rounds onto large baking sheets.
3. Spread ¼ cup of Best Basic Red Sauce on each round, and evenly spread with the back of a spoon. Top each with ¼ cup of grated cheese.
4. Bake until the cheese is bubbly and golden brown, about 8 minutes.
5. Remove from the oven.
6. Cut each pita pizza into 6 slices each with a sharp knife or pizza wheel, transfer to a plate using a metal spatula and serve immediately.

Pita Pizza For One:
For each pita bread, you'll need just ¼ cup of the Basic Red Sauce (recipe follows) or your favorite store-bought pizza sauce, and ¼ cup of your favorite grated cheese. Preheat a toaster oven to 400 degrees F and assemble your pita pizza as directed in recipe instructions. Carefully place your pita pizza in the toaster oven and cook for 6 to 8 minutes, until cheese is bubbly and golden brown. Using a large metal spatula, carefully transfer your pita pizza to a cutting board and cut into 6 slices with a sharp knife or pizza wheel. Transfer to a plate and serve immediately.

Adapted and used with permission from *There's a Chef in My Soup!*, pg 90

MEXICAN BROILED CORN

Kitchen

YIELD: 10 servings

GRADE 2

This is not your average corn on the cob. In Mexico, they like to kick it up a notch, by adding flavors of lime juice, chilies, cheese, and even sour cream or mayonnaise! I like to use queso fresco, a white, crumbly type of cheese from Mexico, but if you can't find this cheese, Parmesan cheese works great too. Once you try this corn, you might never go back to plain corn on the cob again.

Ingredients

- 10 ears fresh sweet corn, husks and silk removed
- 3 limes, halved
- ¾ cup sour cream
- 3 tablespoons milk
- 4 tablespoons butter, melted
- 1 tablespoon plus 2 teaspoons chili powder
- 2 ½ tablespoons kosher salt
- 1 cup shredded queso añejo, queso fresco, or Parmesan cheese

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ large stockpot
- ❒ dry kitchen towel
- ❒ small baking sheet
- ❒ oven mitts or potholders
- ❒ cheese grater (optional)
- ❒ tongs
- ❒ small bowl
- ❒ pastry brush

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Adapted and used with permission from *There's a Chef in My World!*, pg 136

Directions

1. Fill a large stockpot with water and bring to a boil over high heat.
2. Place the corn and 2 lime halves, into the boiling water, and boil corn for 6 to 8 minutes, or until crisp-tender. Use tongs to remove corn from the water and place on a clean, dry kitchen towel to dry.
3. In a small bowl combine the sour cream and milk and set aside.
4. Place the corn on a small baking sheet and brush with melted butter.
5. Arrange oven rack 8 inches from the broil unit in the oven, and adjust the oven settings to broil (see **Caution**).
6. Using oven mitts or potholders, place the baking sheet in the oven and broil for 8 to 10 minutes, taking corn out and brushing with melted butter every 2 to 3 minutes. Watch the corn carefully while it is in the oven to prevent excessive browning. Corn should be golden brown when ready.
7. Using oven mitts or potholders remove baking sheet from the oven and squeeze remaining lime halves over the warm corn.
8. Generously brush the corn with the sour cream mixture and sprinkle with chili powder, salt and shredded cheese. Serve warm.

Caution

If your broiler is separate from your oven, please have an adult show you how your broiler works.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

EMERIL'S HERB VINAIGRETTE

Kitchen

YIELD: 1 cup

GRADE 2

Ingredients

- ¼ cup herb-infused vinegar (such as tarragon or basil), or white wine vinegar
- 2 tablespoons minced shallots
- 1 tablespoon minced garlic
- ¼ cup assorted chopped soft fresh herbs (such as basil, tarragon, cilantro, parsley, oregano, or whatever herbs you prefer)
- 1 teaspoon salt
- 15 turns freshly ground black pepper
- ¾ cup olive oil

Directions

1. Combine the vinegar, shallots, garlic, herbs, salt, and pepper in a bowl.
2. Slowly whisk in the oil and continue whisking until thoroughly emulsified.
3. Store, refrigerated, in an airtight nonreactive container for up to 3 days. Whisk before serving.

Adapted and used with permission from *Emerils.com*

MAPLE-BUTTERY CORN MUFFINS

Kitchen

YIELD: 12 muffins, 1/2 cup of Maple Butter

GRADE 2

I grew up in Massachusetts where maple syrup is used in cooking all kinds of things—from breakfast cereals to baked beans to desserts—you name it. It adds an interesting flavor and I especially like to add it to baked goods. While you might not think that corn muffins would make a good breakfast treat, just wait 'til you try these! And once you top them with the Maple Butter...man, oh man, now you're talking!

Ingredients

For the Muffins:

- 1 ¼ cups all-purpose flour
- ½ cup yellow cornmeal
- 2 teaspoons baking powder
- ½ teaspoon baking soda
- ½ teaspoon salt
- 2 large eggs
- ½ cup whole milk
- ½ cup sour cream
- ¼ cup maple syrup
- ¼ cup light brown sugar
- 3 tablespoons melted unsalted butter

Contains dairy

For the Maple Butter:

- 7 tablespoons unsalted butter, softened, at room temperature
- 2 tablespoons maple syrup

Contains dairy

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Adapted and used with permission from *There's a Chef in My Soup!*, pg 40

Tools

For the Muffins:

- ❒ 12-cup muffin tin
- ❒ medium mixing bowl
- ❒ measuring spoons
- ❒ large mixing bowl
- ❒ small saucepan
- ❒ 12 paper baking cup liners
- ❒ measuring cups
- ❒ whisk
- ❒ oven mitts or potholders
- ❒ wire rack

For the Maple Butter:

- ❒ small bowl
- ❒ knife
- ❒ measuring spoons
- ❒ small whisk or fork

Directions

For the Muffins:

1. Preheat the oven to 350 degrees F and make sure the oven rack is in the center position.
2. Line a 12-muffin tin with 12 paper baking cup liners.
3. Place the flour, cornmeal, and salt in a medium mixing bowl, and stir to combine.
4. In a large mixing bowl, combine the eggs, milk, sour cream, maple syrup, sugar, and melted butter and whisk until smooth.
5. Add the dry ingredients to the egg mixture, and whisk just until incorporated, being careful not to over mix.
6. Divide the batter evenly between the muffin cups.
7. Bake in the oven until golden brown, about 18 to 20 minutes.
8. Remove from the oven and let cool in the muffin tin for 5 minutes. Serve warm with Maple Butter.

For the Maple Butter:

1. In a small mixing bowl, combine the butter and syrup using a small whisk or fork.
1. Serve with the Maple-Corn Muffins, or wrap tightly with plastic wrap and keep refrigerated for up to 2 weeks.

POWER-PACKED SPINACH SALAD

Kitchen

YIELD: 8 to 10 servings. 1 ¾ cups dressing

GRADE 2

Spinach and bacon—talk about a classic combination. And it also happens to be packed with that good-for-you protein! To make things easy, you can cook the bacon in the oven—no splatters to clean up and you can be doing other things at the same time. Here's how I'd do it: While the bacon is cooking, make the salad and the dressing. This way, once the bacon is done and cooled, you're ready to go!

Ingredients

- 10 slices bacon
- 12 cups fresh spinach, rinsed, stemmed and patted dry
- 2 cups sliced white button mushrooms, wiped clean, trimmed
- 1 cup thinly sliced red onion
- 3 medium tomatoes, cored and cut into wedges (optional)
- 4 hard-boiled eggs, peeled and thinly sliced (optional)

Contains egg

For the Dressing:

- ½ cup honey
- ¼ cup Dijon mustard
- 1 cup vegetable oil
- 2 tablespoons fresh lemon juice
- ½ teaspoon ground white pepper
- ¼ teaspoon salt

Tools

For the Salad:

- ❒ baking sheet
- ❒ oven mitts or pot holders
- ❒ chef's knife
- ❒ measuring cups and spoons
- ❒ large mixing bowl
- ❒ wooden spoon or two forks
- ❒ parchment paper
- ❒ cutting board

For the Dressing:

- ❒ whisk
- ❒ medium mixing bowl
- ❒ measuring cups and spoons:

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Directions

For the Salad:

1. Position rack in center of oven and preheat the oven to 375 degrees F.
2. Line a baking sheet with parchment paper and arrange the bacon strips on it. Bake until brown and crispy, about 20 to 25 minutes.
3. Using oven mitts or pot holders, remove the bacon from the oven and let cool, about 15 minutes. Crumble into bite-size pieces.
4. Combine the spinach, bacon, mushrooms and onion in a large mixing bowl and toss.
5. Divide the spinach mixture among serving plates.
6. Garnish with tomato wedges and/or sliced hard-boiled eggs if desired. Drizzle with the dressing and serve.

For the Dressing:

1. Combine the honey and mustard in a medium mixing bowl and whisk to blend.
2. Slowly add the oil in a steady stream, whisking until blended and smooth.
3. Add the lemon juice, white pepper and salt and whisk to blend.

GO NUTS FOR BANANA BREAD

Kitchen

YIELD: 8 to 10 servings (or 1 loaf)

GRADE 2

Don't be alarmed when your banana bread splits open on top while it's baking; this is normal and it's supposed to happen.

This is a great way to use those really ripe bananas that no one wants to eat! The riper the bananas, the sweeter and better the banana bread will be. This bread makes great toast when spread with a little butter.
Or, for a kicked up sandwich, spread a thin slice of banana bread with some softened cream cheese, and top with another thin slice of bread—yum! And if you're into raisins instead of nuts, go ahead and substitute one cup of raisins for the walnuts called for here.

Ingredients

- 3 ripe bananas
- 2 eggs
- 1 cup packed light brown sugar
- ¾ cup vegetable oil
- ½ cup sour cream
- ¾ teaspoon ground cinnamon
- 1 teaspoon baking soda
- 1 teaspoon baking powder
- 1 teaspoon vanilla extract
- ½ teaspoon salt
- ¾ cup chopped walnut pieces
- 1 ¾ cups all purpose flour
- 1 ½ teaspoons vegetable shortening or unsalted butter

Contains dairy, ehh and tree nuts

Tools

- ❒ small mixing bowl
- ❒ knife
- ❒ large mixing bowl
- ❒ 6- by 9-inch loaf pan
- ❒ toothpick
- ❒ fork
- ❒ chopping board
- ❒ whisk
- ❒ oven mitts or potholders

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Adapted and used with permission from *There's a Chef in My Soup!*, pg 38

Directions

1. Preheat the oven to 350 degrees F. Make sure the oven rack is in the center position.
2. Peel the bananas and place in a small mixing bowl. Mash with the back of a fork until there are no big lumps remaining.
3. In a large bowl, combine the eggs, sugar, oil, and sour cream and whisk until smooth.
4. Add the cinnamon, baking soda, baking powder, vanilla extract, salt, mashed bananas and walnuts to the egg mixture, and whisk to combine.
5. Add the flour and stir until just combined. Do not overmix!
6. Lightly grease a 6- by 9-inch loaf pan with the vegetable shortening.
7. Pour the batter into the loaf pan and bake until golden brown and risen, about 1 hour and ten minutes.
8. Remove from the oven and let sit for 10 minutes in the pan. Turn out onto a wire rack to finish cooling before serving.

Caution

Make sure you use pot holders when turning out the bread!

Note:
To make sure your bread is done, it's always a good idea to perform the toothpick trick: insert a toothpick into the center of the loaf toward the end of the baking time—if the toothpick comes out clean, it's done. If bits of batter stick to the toothpick, the bread needs a bit more baking time.

INDIAN NAAN BREAD

Kitchen

YIELD: 12 (5- to 6-inch) flatbreads

GRADE 2

This bread from India is similar to pita bread. If you haven't tried it before, I bet you'll like it! It's super-easy to make, too, so whip up a batch next time you're having friends over for a party. Cut it into strips or wedges and serve it with your favorite dip or spread.

Ingredients

- 2 teaspoons active dry yeast
- 1 teaspoon sugar
- 1 cup warm water, about 110 degrees F
- 2 ½ cups all purpose flour, plus more as needed while kneading
- 1 teaspoon salt
- ½ cup plus 2 teaspoons clarified butter (still warm)

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ instant-read thermometer
- ❒ sifter
- ❒ medium mixing bowl
- ❒ damp kitchen towel
- ❒ rolling pin
- ❒ glass measuring cup
- ❒ spoon
- ❒ large mixing bowl
- ❒ plastic wrap or clean
- ❒ two large baking sheets,
- ❒ oven mitts or pot holders

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Adapted and used with permission from *There's a Chef in My World!*, pg 156

Directions

1. In a glass measuring cup, combine the yeast and sugar. Add the water and stir well. Let rest until foamy, about 5 minutes.
2. Sift together the flour and salt into a large mixing bowl. Make a well in the center of the flour with clean hands and pour the yeast mixture and ½ cup of the clarified butter into the center. Mix together with your fingers until a smooth dough forms. The dough should be slightly sticky. You can add a small amount of additional flour if needed.
3. Transfer dough to a lightly floured surface and knead for 3 minutes.
4. Oil a medium mixing bowl with the remaining 2 teaspoons of butter and place the dough in the bowl, turning to coat. Cover the bowl with plastic wrap or a damp kitchen towel and let rest in a warm, draft free space until doubled in size, about 1 hour.
5. Preheat the oven to 400 degrees F and lightly grease two large baking sheets.
6. Divide the dough into 12 equal pieces and transfer to a lightly floured work surface. Using a lightly floured rolling pin, gently roll each portion of dough into a circle about 5 or 6 inches in diameter.
7. Transfer the dough circles to the prepared baking sheets and bake until just golden brown and puffed, 12 to 15 minutes.
8. Serve immediately.

FRESH MELON KEBOBS

Kitchen

YIELD: 10 to 12 servings

GRADE 3

Ingredients

- 1 small watermelon, halved and seeded
- 1 honeydew melon, halved and seeded
- 1 cantaloupe, halved and seeded
- juice of 1 to 2 limes

Tools

- ❒ chef's knife
- ❒ cutting board
- ❒ melon baller
- ❒ juicer
- ❒ reamer
- ❒ bamboo skewers
- ❒ serving tray or baking sheet

Directions

1. Using a melon baller, scoop out each variety of fruit and alternate balls on short bamboo skewers. Squeeze fresh lime juice over fruit and chill until serving time.
2. Serve cold.

Adapted and used with permission from *Emerils.com*

SWEDISH CUCUMBER SALAD

Kitchen

YIELD: 8 to 10 servings

GRADE 3

This refreshing salad is the perfect accompaniment to the Swedish Meatballs. As a matter of fact, in Sweden, you hardly ever see meatballs served without some version of a cucumber salad, along with boiled new potatoes and lingonberries! But try this salad next time you barbecue for a cool taste of summer that goes with just about anything that comes off the grill!

Ingredients

- 4 large European "seedless" cucumbers, about 1 pound each, or 4 pounds regular cucumbers
- 2 teaspoons salt
- ½ cup white vinegar
- 2 ½ tablespoons cider vinegar
- ¾ cup sugar
- 1 ½ tablespoons chopped fresh dill

Tools

- ❒ vegetable peeler
- ❒ small spoon or melon baller
- ❒ cutting board
- ❒ two medium non-reactive mixing bowls
- ❒ paring knife
- ❒ chef's knife
- ❒ colander
- ❒ spoon

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Adapted and used with permission from *There's a Chef in My World!*, pg 62

Directions

1. Peel the cucumbers and cut in half lengthwise. Using a small spoon (teaspoon) or a small melon baller, scoop any seeds as well as the watery center from each piece, forming a shallow groove down the center lengthwise.
2. Using a sharp knife, slice the cucumbers crosswise as thinly as possible, ideally about 1/8-inch thick.
3. Place the cucumbers in a colander and sprinkle with the salt. Using your hands, toss to combine the cucumbers with the salt and allow to stand for at least one hour and up to two hours.
4. Using your hands, squeeze handfuls of cucumbers to release any excess liquid and transfer to a medium non-reactive bowl.
5. In another non-reactive mixing bowl, combine the white vinegar, cider vinegar, and sugar, and stir until the sugar is completely dissolved. Pour the vinegar mixture over the cucumbers and add the chopped fresh dill. Stir to thoroughly combine and serve, or refrigerate up to overnight and serve cold.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

JILLIE'S PESTO-CHEESE DIP

Kitchen

YIELD: 6 to 10 servings (or 1 cup)

GRADE 3

My daughter Jillie came up with this recipe a couple of years ago, and talk about something totally awesome! And easy, too! Try it—you'll make your family and friends very, very happy! In case you don't already know, pesto is an Italian sauce traditionally made with a mortar and pestle, but it can be whipped up in no time at all in a blender. In Italian cooking it's most commonly tossed with pasta, but you'll find it goes really well with lots of things. Try adding a little to potato salad, drizzled over sliced tomatoes for a fresh summer salad, or, as we do here, on top of cream cheese for a tasty snack.

Ingredients

For the Basil Pesto

- 2 tablespoons lightly toasted walnut pieces
- 1 cup tightly packed basil leaves
- 1 teaspoon minced garlic
- ¼ cup grated Parmesan cheese
- ½ cup olive oil

Contains dairy and tree nuts

For the Pesto-Cheese Dip

- 8 ounces cream cheese
- ¼ cup Basil Pesto, recipe above
- crackers, bagel chips or tortilla chips for serving

Contains dairy

Tools

For the Basil Pesto

- ❒ small baking sheet or pie pan
- ❒ grater
- ❒ blender
- ❒ measuring cups and spoons
- ❒ air-tight container
- ❒ oven mitts or potholders

For the Pesto-Cheese Dip

- ❒ measuring cups and spoons
- ❒ blender
- ❒ measuring cups and spoons
- ❒ microwave-safe plate
- ❒ microwave, spoon

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Adapted and used with permission from *There's a Chef in My Soup!*, pg 132

Directions

For the Basil Pesto

1. Combine all of the ingredients in a blender and process on high speed until smooth, 1 to 2 minutes.
2. Pour into an airtight container and refrigerate until ready to use, up to 3 days.

For the Pesto-Cheese Dip

1. Place the cream cheese on a decorative, microwave-safe plate, and microwave uncovered on high speed until beginning to slightly melt, about 15 seconds.
2. Remove from the oven and spoon the Basil Pesto evenly over the cream cheese.
3. Return to the microwave and cook uncovered on high speed until the Pesto is just warm but still thick, 5 to 10 seconds.
4. Remove from the microwave and serve with crackers or chips of choice.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

IT'S A GOOD MORNING MUFFINS

Kitchen

YIELD: 12 muffins

GRADE 3

It's always a good morning when muffins are on your family's breakfast table. But with these muffins, oh yeah, baby! Not only are they super delicious, but they're loaded with lots of good-for-you things: carrots, parsnips, apples, pecans, and raisins. Just try them! I bet a dozen muffins won't last till lunchtime in your house! If you do have extras, they make for great snacks and lunchbox treats.

Ingredients

- 2 teaspoons butter
- 2 cups all-purpose flour
- 1 cup sugar
- 2 teaspoons baking soda
- 2 teaspoons ground cinnamon
- ½ teaspoon salt
- 1 cup grated carrots
- 1 cup grated parsnips
- ¼ cup golden raisins
- ¼ cup dark raisins
- ½ cup chopped pecans
- ½ cup shredded coconut
- 1 Granny Smith apple, peeled, cored and chopped
- 2 large eggs
- 1 cup vegetable oil
- 2 teaspoons vanilla extract

Contains dairy, egg and tree nuts

Tools

- ❒ muffin pan
- ❒ measuring spoons and cups
- ❒ two medium mixing bowls
- ❒ whisk
- ❒ wire cooling rack
- ❒ sifter
- ❒ grater
- ❒ wooden spoon
- ❒ oven mitt

Adapted and used with permission from *There's a Chef in My Family!*, pg 28

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Directions

1. Preheat the oven to 350 degrees F. Grease the muffin tin with the butter and set aside.
2. Sift together the flour, sugar, baking soda, cinnamon and salt in a mixing bowl. Stir in the carrots, parsnips, raisins, pecans, coconut and apples.
3. In another bowl, combine the eggs, vegetable oil and vanilla and whisk until smooth.
4. Add the wet mixture to the flour mixture and stir until the mixture is just blended.
5. Spoon equal amounts of the batter into the muffin cups.
6. Bake until they spring back to the touch and are golden brown, about 35 minutes.
7. Let cool in the tins on a rack for 5 minutes, then turn out to cool completely.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

OLD-FASHIONED PRETZELS

Kitchen

YIELD: 16 pretzels

GRADE 3

If it's too difficult to make the pretzel shapes, try making simple twists. They taste just as good

I shape my pretzels in the traditional sort of bow shape, but you can make them into any shape you like. You can make twists, circles, or whatever strikes your fancy. If you're into dip, they make great dippers, too!

Ingredients

- 1 ½ cups whole milk
- 3 tablespoons vegetable oil
- 1 (¼-ounce) package active dry yeast
- 2 tablespoons light brown sugar
- 4 cups all-purpose flour
- 1 teaspoon salt
- 1 large egg
- 1 ½ teaspoons kosher salt

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ instant-read thermometer,
- ❒ large wooden spoon or rubber spatula
- ❒ small mixing bowl
- ❒ ruler
- ❒ pastry brush
- ❒ turner
- ❒ 1 quart saucepan
- ❒ 2 large mixing bowls,
- ❒ standing electric mixer fitted with a dough hook (optional)
- ❒ rolling pin
- ❒ baking sheet
- ❒ oven mitts or pot holders
- ❒ wire rack

Directions

1. Place the milk in a small saucepan. Heat over medium-low heat until warm, about 110 degrees F on an instant-read thermometer. Remove from the heat.
2. Combine 1 tablespoon of the oil with the yeast and sugar in a large mixing bowl.
3. Pour in the warm milk and stir with a large wooden spoon or rubber spatula until the yeast and sugar are dissolved. After a few minutes you should see bubbles appear on the surface of the mixture—this will let you know that the yeast is working. Let rest until slightly thickened and foamy, about 5 minutes.

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4. Add the flour and the salt to the yeast mixture, stirring well with a large wooden spoon or rubber spatula until all the flour is mixed in.
5. Place the dough on an unfloured work surface and knead until smooth, about 3 to 5 minutes. (Or, you can mix the dough in a standing electric mixer fitted with a dough hook.)
6. Grease a large mixing bowl with the remaining 2 tablespoons of oil, place the dough in the bowl and turn to coat lightly with oil.
7. Cover with plastic wrap and let stand in a warm, draft-free place until risen and doubled in size, about 2 hours.
8. Make sure that the oven rack is in the center position and preheat the oven to 425 degrees F.
9. Beat the egg in a small mixing bowl and set aside.
10. Remove the dough from the bowl and use a rolling pin to roll it out on an unfloured surface into a 12- by 10-inch rectangle. It's good to measure with a ruler.
11. Cut the dough in half both vertically and horizontally, so that you end up with 4 rectangles of equal size. Repeat this process with each of these 4 pieces, and you'll end up with 16 equal-size pieces of dough.
12. Roll one piece between your hands and the surface to form a long, thin roll (like a snake), about ½-inch in diameter and 14-inches long (see **Note**).
13. Bring the ends up to form a U-shape and cross one end over the other at the top. Bring the ends down and across each other as though making a bow, and press down on the ends to seal.
14. Place the formed pretzel on an ungreased baking sheet and repeat with the remaining pieces of dough, keeping the pretzels at least 1-inch apart.
15. With a pastry brush, paint each pretzel with the beaten egg, and sprinkle lightly with the kosher salt.
16. Bake until golden brown, about 20 minutes.
17. Using oven mitts or pot holders, remove the baking sheet from the oven and transfer the pretzels with a turner to wire racks to cool.
18. Serve warm or at room temperature.

Caution

Careful cutting the dough!

Note:
If the dough becomes too dry to work with and will not stretch, wet your hands slightly and then try rolling it again.)

BISCUITS WITH BERRIES

Kitchen

YIELD: 8 (3-inch) or 10 to 12 (2½-inch) biscuits

GRADE 3

My friends! These biscuits are truly the real deal! Made totally from scratch, these will make you stop and think next time you consider using store-bought biscuits. Cake flour makes them extra tender, and heavy cream makes them super moist and delicious. Remember to go easy when mixing the dough or your biscuits will be tough and chewy instead of light and airy.

Ingredients

For the Biscuits:

- 1 ¼ cups self-rising flour
- ¾ cup cake flour
- 1 tablespoon sugar
- ¾ teaspoon baking powder
- ½ teaspoon salt
- 1/8 teaspoon baking soda
- 4 tablespoons (½ stick) cold unsalted butter, plus 2 tablespoons melted butter
- 1 ¼ cups heavy cream
- ¼ cup all-purpose flour

Contains dairy

For the Berries:

- 6 cups mixed fresh berries, rinsed (such as strawberries, blueberries and raspberries) halved if necessary
- 6 tablespoons sugar

For the Whipped Cream:

- ¾ cup heavy cream, well chilled
- 2 tablespoons confectioners' sugar
- ½ teaspoon vanilla extract

Contains dairy

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Tools

- ❒ measuring cups and spoons
- ❒ sifter
- ❒ rubber spatula (optional)
- ❒ baking sheet
- ❒ pastry brush
- ❒ 2 large mixing bowls
- ❒ medium mixing bowl
- ❒ pastry cutter (optional)
- ❒ 3-inch (or smaller) cookie cutter
- ❒ small saucepan
- ❒ oven mitts or pot holders
- ❒ electric mixer

Directions

1. Position rack in center of oven and preheat the oven to 475 degrees F.
2. Sift the self-rising flour, cake flour, sugar, baking powder, salt, and baking soda into a medium mixing bowl.
3. Using your fingers or a pastry cutter, work the cold butter into the flour until there are no butter pieces larger than a pea.
4. Add the heavy cream to the flour mixture and, using your hands or a rubber spatula, stir just until the cream and flour come together to form a dough. Do not overmix!
5. Sprinkle some of the all-purpose flour on a flat surface and place the dough on top of the flour. Using your hands, press the dough into a ½-inch thick disk about 8 inches in diameter.
6. Using a biscuit cutter dipped in flour, cut the dough into circles. Be sure to press straight downward when cutting the dough—a twisting motion will prevent the dough from rising. If you don't have a cutter, you can also use the rim of a sturdy glass or bowl. You can gather the scraps of dough and re-form them to make more biscuits. Simply gather the scrap pieces together and press them to re-form into a ½-inch thick disk, then cut as many additional biscuits as possible from the re-formed dough.
7. Place the biscuits on a small baking sheet and use a pastry brush to brush the tops with the melted butter.
8. Bake in the oven for 8 to 12 minutes, or until golden brown.
9. Using oven mitts or pot holders, remove the biscuits from the oven and allow to cool briefly and serve while still warm.

Continued on next page

10. While the biscuits are baking, make the berry topping: Combine the berries and sugar in a large mixing bowl and toss to combine. The berries will give up some of their juice as they sit. This is called macerating.
11. Make the whipped cream: Place a mixing bowl and the beaters from your electric mixer in the freezer or refrigerator until well chilled, about 15 minutes.
12. Combine the heavy cream, confectioners' sugar, and vanilla extract in the chilled bowl.
13. With an electric mixer on low speed, begin beating the cream, gradually increasing the speed to high as cream thickens. (Do this slowly, or the cream will splatter all over!)
14. Beat until the cream forms soft peaks. Test to see if it is ready by turning off the mixer and lifting the beaters out of the cream—if the cream makes soft peaks that topple over slightly, then it's done. Be careful not to overwhip, or the cream will separate and begin to taste like butter.
15. Serve immediately or cover with plastic wrap and refrigerate for up to 2 hours.
16. To serve the biscuits, cut each biscuit in half horizontally and spoon some of the berries (with juices) over the bottom portion. Top with a dollop of whipped cream and then place the top half of the biscuit on top. Enjoy!

SESAME PEANUT NOODLE SALAD

Kitchen

YIELD: 6 to 8 servings

GRADE 3

This Chinese side dish makes a great accompaniment to stir fried chicken or pork or tastes great on its own. It's important to toss the spaghetti with the remaining peanut sauce just before serving, so the noodles won't soak up too much of the sauce. You can let the noodles chill in the refrigerator overnight before you toss with the second half of the dressing.

Ingredients

- 1 pound spaghetti
- 4 tablespoons peanut oil, divided
- ½ cup creamy peanut butter
- ½ cup soy sauce
- 1 tablespoon toasted sesame oil
- ¼ cup light brown sugar
- 1 tablespoon minced fresh ginger
- 2 to 3 pinches crushed red pepper
- ½ cup diagonally sliced green onion tops
- ½ cup chopped unsalted peanuts

Contains peanuts and soy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ medium soup pot or dutch oven
- ❒ colander
- ❒ medium mixing bowl
- ❒ tongs
- ❒ cutting board
- ❒ vegetable peeler
- ❒ oven mitts or pot holders
- ❒ large mixing bowl
- ❒ whisk
- ❒ plastic wrap

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Adapted and used with permission from *There's a Chef in My World!*, pg 64

Directions

1. Fill a medium soup pot or Dutch oven with water and bring to a boil over high heat.
2. Boil pasta according to package directions, omitting salt, about 9 minutes or until al dente, not overcooked. "Al dente" is Italian for "to the tooth," meaning pasta should offer a slight resistance when bitten.
3. Using oven mitts or pot holders, drain the spaghetti into a colander placed in a sink. Be careful to pour it away from you, so that the steam doesn't burn.
4. Place the spaghetti in a large mixing bowl and, using tongs, toss with 2 tablespoons of the peanut oil to keep the pasta from sticking. Set aside.
5. In a medium bowl, whisk together the remaining peanut oil, peanut butter, soy sauce, sesame oil, brown sugar, ginger, and crushed red pepper. Whisk until smooth.
6. Pour half of the peanut mixture onto the spaghetti, and using tongs, toss to coat the pasta. Cover the spaghetti with plastic wrap and refrigerate until chilled, about 2 hours.
7. When ready to serve, pour the remaining peanut mixture onto the spaghetti and toss to coat the pasta. Sprinkle with sliced green onions and chopped peanuts. Serve immediately.

Did you know

It is said that Marco Polo brought pasta to Italy during his travels along the Silk Road in the thirteenth and fourteenth centuries. But there are records of pasta being eaten in Italy before that time. We know for sure that pasta has been a favorite all over the world for hundreds of years.

GERMAN APPLE PANCAKE

Kitchen

YIELD: 4 servings (or 1 pancake)

GRADE 4

This super-huge pancake is fit for a king! It's made from a simple batter that is poured over the sautéed apples and then baked for a puffy treat you eat hot from the oven. It is traditionally eaten with confectioners' sugar, but kick yours up with maple syrup, if you like! The Germans call this "appelpfannkuchen." I call it great!

Ingredients

- 4 large eggs, lightly beaten
- 1 cup whole milk
- 1 cup all-purpose flour
- ½ teaspoon vanilla extract
- 3 tablespoons unsalted butter
- 2 large apples, peeled, cored, and thinly sliced
- ½ teaspoon ground cinnamon
- 1/8 teaspoon ground nutmeg
- Pinch of salt
- 1/3 cup packed light brown sugar
- Confectioners' sugar
- Maple syrup (optional)

Contains dairy and egg

Tools

- ❒ measuring cups and spoons
- ❒ paring knife
- ❒ apple corer
- ❒ whisk
- ❒ wooden spoon
- ❒ heavy ovenproof 12-inch skillet (preferably nonstick)
- ❒ cutting board
- ❒ vegetable peeler
- ❒ large mixing bowl
- ❒ sifter
- ❒ oven mitts or pot holders

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Adapted and used with permission from *There's a Chef in My World!*, pg 38

Directions

1. In a large mixing bowl, combine the beaten eggs, milk, flour, and vanilla, and whisk until just blended, being careful to not overmix. Set the batter aside to rest at least 20 minutes.
2. Position rack in center of oven and preheat the oven to 450 degrees F.
3. In a heavy ovenproof 12-inch skillet, melt 2 tablespoons of the butter over high heat. Add the apples, cinnamon, nutmeg, and salt and cook, stirring frequently, until the apples are soft and lightly golden around the edges, about 6 minutes.
4. Add the brown sugar and cook, stirring, until the apples are caramelized and very soft, 2 to 3 minutes longer. Add the remaining tablespoon of butter and stir to melt.
5. Working very quickly, pour the batter evenly over the top of the apples. Using oven mitts or pot holders, transfer the skillet to the oven and bake until the pancake is golden brown and puffed, about 15 minutes. Don't be alarmed when you see the edges of the pancake puff up over the top of the pan—this is supposed to happen!
6. Using oven mitts or pot holders, remove the skillet from the oven and serve the pancake immediately, sprinkled with sifted confectioners' sugar or drizzled with maple syrup, as desired.

Note:
This recipe will need to be made numerous times as necessary for the number of kids in a given group. Cannot be scaled up since this amount of batter is what fits correctly in a large 12-inch skillet. Two recipes (2 large pancakes) would be plenty for 10 kids to taste. One large pancake might work, too, depending on number of kids and size
of tasting portion.

VIETNAMESE PICKLED CARROTS (CAROT CHUA)

Kitchen

YIELD: 8 to 10 servings

GRADE 4

Ingredients

- 6 medium carrots, peeled and thinly sliced on the diagonal
- 1 red chile (optional) such as cayenne or Thai, thinly sliced crosswise, or ¼ teaspoon crushed red pepper
- 1 cup rice vinegar
- 3 tablespoons sugar
- ½ teaspoon salt

Tools

- ❒ vegetable peeler
- ❒ chef's knife
- ❒ cutting board,
- ❒ rubber gloves (optional—for handling chiles)
- ❒ measuring cups and spoons, medium nonreactive heatproof bowl
- ❒ small saucepan,
- ❒ wooden spoon,
- ❒ oven mitts or pot holders

Directions

1. Place the carrots and chile in a medium nonreactive, heatproof bowl.
2. In a small saucepan, combine the vinegar, sugar and salt and bring to a boil, stirring until the sugar dissolves. Remove and cool slightly.
3. Pour the warm vinegar mixture over carrots and allow to marinate for at least 1 hour and up to 2 weeks, refrigerated.

Emeril's Culinary Garden & Teaching Kitchen

EMERIL'S HOMEMADE SWEET AND SPICY PICKLES

Kitchen

YIELD: 4 pints

GRADE 4

If you are a fan of bread-and-butter pickles, this is the recipe for you!

Ingredients

- 3 pounds pickling cucumbers, sliced into 1/4-inch thick slices
- 2 cups sliced onions
- ½ cup pickling salt
- 6 cups water
- 3 cups white vinegar
- 1 ½ cups apple cider vinegar
- 3 ½ cups sugar
- 2 tablespoons yellow mustard seeds
- ½ teaspoon turmeric
- 4 whole cloves
- 10 tablespoons roughly chopped garlic
- 24 dried cayenne peppers
- 2 teaspoons 100 percent Natural Pickle Crisp, optional

Tools

- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ colander
- ❒ oven mitts or pot holders
- ❒ ladle
- ❒ chef's knife
- ❒ large nonreactive bowl
- ❒ medium saucepan
- ❒ plastic canning funnel
- ❒ rubberized jar lifters
- ❒ oven mitts or pot holders
- ❒ four sterilized pint-sized preserving jars and lids
- ❒ hot water canner or large pot for processing packed jars

Continued on next page

Directions

1. Place cucumbers, onions, pickling salt, and water in a large, non-reactive bowl. Cover and allow cucumbers to soak for 2 hours. Drain the water from the onions and cucumbers through a colander and rinse well for 5 minutes. Drain well and set aside.
2. Combine the vinegars, sugar, mustard seeds, turmeric, cloves, garlic, and peppers in a medium saucepan over high heat. Bring to a boil, reduce heat to medium and add the cucumbers and onions. Bring to a simmer and remove the saucepan from the heat.
3. Fill each of the hot sterilized pint-size preserving jars with the pickle mixture, dividing the pickles evenly, and adding enough of the liquid to come within ½-inch of the top. Add ½ teaspoon of Natural Pickle Crisp to each jar, if desired. With a clean damp towel, wipe the rim and fit with a hot lid. Screw on the metal ring just until the point of resistance is met. Process the jars in a hot-water bath for 15 minutes.
4. Using tongs (or rubberized canning jar lifters), remove the jars, place on a towel, and let cool. Test the seals by allowing the jars to stand at room temperature overnight or until the lids pop. Tighten the rings and store in a cool dry place. Let the pickles age for at least 2 weeks before using.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

NUTTY BUTTERY GREEN BEANS

Kitchen

YIELD: 6 to 10 servings

GRADE 4

Did you know that toasting nuts not only makes them crunchy but also intensifies their flavor?

The toasted almonds in this recipe make these green beans extra crunchy and simply delicious—one sure-fire way to get those finicky friends of yours to eat their green beans!

Ingredients

- 1 ½ pounds green beans
- 6 cups water
- 2 ¼ teaspoons salt
- 6 tablespoons (½ stick plus 2 tablespoons) unsalted butter
- 1 (2 ¼ ounce) package sliced almonds
- 1 ½ teaspoons Worcestershire sauce
- ¼ teaspoon ground black pepper

Contains dairy and tree nuts

Tools

- ❒ measuring cups and spoons
- ❒ oven mitts or potholders
- ❒ 3 ½-quart heavy saucepan
- ❒ colander

Directions

1. Trim the beans by snapping the ends off.
2. Place the water and 1 ½ teaspoons of the salt in a medium, heavy saucepan and bring to a boil.
3. Carefully add the beans and return to a boil. Cook uncovered until tender, 5 to 7 minutes.
4. Using oven mitts or pot holders, remove the saucepan from the heat and drain the beans in a colander set in the sink, pouring away from you. Rinse under cold running water and drain.
5. Melt the butter in the same 3 ½-quart saucepan over medium-high heat. Add the almonds, Worcestershire sauce, remaining ¾ teaspoon of salt, and the black pepper. Cook, stirring, until the almonds are toasted, 2 to 3 minutes. Add the drained green beans to the pan and cook, stirring, until well coated with sauce and warmed through, about 1 minute.
6. Using an oven mitt or pot holder, remove from the heat and serve.

Adapted and used with permission from *There's a Chef in My Soup!*, pg 168

Caution

Be very careful adding the green beans to the hot water—you will need to add them slowly so the water does not splash up and burn you.

GREEN SALAD WITH FRENCH DRESSING

Kitchen

YIELD: 8 to 10 servings

GRADE 4

Ingredients

- ¼ cup red wine vinegar
- ¼ cup lemon juice
- 2 teaspoons Dijon mustard
- 2 teaspoons paprika
- 1 cup olive oil
- 12 cups mixed salad greens or spring mix
- 1 small red onion, thinly sliced
- 2 to 3 medium tomatoes, cored and cut into wedges
- 2 cups croutons, for garnish

Tools

- ❒ measuring cups and spoons
- ❒ medium nonreactive mixing bowl
- ❒ chef's knife
- ❒ salad tongs or wooden spoons for tossing salad
- ❒ whisk
- ❒ large salad bowl
- ❒ paring knife

Directions

1. Make the dressing by whisking together the vinegar, lemon juice, Dijon mustard and paprika until well blended. Slowly whisk in olive oil until emulsified.
2. To make the salad, combine the greens, sliced red onion and tomato wedges in a large wooden salad bowl, and drizzle with enough of the dressing to lightly coat the salad. Top with croutons and serve.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

BEST BASIC RED SAUCE

Kitchen

YIELD: 10 cups (or 2½ quarts)

GRADE 4

This sauce is really easy and really yummy, and once you've made a big 'ole batch of this, you've got lots of options: pizza, spaghetti and meatballs, lasagna—you name it! I like to use canned whole tomatoes when making my Basic Red Sauce instead of chopped tomatoes or tomato puree. Not only is it fun to squeeze and break up the tomatoes by hand, but the sauce also has a much better texture if you use whole tomatoes.

Ingredients

- 2 tablespoons olive oil
- 1½ cup chopped yellow onions (1 medium yellow onion)
- 1 teaspoon minced garlic (2 cloves garlic)
- ½ teaspoon salt
- ½ teaspoon dried basil
- ½ teaspoon dried oregano
- 1/8 teaspoon ground black pepper
- 2 (28-ounce) cans whole peeled tomatoes
- 2 (15-ounce) cans tomato sauce
- 3 tablespoon tomato paste
- 2 cup water
- 1 teaspoon sugar

Tools

- ❒ knife and cutting board
- ❒ can opener
- ❒ measuring cups and spoons
- ❒ 5-qt. heavy pot, big wooden spoon
- ❒ garlic press (optional)
- ❒ mixing bowl
- ❒ oven mitts or potholders

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Adapted and used with permission from *There's a Chef in My Soup!*, pg 70

Remember that cleaning is an important part of cooking—if you squirt tomato juice when squeezing the tomatoes, make sure to clean it up!

Directions

1. Heat the olive oil in a 5-quart pot over medium heat.
2. Add the onions, garlic, salt, basil, oregano and black pepper, and cook, stirring, until soft, about 5 minutes.
3. Place the tomatoes in a large bowl and squeeze to break into small pieces.
4. Add the tomatoes, tomato sauce, tomato paste, water, and sugar to the pot with the onions, and stir well.
5. Bring to a simmer over medium-high heat.
6. Lower the heat to medium-low, and simmer uncovered for 45 minutes, stirring occasionally with a long-handled wooden spoon.
7. Remove from the heat, and use as needed. You can store this sauce in an airtight container in the refrigerator for up to 4 days, or freeze it for up to 3 months.

Caution

Be careful when stirring—hot sauce makes bubbles that pop and splatter!

Emeril's CULINARY GARDEN & TEACHING KITCHEN

HOMEMADE SEMOLINA PASTA

Kitchen

YIELD: 1 1⅓ pounds fresh pasta

GRADE 4

This recipe can be doubled, but it will be even more difficult to knead. Try making this in numerous batches for larger groups.

Make your own pasta at home then add whatever you like best. Toss with your favorite sauce, sautee with veggies, or just eat it plain with butter.

Ingredients

- 2 ½ cups semolina flour
- 4 large eggs, whisked

Contains dairy and egg

Tools

- ❒ measuring cups
- ❒ spatula or wooden spoon
- ❒ rolling pin
- ❒ large mixing bowl
- ❒ plastic wrap
- ❒ chef's knife
- ❒ electric mixer fitted with a dough hook (optional)
- ❒ pasta roller (for rolling dough into thin sheets)—optional

Directions

1. Place the semolina flour in a large mixing bowl and form a small well in center. Add the eggs to the well. Using a spatula or wooden spoon, gradually combine until the dough comes together. If the dough seems a little dry, add very small amounts of water at a time until the dough feels somewhat smooth (keep in mind that a 100% semolina dough will be a bit drier and tighter than other doughs).
2. Transfer the dough to a clean work surface, and knead it for about 5 minutes (see **Note**). Form the dough into a ball and wrap it well with plastic wrap. Set it aside to rest at room temperature for at least 30 minutes, or refrigerate up to overnight. Dough will need to return to room temperature before it may be rolled and cut as desired.

Note:
The more semolina a dough has, the more challenging it is to knead; work it as best as you can or knead it in a standing electric mixer fitted with a dough hook.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

LATKES (LAHT-KUHS)

Kitchen

YIELD: 4 to 6 servings

GRADE 4

These Eastern European treats can best be described as fried potato pancakes—and once you've had one, you will see why they are legendary worldwide! Traditionally served at Hanukkah, latkes make wonderful treats for any time of the year and any time of the day or night—for breakfast, as after-school snacks, or as hors d'oeuvres before dinner. Try them as suggested here, with applesauce and sour cream—the most traditional way to serve them.

Ingredients

- 2 ½ pounds baking potatoes, peeled
- 1 medium yellow onion, grated
- 2 large eggs, lightly beaten
- 2 tablespoons all-purpose flour
- 1 teaspoon salt
- ¼ teaspoon ground white pepper
- ¼ teaspoon baking powder
- 1 to 1 ¼ cups vegetable oil, for frying
- 1 cup applesauce
- 1 cup sour cream

Contains dairy and egg

Tools

- ❒ measuring cups and spoons
- ❒ box grater
- ❒ colander
- ❒ wooden spoon
- ❒ spoon
- ❒ paper towel-lined baking sheet
- ❒ clean kitchen towel or cheesecloth
- ❒ vegetable peeler
- ❒ fork or whisk
- ❒ medium mixing bowl
- ❒ large skillet
- ❒ metal spatula or tongs
- ❒ oven mitts or pot holders

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Adapted and used with permission from *There's a Chef in My World!*, pg 34

Directions

1. Preheat the oven to 200 degrees F.
2. Using a box grater, coarsely grate the potatoes. Watch your fingers!
3. Place the potatoes in a colander lined with a clean kitchen towel or cheesecloth and let the potatoes sit for at least 15 minutes to release some of their liquid. Pick up the four corners of the towel or cloth and bring them together, then tightly wring the towel in the sink so that any extra liquid is squeezed from the potatoes.
4. Transfer the potatoes to a medium mixing bowl and add the grated onion, beaten eggs, flour, salt, pepper, and baking powder. Using a wooden spoon, stir until thoroughly combined.
5. In a large skillet over medium-high heat, add ¼ cup of the oil to the pan. When the oil is hot, spoon the potato mixture, 2 tablespoons at a time, into the skillet to form individual cakes. You should be able to fit 4 or 5 latkes in the pan at a time. Using the back of a spoon, flatten each latke so that it resembles a pancake. Cook until golden brown, about 2 to 3 minutes. Using a metal spatula or tongs, carefully flip the latkes over, making sure to watch out for any splattering oil. Cook the latkes until the second side is golden brown, about 2 minutes longer.
6. Remove the latkes from the pan and set aside to drain on a paper towel–lined baking sheet. You can keep them warm in the heated oven while you cook the remaining latkes. Add more oil as needed and continue to fry the latkes in batches, making sure not to overcrowd the pan.
7. To serve, place a dollop of applesauce and/or sour cream in the center of each latke. Serve warm.

Note:
Since this makes 18 small pancakes, this should be sufficient for up to 10 tasting portions. Recipe may be scaled up proportionally if a larger amount is desired.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

VEGETABLE STOCK

Kitchen

YIELD: 3 ½ quarts

GRADE 4

Ingredients

- 2 cups large dice yellow onions
- 2 cups large dice leeks, green and white parts, well rinsed
- 2 cups mushroom trimmings, wiped clean
- 1 cup large dice carrots
- 1 cup large dice celery
- 1 cup large dice turnips
- 1 cup large dice parsnips
- 1 cup large dice yellow squash
- 1 cup large dice zucchini
- 8 Roma tomatoes, quartered
- ½ cup garlic cloves, peeled
- 2 tablespoons olive oil
- 1 teaspoon salt
- ½ teaspoon fresh cracked black pepper
- 1 gallon water
- 2 tablespoons fresh thyme, or 2 teaspoons dried
- 8 parsley stems
- 4 basil stems
- 2 bay leaves

Tools

- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ wooden spoon
- ❒ large stockpot
- ❒ chef's knife
- ❒ large roasting pan
- ❒ oven mitts or pot holders
- ❒ fine mesh strainer

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Directions

1. Preheat the oven to 400 degrees F.
2. In a large roasting pan, spread the onions, leeks, mushrooms, carrots, celery, turnips, parsnips, squash, zucchini, tomatoes and garlic cloves. Drizzle with the olive oil, and season with the salt and pepper, stirring to coat. Roast for 45 minutes, stirring, every 15 minutes to brown evenly.
3. Remove from the oven and transfer to a large pot. Add the water and herbs, and bring to a boil. Reduce the heat and simmer for 45 minutes to 1 hour, skimming to remove any foam that rises to the surface.
4. Remove from the heat and strain through a fine mesh strainer into a clean container. Use immediately, or cool in an ice bath and then refrigerate in an airtight container for up to 5 days. (The stock can be frozen for up to 3 months.)

PASTA AND SWISS CHARD
IN BROTH WITH MEATBALLS

Kitchen

YIELD: 8 to 12 servings

GRADE 4

This is a great alternative to spaghetti and meatballs. A comforting dish for a cool fall night.

Ingredients

- 4 slices white bread
- 2 cups water
- ½ pound ground veal
- ½ pound ground beef chuck
- ½ pound ground pork
- ½ cup minced onions
- 4 teaspoons minced garlic
- 2 teaspoon salt
- 2 teaspoon freshly ground black pepper
- ½ finely chopped green onions
- 1 gallon beef stock
- 12 ounces small pasta shapes (such as orzo, stars, or alphabets)
- 2 pounds Swiss chard, cleaned, stemmed and shredded
- 8 ounces Parmigiano-Reggiano cheese, grated

Contains dairy

Tools

- ❒ two medium mixing bowls
- ❒ small saucepan
- ❒ stock pot or large soup pot
- ❒ cutting board
- ❒ box grater
- ❒ measuring cups and spoons
- ❒ oven mitts or pot holders
- ❒ chef's knife
- ❒ ladle

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Directions

1. Place the bread in a shallow bowl and pour the water over the bread. Allow to sit for 10 minutes.
2. Remove the bread from the bowl, squeezing out the excess liquid. In a mixing bowl, combine the bread, meats, onions, garlic, salt, pepper, and green onions. Mix well. *(To test the seasoning of the mixture, bring a small pot of water to a boil. Form a small amount of the mixture into a small ball and blanch in the water for 3 to 4 minutes. Remove from the water, cool slightly, and taste. Adjust the seasoning accordingly.)*
3. Form the meat mixture into small balls, about the size of a quarter.
4. Bring the beef stock to a simmer. Add the meatballs to the simmering stock and cook for 25 to 30 minutes.
5. Add the pasta and Swiss chard, and continue to cook until the pasta is tender, about 6 to 8 minutes longer.
6. To serve, ladle the soup into individual bowls and garnish with the cheese.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

STRAWBERRY JAM

Kitchen

YIELD: 6 jars (half pints)

GRADE 4

Ingredients

- 4 pints fresh strawberries, halved
- 5 cups sugar
- Juice and zest of one lemon

Tools

- ❒ cutting board and paring knife
- ❒ fine grater or rasp
- ❒ 8-quart stock pot
- ❒ small plate
- ❒ oven mitts or pot holders
- ❒ labels for jars (optional)
- ❒ candy or instant-read thermometer
- ❒ measuring cups
- ❒ juicer or reamer
- ❒ wooden spoon
- ❒ metal spoon for skimming
- ❒ canning funnel
- ❒ hot sterilized canning jars with lids

Directions

1. Combine the fruit, sugar, lemon juice and lemon zest in an 8-quart stock pot. Stir to dissolve and then bring to a boil over medium-high heat. Maintain at a full rolling boil until the jell point is reached, 220 degrees F. This may take a while—up to 40 minutes, depending on your cooktop. Use your thermometer to make sure it comes up to the proper temperature. While the mixture cooks, stir it occasionally so the fruit does not stick to the bottom of the pan. You can test the jam by spooning a small amount onto a cold plate; if it has cooked long enough, a skin will form on the surface as it cools.
2. Remove jam from the heat, skim off any impurities that have risen to the top.
3. Using a canning funnel, ladle the fruit into the hot sterilized jars. Fill the jars, leaving 1-inch from the top of the jars for headroom, and wipe the rims well with a clean damp paper towel.
4. Seal the jars. They should pop and seal as they cool if they seal properly. (Any jars that do not seal properly should be refrigerated and used within several weeks.)
5. Label the jars and store in a cool, dark, and dry place.

Adapted and used with permission from *Emerils.com*

OOEY GOOEY BLUEBERRY "FRENCH TOAST"

Kitchen

YIELD: 10 to 12 servings, 3 cups of Blueberry Sauce

GRADE 4

The Blueberry Sauce can be made in advance and kept refrigerated for up to one week and then rewarmed just before serving.

This dish is really a cross between French toast and bread pudding—two of my favorite things to eat any time of the day! It is rich and creamy and ooey and gooey and chock full of blueberries all at the same time. It's a great dish to make for a crowd and can be put together the night before and then baked in the morning, so that it's fresh and hot when you serve it. Don't skip the blueberry topping—it's the crowning glory!

Ingredients

For the French Toast:

- 1 tablespoon unsalted butter
- 14 slices home-style white bread, crusts discarded and bread cut into 1-inch cubes
- 2 (8-ounce) packages cold cream cheese, cut into 1-inch cubes
- 1 cup blueberries, picked over and rinsed
- 10 large eggs
- 2 cups half-and-half
- 1/3 cup maple syrup
- ¼ cup fresh squeezed orange juice

Contains dairy and egg

For the Blueberry Sauce:

- 1½ cups sugar
- 1 ½ cups water
- ½ cup fresh-squeezed orange juice
- 3 tablespoons cornstarch
- 1 ½ teaspoons orange zest
- 1 ½ cups blueberries, picked over and rinsed
- 1 ½ tablespoons unsalted butter

Contains dairy and egg

Continued on next page

Adapted and used with permission from *There's a Chef in My Family!*, pg 42

Tools

For the French Toast:

- ❒ cutting board
- ❒ chef's knife
- ❒ measuring cups and spoons
- ❒ whisk
- ❒ 9- by 13-inch baking dish or casserole
- ❒ serrated bread knife
- ❒ juicer (optional)
- ❒ large mixing bowl
- ❒ aluminum foil
- ❒ oven mitts or pot holders

For the Blueberry Sauce:

- ❒ measuring cups and spoons
- ❒ juicer (optional)
- ❒ zester or box grater
- ❒ small saucepan
- ❒ wooden spoon
- ❒ oven mitts or pot holders
- ❒ large spoon or ladle

Directions

For the French Toast:

1. Butter a baking dish with the tablespoon of butter.
2. Arrange half of the bread cubes on the bottom of the baking dish.
3. Top the bread cubes with the cream cheese cubes and blueberries and arrange the remaining bread cubes over the blueberries.
4. In a large bowl whisk together the eggs, half-and-half, syrup, and orange juice.
5. Pour the egg mixture evenly over the bread mixture. Cover with aluminum foil and refrigerate for at least 1 hour and up to overnight.
6. Remove the baking dish from the refrigerator and allow to come to room temperature for about 20 minutes. Position rack in center of oven and preheat the oven to 350 degrees F.
7. Bake the "French toast" with foil cover for 30 minutes. Using oven mitts or pot holders, remove the baking dish from the oven, remove the foil, and return the dish to the oven until toast is golden brown and puffed, about 30 more minutes.
8. Using oven mitts and pot holders, remove the baking dish from the oven and allow to sit until slightly cooled, about 15 minutes.
9. Serve in bowls with blueberry sauce ladled over the top.

Continued on next page

For the Blueberry Sauce:

1. In a small saucepan over medium-high heat, stir together the sugar, water, orange juice, cornstarch, and orange zest.
2. Cook, stirring occasionally, until thickened, about 5 minutes.
3. Stir in the blueberries and simmer the mixture, stirring occasionally, until the berries have burst, about 5 minutes.
4. Add the butter and stir until melted.
5. Remove from heat and spoon or ladle over warm Ooey Gooey Blueberry "French Toast."

Emeril's CULINARY GARDEN & TEACHING KITCHEN

MOROCCAN COUSCOUS

Kitchen

YIELD: 8 to 12 servings

GRADE 4

Couscous is eaten all over North Africa and is particularly associated with Moroccan cooking, where it is usually served for lunch on Fridays. Though traditionally served as a main course or dessert, the quick cooking time makes this a wonderful side dish for any number of entrees. Feel free to kick yours up by adding your favorite dried fruits, nuts, citrus zest, or small vegetables or garbanzo beans.

Ingredients

- 4 cups water
- 6 tablespoons olive oil
- 1 ½ teaspoons salt
- 2 (10-ounce) packages plain couscous
- 1 ½ teaspoons ground cumin
- ½ teaspoon ground cinnamon
- 2 tablespoons finely chopped fresh herbs of your choice, such as mint, parsley, cilantro, or basil

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ large mixing bowl
- ❒ oven mitts or pot holders
- ❒ cutting board
- ❒ medium saucepan with lid
- ❒ fork

Continued on next page

Adapted and used with permission from *There's a Chef in My World!*, pg 132

Directions

1. In a medium saucepan, bring the water, 2 tablespoons of the olive oil, and 1 teaspoon of the salt to a boil.
2. When the water begins to boil, remove the pan from the heat, stir in the couscous, and cover the saucepan. Allow the couscous to stand for 5 minutes, without lifting the lid.
3. Pour the couscous into a large mixing bowl and toss lightly with a fork to break up any lumps.
4. Drizzle the couscous with the remaining 4 tablespoons of olive oil, tossing to coat well.
5. Add the remaining ½ teaspoon salt, cumin, cinnamon, and herb(s) of your choice. Gently toss to combine, using a fork to stir in the seasonings.

SUMMER PUDDING

Kitchen

YIELD: 6 to 8 servings

GRADE 5

This is a great summer dessert from England. For this version, we use strawberries, blueberries, blackberries and raspberries, but feel free to use your own favorite combination of berries. I have also found that if you need stale bread in a hurry, for this recipe it's best not to toast it in the oven. Just leave the bread slices out overnight on a baking sheet, uncovered, and your bread will be just right by the next day.

Ingredients

- 2 (8.8-ounce) containers fresh strawberries, washed, patted dry, hulled, and quartered (about 4 cups quartered berries)
- 2 (4.4-ounce) containers fresh blueberries, washed, picked over, and patted dry (about 2 cups)
- ½ pint fresh blackberries, washed, picked over, and patted dry (about 1 cup)
- 1 (6-ounce) container fresh raspberries, washed, picked over, and patted dry (about
- 1 cup)
- ¾ cup granulated sugar
- 2 tablespoons fresh lemon juice
- 10 to 12 slices stale white bread or challah bread, crusts removed
- 1 cup heavy cream
- 1 tablespoon confectioners' sugar

Tools

- ❒ measuring cups and spoons
- ❒ large saucepan
- ❒ 9- by 5-inch loaf pan
- ❒ cutting board
- ❒ slotted spoon
- ❒ small baking sheet or dish
- ❒ juicer (optional)
- ❒ oven mitts or pot holders
- ❒ plastic wrap
- ❒ bread knife
- ❒ spoon or ladle
- ❒ large serving platter
- ❒ three soup-size cans or other objects for weighting pudding
- ❒ electric mixer fitted with whisk attachment

Continued on next page

Adapted and used with permission from *There's a Chef in My World!*, pg 172

Directions

1. Combine the strawberries, blueberries, blackberries, and raspberries in a large saucepan. Add the sugar and lemon juice and cook over medium heat until the fruit is tender and beginning to burst but still holds its shape, about 5 minutes. Using oven mitts or pot holders, remove the fruit from the heat and allow to cool to room temperature.
2. Meanwhile, line a 9- by 5-inch loaf pan with plastic wrap. Cut the bread slices (to fit in the bottom of the baking pan in the next step.) Repeat with the remaining bread slices as needed to fit into each layer. Set aside.
3. When the fruit has cooled, use a slotted spoon to place about 2 cups of the fruit in the bottom of the prepared baking pan, making sure the bottom is covered with fruit. Dip one side of the prepared bread slices in the juice from the cooked fruit, and place one layer of bread, soaked side down, on top of the fruit in the baking pan. Using a spoon or a ladle, spread enough juice on top of the bread layer so that none of the white is visible.
4. Repeat the fruit and bread layers two more times, ending with the bread layer. Pour any remaining juice on top of the last bread layer.
5. Cover tightly with plastic wrap and set the baking pan on a small baking sheet or dish. Place 3 soup-size cans on top of the wrapped pudding to weigh it down. Refrigerate the pudding with the can weights overnight.
6. In the bowl of an electric mixer fitted with a whisk attachment, add the heavy cream and confectioners' sugar and whisk until thick and frothy and stiff peaks have formed.
7. To serve, remove the can weights from the top of the pudding and carefully unwrap the plastic. Place a serving platter that is larger than the baking dish over the pudding and invert. Shake gently to release the pudding onto the serving platter and remove the plastic wrap.
8. Slice or spoon the summer pudding onto individual plates and serve chilled with the sweetened whipped cream.

OVEN-ROASTED VEGGIES

Kitchen

YIELD: 6 servings (or up to 10 tasting portions)

GRADE 5

This is a crowd-pleasing dish you can make for almost any family meal. With so many veggies to choose from, there will be something in this dish for everyone to like. Kick it up with some garlic or add some chopped fresh rosemary and thyme. Fresh herbs rule!

Ingredients

- 3 tablespoons extra virgin olive oil
- 2 teaspoons salt
- 1 teaspoon Emeril's Italian Essence, or other Italian seasoning
- ½ teaspoon freshly ground black pepper
- ½ teaspoon Baby Bam
- 1 pound red potatoes, cut into eighths, or bite-size pieces
- 1 pound carrots (about 3 cups, or 6 medium carrots), peeled and sliced into 1-inch pieces
- 1 medium yellow onion (about 1 ½ cups), chopped into eighths, or bite-size pieces
- 1 medium yellow squash (about 1 ½ cups, or 5 ounces), chopped into 1-inch pieces
- 1 medium red bell pepper (about 1 cup, or 5 ounces), chopped into 1-inch pieces

Tools

- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ roasting pan, preferably non-stick (see **Note**)
- ❒ chef's knife
- ❒ two medium bowls
- ❒ oven mitts

Continued on next page

Adapted and used with permission from *There's a Chef in My Family!*, pg 156

Directions

1. Preheat the oven to 425 degrees F.
2. Combine 1 tablespoon of the olive oil, 1 teaspoon of the salt, ½ teaspoon of the Italian Essence, ¼ teaspoon of the black pepper, and ¼ teaspoon of the Baby Bam in a bowl.
3. Toss the potatoes in this mixture and place in the roasting pan and roast for 20 minutes.
4. Meanwhile, combine the remaining 2 tablespoons olive oil, remaining 1 teaspoon salt, remaining ½ teaspoon Italian Essence, remaining ¼ teaspoon black pepper, and remaining ¼ teaspoon Baby Bam in the other bowl. Toss the carrots, onion, squash, and pepper in this mixture and reserve for roasting.
5. After the initial 20-minute roasting of potatoes remove them from the oven. Add the other vegetables to the potatoes and, using a wooden spoon, stir to combine.
6. Return the roasting pan to the oven and increase the temperature to 475 degrees F. Roast until all vegetables are tender and show nice color, about 40 minutes longer. (Stir the pan at least once during cooking to insure even browning of the vegetables.)
7. Remove the pan from the oven, allow to cool for 10 minutes and serve.

Note:
If using a non-stick pan there is no need to coat it with olive oil or stir the roasting vegetables too frequently. However, if using a regular pan you will need to coat the pan with about 2 tablespoons of olive oil before roasting the vegetables, and you will need to stir your roasting vegetables more frequently (about every 20 minutes.)

Emeril's CULINARY GARDEN & TEACHING KITCHEN

FIESTA QUESADILLAS

WITH SIMPLE SALSA AND HOLY MOLY GUACAMOLE

Kitchen

YIELD: 5 servings, 1 cup Salsa, ½ to 1 cup Guacamole

GRADE 5

I just love quesadillas—all that gooey cheese inside of a thin flour tortilla, oh, yeah, baby. Make sure you kick yours up a notch or two by preparing both the Simple Salsa and Holy Guacamole to go on top. Talk about a match made in heaven!

Ingredients

For the Quesadillas:

- 10 (6-inch) flour tortillas
- 1 ¼ cups grated Monterey Jack cheese (6 ounces)
- 1 ¼ cups grated cheddar cheese (6 ounces)
- 2 tablespoons finely chopped yellow onions
- 5 teaspoons vegetable oil
- Simple Salsa, for serving
- Holy Guacamole, for serving

Contains dairy

For the Salsa:

- 2 medium tomatoes, halved and seeds removed
- ½ teaspoon salt
- ½ teaspoon minced garlic
- 1 tablespoon minced yellow onion
- 1 tablespoon minced green bell pepper
- 1 tablespoon lime juice
- ¼ teaspoon Green Pepper Sauce

For the Guacamole:

- 1 avocado, peeled, halved and seed removed
- 1 tablespoon fresh lime juice
- 1 tablespoon minced yellow onion
- ½ teaspoon minced garlic
- ¼ teaspoon Baby Bam
- ¼ teaspoon salt
- ¼ teaspoon Emeril's Green Pepper Sauce (optional)

Continued on next page

Adapted and used with permission from *There's a Chef in My Soup!*, pg 104

Tools

For the Quesadillas:

- ❒ knife
- ❒ cutting board
- ❒ pizza wheel or sharp knife
- ❒ two small bowls
- ❒ grater
- ❒ medium skillet (8- or 10-inch)
- ❒ spatula
- ❒ fork

For the Salsa and Guacamole:

- ❒ knife
- ❒ cutting board
- ❒ mixing bowl
- ❒ fork
- ❒ measuring spoons
- ❒ plastic wrap

Directions

For the Quesadillas:

1. Place 1 tortilla on a flat work surface and evenly cover the tortilla with 4 tablespoons of the cheese, and top with 1 teaspoon of the chopped onions.
2. Cover with the second tortilla and rub ½ teaspoon of vegetable oil onto the top tortilla.
3. Repeat this process with the remaining tortillas—you will have five stuffed tortilla "sandwiches" in all.
4. Heat a medium-sized skillet over medium-low heat.
5. When the pan is hot, add ½ teaspoon of the oil to the pan and carefully transfer one of the stuffed tortillas with a large spatula to the hot pan.
5. Cook until the bottom is just golden and the cheese is starting to melt, about 2 to 3 minutes. Carefully turn with a spatula and cook for about 1 ½ to 2 minutes, until golden brown on the second side.
6. Using a spatula, remove the quesadilla from the pan, place on a cutting board and slice with a pizza wheel or sharp knife.
7. Repeat with the remaining tortillas and ingredients and serve immediately with about 2 tablespoons of the Homemade Salsa and a dollop of Guacamole.

Caution

Be careful flipping your hot quesadilla, and cutting the hot tortilla! Hot cheese can stick!

For the Salsa:

1. Place the tomato halves on a cutting board and slice into quarters.
2. Working over a mixing bowl, squeeze each piece in your hands to remove the seeds, then chop into ¼-inch chunks. Discard the seeds.
3. Place the tomato pieces in a bowl and sprinkle with the salt, add the remaining ingredients and mix well with a fork or spoon.
4. Let sit for at least 30 minutes before serving, this will allow the flavors to blend.

For the Guacamole:

1. Place an avocado half on a cutting board, flat side down.
2. Cut into sixths lengthwise, then chop into ¼-inch pieces.
3. Place the avocado pieces in a mixing bowl.
4. Add the remaining ingredients and mash until mostly smooth with the back of a fork.
5. Stir to evenly distribute ingredients, then serve immediately, or keep covered with plastic wrap in the refrigerator until ready to use.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

APPLE-OF-MY-EYE CRISP

Kitchen

YIELD: 6 to 8 servings

GRADE 5

If you want to make a pie instead, just pour the apples into an (unbaked) store-bought or premade pie crust and proceed as directed for an apple crumb pie!

Here's a really old-fashioned, homey dessert that takes me back to my childhood—a lot of folks in New England like to make Apple Crisp in the fall when apples are at their best. I've used a combination of tart and sweet apples here because I think they're terrific together, but you could really use any apples you like. The secret to a successful crisp topping is letting it rest in the refrigerator while you prepare the other ingredients. Oh, and if you really want to kick this up notches unknown to mankind? Serve your crisp with a scoop or two of vanilla ice cream on top!

Ingredients

- 4 tablespoons cold unsalted butter, cut into ½-inch pieces, plus 1 tablespoon
- ½ cup all purpose flour
- ¼ cup light brown sugar
- ¼ cup plus ¾ cup sugar
- ¼ teaspoon salt
- 3 Granny Smith apples
- 3 Golden Delicious apples
- 2 teaspoons fresh lemon juice
- 1 tablespoon plus 1 teaspoon cornstarch
- 1 teaspoon cinnamon

Contains dairy

Tools

- ❒ medium bowl
- ❒ large spoon
- ❒ measuring spoons
- ❒ peeler
- ❒ cutting board
- ❒ oven mitts or potholders
- ❒ apple corer, wire rack
- ❒ large bowl
- ❒ measuring cups
- ❒ 9-inch by 9-inch baking dish
- ❒ knife
- ❒ spoon
- ❒ two forks or a pastry blender

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Adapted and used with permission from *There's a Chef in My Soup!*, pg 222

Directions

1. Preheat the oven to 350 degrees F and make sure the oven rack is in the center position.
2. Butter a 9- by 9-inch baking dish with 1 tablespoon of the butter. Set aside.
3. Place the flour, brown sugar, ¼ cup of the sugar, and salt in a medium bowl.
4. Add the remaining 4 tablespoons of butter pieces and work in with two forks, a pastry blender or your fingers until the mixture resembles coarse crumbs. Refrigerate the crumb topping while preparing the other ingredients.
5. Peel and core the apples, then cut one apple in half. Place one half flat-side down on the cutting board and cut lengthwise into six slices.
6. Place slices in a large mixing bowl and toss with the lemon juice.
7. Repeat with the remaining apples, tossing with the lemon juice after each addition.
8. Add the remaining ¾ cup of sugar, cornstarch, and cinnamon to the apples and stir well with a large spoon.
9. Pour the apples into the prepared baking dish and crumble the topping evenly over the top.
10. Bake until golden brown and bubbling, about 1 hour and 15 minutes.
11. Remove from the oven and cool for 10 minutes before serving.

Caution

Be careful coring and slicing apples! Have an adult help you. And hey—be really careful taking the hot, bubbly cobbler out of the oven.

MISO SOUP WITH VEGETABLE STOCK

Kitchen

YIELD: 8 to 10 servings

GRADE 5

Ingredients

- 2/3 ounce konbu (kelp), 4 to 6 squares
- 8 cups vegetable stock, see recipe on page 656
- 6 large dry wood ear mushrooms, wiped clean (see **Note**)
- 4 teaspoons soy sauce
- 6 tablespoons white or yellow miso paste
- 2 tablespoons brown miso paste
- ½ cup finely sliced scallions
- 8 ounces tofu, cut into ½-inch cubes

Contains soy

Tools

- ❒ measuring cups and spoons
- ❒ fine mesh strainer
- ❒ chef's knife
- ❒ large saucepans
- ❒ cutting board
- ❒ slotted spoon

Directions

1. To make the "dashi" soup stock, in a large saucepan, combine the konbu and vegetable stock and heat over medium-low heat almost to the boiling point. Remove the konbu just before the mixture comes to a boil and discard.
2. Remove from the heat and skim any foam that rises to the surface. Let stand for 2 minutes. Strain through a fine mesh strainer into a saucepan. Keep warm over low heat.
3. Add the mushrooms and soy sauce to the dashi and steep until mushrooms are tender, about 10 minutes. Remove with a slotted spoon, and when cool enough to handle, slice thinly. Return to the liquid. Add the miso pastes and cook over low heat, stirring to dissolve. Add the scallions and tofu and cook until warmed through, about 3 minutes.
4. Serve immediately.

Note:
Thinly sliced fresh mushrooms (such as shiitake or baby cremini) or tiny whole mushrooms (such as enoki) may be added instead of dried if preferable. In this case, the mushrooms only need to steep in the broth until slightly softened.

VEGETABLE STOCK

Kitchen

YIELD: 3½ quarts

GRADE 5

Ingredients

- 2 cups large dice yellow onions
- 2 cups large dice leeks, green and white parts, well rinsed
- 2 cups mushroom trimmings, wiped clean
- 1 cup large dice carrots
- 1 cup large dice celery
- 1 cup large dice turnips
- 1 cup large dice parsnips
- 1 cup large dice yellow squash
- 1 cup large dice zucchini
- 8 Roma tomatoes, quartered
- ½ cup garlic cloves, peeled
- 2 tablespoons olive oil
- 1 teaspoon salt
- ½ teaspoon fresh cracked black pepper
- 1 gallon water
- 2 tablespoons fresh thyme, or 2 teaspoons dried
- 8 parsley stems
- 4 basil stems
- 2 bay leaves

Tools

- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ wooden spoon
- ❒ large stockpot
- ❒ chef's knife
- ❒ large roasting pan
- ❒ oven mitts or pot holders
- ❒ fine mesh strainer

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Directions

1. Preheat the oven to 400 degrees F.
2. In a large roasting pan, spread the onions, leeks, mushrooms, carrots, celery, turnips, parsnips, squash, zucchini, tomatoes and garlic cloves. Drizzle with the olive oil, and season with the salt and pepper, stirring to coat. Roast for 45 minutes, stirring, every 15 minutes to brown evenly.
3. Remove from the oven and transfer to a large pot. Add the water and herbs, and bring to a boil. Reduce the heat and simmer for 45 minutes to 1 hour, skimming to remove any foam that rises to the surface.
4. Remove from the heat and strain through a fine mesh strainer into a clean container. Use immediately, or cool in an ice bath and then refrigerate in an airtight container for up to 5 days. (The stock can be frozen for up to 3 months.)

Emeril's CULINARY GARDEN & TEACHING KITCHEN

LAYERED BLACK BEAN CHILI DIP

Kitchen

YIELD: 1 (9-inch) layered dip (or 6 to 10 tasting portions)

GRADE 5

Ingredients

- 1 cup Black Bean Chili, recipe follows (see **Note**)
- 1 tablespoon minced jalapeño, or to taste
- 1 cup chopped seeded ripe tomato
- 1 cup grated Cheddar or Cheddar Jack cheese
- 1 cup sour cream
- 1 cup shredded lettuce
- ½ cup finely chopped green onions
- 1 ripe avocado, peeled, seed removed, and diced
- 2 tablespoons minced fresh cilantro
- Tortilla Chips, for dipping

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ box grater
- ❒ cutting board
- ❒ paring knife
- ❒ 9-inch pie dish, spoons

Directions

1. In a 9-inch pie dish, spread the black bean chili.
2. Layer the remaining ingredients in the order given, spreading each layer all the way to the edge of the dish.
3. Serve with the tortilla chips.

Note:
This recipe requires cooking the black bean chili in advance of preparing the layered black bean chili dip.

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EMERIL'S BLACK BEAN CHILI

Kitchen

YIELD: 4 servings

GRADE 5

Ingredients

- 1 cup dried black beans
- 2 tablespoons vegetable oil
- 1 cup chopped yellow onions
- 2 teaspoons chopped garlic
- 1 jalapeno, stemmed, seeded and chopped
- 1 bay leaf
- 1 tablespoon chili powder
- 1 teaspoon ground cumin
- ½ teaspoon Emeril's Original Essence
- ½ teaspoon salt
- 4 to 6 cups water or chicken stock, as needed
- 2 tablespoons fresh lime juice
- ¼ cup chopped fresh cilantro
- 1 avocado, seed removed, cubed
- 1 large ripe tomato, cored, seeded, and diced
- 1 cup shredded mild cheddar cheese, optional

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ large saucepan
- ❒ cutting board
- ❒ large mixing bowl
- ❒ wooden spoon

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Soak the beans overnight before proceeding to cook.

Beans may be cooked without soaking but the cook time will be longer.

Directions

1. Rinse beans in a colander under running water and discard any stones and/or dirt. Place beans in a large bowl and add enough water to cover by several inches. Soak beans overnight before proceeding.
2. Drain the beans in a colander.
3. Heat the vegetable oil in a large saucepan over medium-high heat. Add the onions, garlic, jalapeno, bay leaf, chili powder, cumin, Essence, and salt, and stir to coat. Cook, stirring occasionally, until softened, 3 to 4 minutes.
4. Add the beans and stir to combine. Add 4 cups of the water, stir, and bring to a boil. Reduce the heat to a gentle simmer and cook, stirring occasionally, until the beans are tender and thickened, 1 to 2 hours, adding additional water if the chili gets too thick before the beans are tender. (Start checking the beans after about an hour—the cook time can vary tremendously depending on the age of the beans.)
5. Stir in the lime juice and cilantro, adjust the seasoning if necessary, and serve the chili topped with the avocado, tomato, and cheese if desired.

Note:
Recipe may be scaled up proportionally for a larger yield.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

BEANS GALORE SALAD

Kitchen

YIELD: 10 to 12 servings (or 2 quarts)

GRADE 5

This salad is best if made a day in advance, and will keep for up to one week if refrigerated in an airtight nonreactive container.

Talk about a great salad to take on a picnic or bring to a family reunion. Everyone loves this sweet and tangy salad that has—believe it or not— five different kinds of beans! If you make it a day or two in advance, it will taste even better. I'm telling you, you're guaranteed to be a hit with this one!

Ingredients

- ½ cup red kidney beans, soaked overnight
  or 1 ½ cups canned, drained and rinsed red beans
- ½ cup black beans, soaked overnight
  or 1 ½ cups canned, drained and rinsed black beans
- ½ cup Great Northern beans, soaked overnight
  or 1 ½ cups canned, drained and rinsed white beans
- 3 peeled whole garlic cloves, plus 1 teaspoon minced
- ½ pound wax beans, ends trimmed and blanched until crisp-tender
- ½ pound fresh green beans, ends trimmed and blanched until crisp-tender
- 1 ½ cups red wine vinegar
- 1 cup plus 2 tablespoons sugar
- ¾ cup vegetable oil
- 1 teaspoon salt
- ½ medium red onion, chopped (about ½ cup)

Tools

- ❒ four medium saucepans
- ❒ chef's knife
- ❒ colander
- ❒ large glass or other non-reactive bowl
- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ wooden spoon

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Adapted and used with permission from *There's a Chef in My Family!*, pg 68

Directions

1. If using canned beans, go directly to the end of Step 4.
2. If using dried, soaked beans, put the red beans, black beans, and Great Northerns in separate saucepans. Add four cups of water and one garlic clove to each pot.
3. Over high heat, bring each pot to a boil, reduce the heat to medium-low, and cook until the beans are just tender, 30 to 45 minutes.
4. Using oven mitts or pot holders, carefully pour the liquid and the beans away from you into a colander set in the sink. Rinse with cool water, and then transfer the beans to a large nonreactive bowl and cover with plastic wrap. Refrigerate, stirring occasionally, until thoroughly chilled, at least 2 hours.
5. In a saucepan over high heat, combine the red wine vinegar, sugar, oil, salt, and the minced garlic. Cook until the sugar is dissolved, about 5 minutes. Transfer to a medium, nonreactive bowl, cover with plastic wrap, and refrigerate until thoroughly chilled, at least 2 hours.
6. Add the blanched wax beans, green beans, vinegar mixture, and onion to the beans in the large bowl and toss to mix thoroughly. Serve immediately or refrigerate in an airtight container until ready to serve.

Note:
These cooking times will vary from one package of dried beans to another.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

PASTA PRIMAVERA

Kitchen

YIELD: 8 servings (or 10 tasting portions)

GRADE 5

This is a wonderful dish to make in the springtime, when the new vegetables at the market are all so sweet and tender. I think you'll really like making this with one of my favorite pasta shapes—orechiette. The word orechiette means "little ears" in Italian, and this disc-shaped pasta is perfect for holding little bites of vegetables. But choose the shape that you like best!

Ingredients

- ½ cup cubed carrots
- ½ cup asparagus, sliced crosswise into ½-inch pieces
- 1 pound orechiette pasta or other pasta
- 1 tablespoon plus 1 teaspoon salt
- 2 tablespoons unsalted butter
- 2 tablespoons olive oil
- ½ cup chopped yellow onions
- 1 tablespoon minced garlic
- 1 cup cubed zucchini
- 1 cup cubed yellow squash
- ½ cup chopped tomatoes
- ½ cup frozen green peas
- ½ teaspoon ground black pepper
- ¼ cup extra-virgin olive oil
- 2 tablespoons chopped fresh parsley
- ½ cup grated Parmesan cheese (optional garnish)

Contains dairy

Tools

- ❒ 6-quart pot
- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ oven mitts or pot holders
- ❒ small ladle
- ❒ small cup
- ❒ 12-inch skillet
- ❒ 1- to 2-quart saucepan
- ❒ chef's knife
- ❒ wooden spoon
- ❒ colander
- ❒ large mixing bowl
- ❒ plastic wrap or kitchen towel
- ❒ box grater (optional)

Adapted and used with permission from *There's a C hef in My Family*, pg 118

Continued on next page

Directions

1. Bring a large pot of water to a boil.
2. As the pasta water is heating, bring a small saucepan of water to a boil.
3. Add the carrots and asparagus to the small saucepan and blanch for 2 minutes.
4. Using oven mitts or pot holders, remove the small saucepan from the heat and pour the carrots and asparagus away from you into a colander that is set in the sink. Rinse under cold running water to refresh.
5. While cooking the vegetables, add the pasta and 1 tablespoon of the salt to the large pot of boiling water.
6. Return to a boil and cook the pasta until al dente,* stirring occasionally, about 12 to 15 minutes.
7. Turn the stove off, and with a small ladle, transfer ¼ cup of the cooking liquid to a small cup and set aside.
8. Using oven mitts or pot holders, drain the rest of the pot away from you into a colander that is set in the sink.
9. Place the pasta in a large bowl with the ¼ cup cooking liquid and cover with plastic wrap or a clean kitchen towel to keep warm.
10. In a large skillet over medium-high heat, melt the butter and, when hot, add the olive oil.
11. Add the onion and cook, stirring, for 2 minutes.
12. Add the garlic, and cook, stirring, for 30 seconds.
13. Add the zucchini and squash, and cook, stirring, for 3 minutes.
14. Add the cooked carrots and asparagus, and cook, stirring, for 1 minute.
15. Add the tomato, peas, the remaining teaspoon of salt, and the pepper. Stir and remove from the heat.
16. Pour the vegetables over the pasta in the bowl.
17. Drizzle with the extra-virgin olive oil, and add the parsley. Toss to coat evenly.
18. Sprinkle, if you like, with the Parmesan cheese.
19. Serve immediately.

Note:
"Al dente" is an Italian expression that means "to the tooth" and is used to describe pasta or other foods that are cooked only until they offer slight resistance when bitten into, but are not overly soft or overcooked.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

GARAM MASALA

Kitchen

YIELD: ½ cup

GRADE 5

Ingredients

- 2 tablespoons coriander seeds
- 2 tablespoons cumin seeds
- 2 tablespoons cardamom seeds
- 2 tablespoons black peppercorns
- 1 cinnamon stick, cut into pieces
- 1 teaspoon whole cloves
- 1 teaspoon grated nutmeg

Tools

- ❒ measuring spoons
- ❒ small plate
- ❒ nutmeg grater or fine rasp
- ❒ small sauté pan
- ❒ spice or coffee grinder

Directions

1. In a sauté pan, over medium heat, add everything except for the nutmeg. Toast until dark and fragrant, shaking the pan often, 10 to 12 minutes.
2. Remove and cool. Spices may be spooned onto a plate for quicker cooling.
3. Grind the spices in a spice mill or coffee grinder into a fine powder.
4. Remove and stir in the nutmeg.

VEGETABLE CURRY

Kitchen

YIELD: 6 to 8 servings (or 12 tasting portions)

GRADE 5

In India, where this dish hails from, cooks make their own curry powder, which is a blend of different spices. Some of the spices most often used are cumin, coriander, turmeric, cardamom, and ground hot chiles. Some blends have as many as twenty different spices! Here in America, we usually rely on store-bought curry powder for ease and convenience. I have added some garam masala to the recipe here, another blend that you should be able to find in grocery store spice aisles or gourmet markets. If you cannot find it, simply substitute an equal amount of regular curry powder.

Ingredients

- ¼ cup vegetable oil
- 1 medium yellow onion, chopped
- 2 tablespoons finely chopped fresh ginger
- 1 tablespoon minced garlic
- 2 tablespoons finely chopped jalapeño pepper
- 1 ½ tablespoons curry powder
- 1 ½ tablespoons garam masala or an additional 1 ½ tablespoons curry powder
- 2 ¼ cups coconut milk
- 1 (28-ounce) can whole tomatoes, crushed, with juice
- 2 tablespoons sugar
- 1 ½ teaspoons salt
- 1 medium Idaho potato, peeled and cut into 1-inch cubes
- 8 cups assorted vegetables, such as green beans, cauliflower florets, carrots, red and yellow bell peppers, zucchini, and eggplant, cut into bite-size pieces
- 1 (15-ounce) can chickpeas, drained and rinsed
- Cooked basmati rice, for serving, prepared according to package instructions

Continued on next page

Adapted and used with permission from *There's a Chef in My World!*, pg 108

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ can opener
- ❒ wooden spoon
- ❒ dutch oven or large heavy saucepan with lid
- ❒ cutting board
- ❒ rubber gloves
- ❒ vegetable peeler
- ❒ oven mitts or pot holders

Directions

1. Heat the oil in a heavy Dutch oven or large heavy saucepan over high heat. Add the onion and cook until soft, about 4 minutes.
2. Add the ginger, garlic, jalapeño, curry powder, and garam masala and cook for 2 minutes, stirring, until fragrant.
3. Add the coconut milk, tomatoes, sugar, and salt, and bring to a boil. Reduce the heat to a simmer and cook for 10 minutes.
4. Add the potatoes and cook for 15 to 20 minutes, until the potatoes are just fork-tender.
5. Add the remaining vegetables and chickpeas. Stir well to combine, cover, and reduce the heat to medium-low. Cook, stirring only occasionally, until the vegetables are tender but not falling apart, 40 minutes to 1 hour.
6. Serve with hot cooked rice, preferably basmati if available.

SUMMER SQUASH AND ZUCCHINI CASSEROLE

Kitchen

YIELD: 10 servings

GRADE 6

Ingredients

- 1 ½ tablespoons unsalted butter
- 2 tablespoons olive oil
- 1 cup chopped onions
- 1 ½ teaspoons salt
- 1 teaspoon freshly ground black pepper
- 1 teaspoon minced garlic
- 2 pounds summer squash (about 6 medium), sliced into thin rounds
- 2 pounds zucchini (about 6 medium), sliced into thin rounds
- 1 teaspoon finely chopped fresh thyme
- 3 large eggs
- ¼ cup heavy cream
- 1 cup crushed butter crackers
- ½ cup grated Parmesan cheese

Contains dairy and egg

Tools

- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ large sauté pan
- ❒ slotted spoon
- ❒ medium mixing bowl
- ❒ box grater
- ❒ chef's knife
- ❒ 9- by 13-inch baking dish
- ❒ wooden spoon
- ❒ whisk
- ❒ oven mitts or pot holders

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Directions

1. Preheat the oven to 350 degrees F. Grease a 9- by 13- inch baking dish with ½ tablespoon butter.
2. Heat the olive oil and the remaining 1 tablespoon butter in a large sauté pan over medium-high heat.
3. Add the onions, salt, and black pepper and cook until the onions are soft, about 5 minutes.
4. Add the garlic and cook until fragrant, about 30 seconds.
5. Add the squash and zucchini and cook until tender, stirring occasionally, about 20 minutes. Stir in the thyme and remove from the heat.
6. Using a slotted spoon, transfer the vegetables to the prepared baking dish, reserving the cooking liquid.
7. Combine the eggs and cream in a medium bowl and whisk to blend.
8. Gradually whisk the reserved cooking liquid into the egg mixture.
9. When all the cooking liquid is incorporated, pour the mixture over the vegetables in the baking dish. Using a spoon, gently shift the vegetables around so the egg mixture is evenly distributed.
10. Bake until the mixture sets, about 30 minutes.
11. Remove from oven and sprinkle first with the crackers and then with the Parmesan, and then return to the oven. Bake until golden brown, 10 to 15 minutes.
12. Serve hot or warm.

KA-BAM KABOBS

Kitchen

YIELD: 6 servings

GRADE 6

My suggestion here for scaling this up in a cost-effective manner would be to add more veggies to the skewers—cubed zucchini and several different colored peppers.

Ingredients

- 8 ounces button mushrooms
- 1 medium yellow onion, peeled
- 1 large each green, red, and yellow bell peppers (add 1 of each)
- 1 large or 2 to 3 small zucchini, sliced into ½-inch discs
- 1 ½ pounds beef sirloin, fat trimmed by the butcher or an adult
- 1 tablespoon Baby Bam
- ¼ cup Worcestershire sauce
- ¼ cup soy sauce
- 2 tablespoons balsamic vinegar
- 2 tablespoons vegetable oil
- 1 tablespoon chopped garlic

Contains egg

Tools

- ❒ knife
- ❒ measuring cups and spoons
- ❒ aluminum foil
- ❒ oven mitts or potholders
- ❒ bamboo skewers soaked in water for 30 minutes or metal kabob skewers
- ❒ cutting board
- ❒ tongs
- ❒ baking sheet
- ❒ large glass bowl or plastic resealable bag

Note:
You really have to use either a glass bowl or a re-sealable plastic bag to marinate the meat. Metal will react with the marinade and give the food a funny flavor.

Adapted and used with permission from *There's a Chef in My Soup!*, pg 140

Continued on next page

Directions

1. Place the mushrooms in a large bowl of water. Gently turn the mushrooms in the water to remove any grit or dirt. Quickly remove and dry on a clean kitchen towel. Set aside.
2. Cut the onion in half. Cut each half into quarters, keeping the pieces together as much as possible.
3. Remove the upper ¼ of the bell pepper. Remove the stem end, inside ribs, and seeds. Cut the pepper into quarters crosswise, then into 1-inch pieces.
4. Cut the meat into 1-inch pieces and place in a large glass bowl. Add the Baby Bam and toss to coat. Add the Worcestershire sauce, soy sauce, balsamic vinegar, vegetable oil, and garlic, and stir to combine. Cover tightly with plastic wrap and refrigerate for at least 2 hours and up to 4 hours.
5. Preheat the oven to 450 degrees F and place the oven rack in the top position.
6. Line the baking sheet with foil.
7. Remove the meat from the refrigerator. Thread one meat cube onto a skewer, followed by a mushroom, a piece of bell pepper, zucchini, and a chunk of onion. Continue threading alternating ingredients onto the skewers, until the skewer is full. Place the filled skewers on the baking sheet.
8. Transfer the baking sheet to the oven and bake the kabobs for 10 minutes for medium.
9. Remove from the oven. With an oven mitt or tongs, hold one end of the skewer. In the other hand, with a fork, push the meat and vegetables from the skewer onto a plate. Repeat with the remaining skewers, and serve hot.

Caution

- Always wash your hands with lots of soap and warm water after handling raw meat!
- Be careful when threading the meat onto the sharp skewers! Do not grill without adult supervision!

ONE STOP BREAKFAST CASSEROLE

Kitchen

YIELD: 8 to 10 servings

GRADE 6

One stop at the breakfast casserole will keep you happy till lunchtime. Because it can be assembled the night before, it's also just right to make for a brunch or when company is coming. In the morning, all you have to do is pop it in the oven to bake!

Ingredients

- 8 ounces breakfast sausage or bulk sausage, casing removed
- 2 large shallots, minced (about 1/3 cup)
- 1 tablespoon butter
- 12 to 16 ½-inch-thick slices of day-old French bread (toast lightly if fresh)
- 6 ounces shredded cheese, such as Monterey Jack, Cheddar, or Swiss (1 ½ cups)
- 10 large eggs
- 2 ½ cups half-and-half
- ½ teaspoon salt
- ¼ teaspoon ground white pepper

Contains dairy and egg

Tools

- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ wooden spoon
- ❒ serrated bread knife
- ❒ medium mixing bowl
- ❒ plastic wrap
- ❒ chef's knife
- ❒ medium nonstick skillet
- ❒ 9-inch square baking dish
- ❒ box grater
- ❒ whisk
- ❒ oven mitts or pot holders

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Adapted and used with permission from *Emerils.com*

Directions

1. Heat a skillet over medium heat, and—when hot, add the sausage. Cook until sausage begins to brown, breaking it into small pieces with a wooden spoon, about 4 minutes.
2. Add the shallots to the skillet and continue to cook until meat is golden brown and the shallots are soft, about 2 minutes longer.
3. Remove the skillet from the heat and set aside.
4. Butter the baking dish and line the bottom with half of the bread slices.
5. Top the bread slices with half of the sausage-shallot mixture and half of the grated cheese. Make another layer with the remaining bread, sausage, and cheese.
6. In a mixing bowl, combine the eggs, half-and-half, salt, and pepper and whisk to combine.
7. Pour the egg mixture evenly over the layered bread mixture. Cover with plastic wrap and refrigerate for at least 1 hour and up to overnight.
8. Remove the casserole from the refrigerator and allow to come to room temperature for about 20 minutes. Position rack in center of oven and preheat the oven to 325 degrees F.
9. Remove the plastic wrap and bake the casserole, uncovered, until puffed and golden brown, about 1 hour.
10. Using oven mitts or pot holders, remove the casserole from the oven and let rest for 5 minutes before serving.

GRILLED FISH TACOS

WITH A ROASTED CHILE AND AVOCADO SALSA

Kitchen

YIELD: 10 tacos

GRADE 6

This is such an easy, healthful dish. Use any mild, flaky fish that you like, mahimahi, cod, lemon fish (cobia), amberjack...the list goes on. Don't skip the salsa!

Ingredients

- 1 Hass avocado, peeled, and pit removed
- 2 poblano chiles, roasted, peeled, and seeded
- 1 jalapeño, roasted, peeled, and seeded
- 1/3 cup plus 2 tablespoons olive oil
- 1 cup chopped onion
- ¾ cup cilantro leaves
- Juice of 1 lime
- 1 ½ teaspoons kosher salt
- 3 tablespoons water
- 1 ½ pounds amberjack fillet (or other mild, flaky fish)
- ½ teaspoon freshly ground white pepper
- 10 fresh white or yellow corn tortillas, warmed according to package directions or grilled/griddled briefly to heat through
- 5 slices ripe tomato, cut in half
- 2 limes, halved

Tools

- ❒ paring knife
- ❒ cutting board,
- ❒ measuring cups and spoons
- ❒ grill or grill pan
- ❒ fork
- ❒ rubber gloves for handling chiles (optional)
- ❒ chef's knife
- ❒ juicer
- ❒ blender
- ❒ tongs
- ❒ spoons

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Adapted and used with permission from *Emerils.com*

Directions

1. In a blender, combine the avocado with the roasted poblano and jalapeño chiles, the 1/3 cup olive oil, ¼ cup of the chopped onion, ¼ cup of the cilantro leaves, the lime juice, ½ teaspoon of the kosher salt, and the water. Puree until smooth, and set aside. Taste and adjust the seasoning if necessary.
2. Preheat a grill to medium, or preheat a cast-iron grill pan over medium heat.
3. Season the amberjack with the remaining 1 teaspoon kosher salt and the white pepper. Rub the remaining 2 tablespoons olive oil over both sides of the fish, and place the fish on the grill. Grill until the fish is just cooked through and flakes easily, about 4 minutes on each side. Remove the fish from the grill, and use a fork to break it into flakes or small chunks.
4. To assemble the tacos, divide the fish evenly among the tortillas. Garnish each taco with some of the chopped onion and cilantro leaves. Place a half tomato slice over each, and drizzle with some of the avocado salsa. Squeeze some lime juice over the tacos, fold the tortilla sides together, and serve immediately.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

HOMEMADE YOGURT

Kitchen

YIELD: 1 quart

GRADE 6

Ingredients

- 1 quart milk
- 3 heaping tablespoons commercial plain yogurt
- sugar or honey, to sweeten to taste
- 1 pint raspberries, for serving

Contains dairy

Tools

- ❒ large thermos
- ❒ medium saucepan
- ❒ small bowl
- ❒ candy thermometer
- ❒ whisk
- ❒ wooden spoon

Directions

Note:
There are several yogurt-making devices, but you can easily make it at home in a large thermos bottle using a candy thermometer.
Sterilize all equipment in boiling water before using.

1. Bring milk to a boil, then cool to 100 degrees F.
2. In a small bowl blend yogurt with ¼ cup of warm milk. Whisk it back into warm milk. Pour into a pre-warmed thermos, seal, and set aside in a warm place for 7 hours.
3. Turn yogurt out into a bowl that is set in a bowl of ice water, stirring to quicken cooling. Cover and refrigerate for 4 hours, or until thickened.
4. Sweeten to taste, if desired, and serve with raspberries. Yogurt will keep for 4 to 5 days, covered and refrigerated.

Adapted and used with permission from *Emerils.com*

LEMON POPPY SEED MUFFINS
WITH RASPBERRY BUTTER

Kitchen

GRADE 6

YIELD: 12 Muffins, 1 ½ cups of Raspberry Butter

These muffins are moist and delicious, a wonderful treat for a brunch or ladies' tea. The raspberry butter is a great touch.

Ingredients

For the Muffins:

- 1 ¾ cups all-purpose flour
- ¾ cup sugar, plus 1 teaspoon for sprinkling
- 2 teaspoons baking powder
- ¼ teaspoon baking soda
- ¼ teaspoon salt
- 1 egg, lightly beaten
- ¾ cup buttermilk
- ¼ cup fresh lemon juice
- ½ cup (1 stick) unsalted butter, melted
- 1 tablespoon poppy seeds
- 1 teaspoon lemon zest

Contains dairy and egg

For the Raspberry Butter:

- 1 (6-ounce) container fresh raspberries, picked through
- 1 teaspoon fresh lemon juice
- 3 tablespoons confectioners' sugar
- 1 ½ cups (3 sticks) unsalted butter, at room temperature
- 2 tablespoons honey
- Pinch salt

Contains dairy

Tools

For the Muffins:

- ❒ measuring cups and spoons
- ❒ whisk
- ❒ sifter
- ❒ muffin pan
- ❒ rubber spatula
- ❒ spoon
- ❒ wire cooling rack
- ❒ zester or fine grater
- ❒ oven mitts or pot holders

For the Raspberry Butter:

- ❒ food processor
- ❒ fine-mesh sieve
- ❒ medium bowl
- ❒ medium saucepan
- ❒ measuring cups and spoons
- ❒ oven mitts or pot holders
- ❒ electric mixer

Continued on next page

Directions

For the Muffins:

1. Preheat oven to 350 degrees F. Lightly grease a standard 12-well muffin pan.
2. Sift together the flour, sugar, baking powder, baking soda, and salt into a large mixing bowl. In a separate bowl, whisk together the egg, buttermilk, and lemon juice.
3. Make a well in center of the flour mixture and pour the buttermilk mixture into the well. Add the melted butter and use a rubber spatula to blend with quick strokes, being careful not to overmix the batter; it should still be slightly lumpy. Gently stir in the poppy seeds and lemon zest.
4. Spoon batter into the prepared muffin pan, filling each well ¾ full. Bake until slightly puffed and golden, 20 to 22 minutes. Lightly sprinkle sugar over the tops of the muffins, if desired.
5. Remove the muffins from the pan and cool slightly on a wire rack.
6. Serve the muffins warm, with Raspberry Butter.

For the Raspberry Butter:

1. Place raspberries in a food processor and pulse until completely pureed. Place raspberry puree in a fine-meshed sieve set over a medium bowl, pressing to extract all the juice from the puree. Discard the seeds and pulp.
2. Pour the strained puree into a medium saucepan and add the lemon juice and sugar. Bring mixture to a boil, and cook for 2 minutes, or until the mixture slightly thickened. Remove from the heat and cool puree completely.
3. Cream together the butter, honey, salt, and cooled puree until smooth and well blended. (This may take up to 5 minutes on high speed.) Place butter in molds or onto sheets of plastic wrap and roll into logs (or into a bowl for spreading). Refrigerate until chilled and firm.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

SEARED PORK CHOPS

WITH HOISIN BBQ SAUCE AND PINEAPPLE ASIAN SLAW

Kitchen

YIELD: 8 to 10 servings

GRADE 7

Ingredients

For the Hoisin BBQ sauce:

- ¾ cup hoisin sauce
- 1 ½ teaspoons brown sugar
- 2 tablespoons soy sauce
- 2 tablespoons ketchup
- 1 tablespoon honey
- 1 tablespoon apple cider vinegar
- 1 ½ teaspoons Sriracha, or other spicy chili garlic sauce

Contains soy

For the Pineapple Asian Slaw:

- 1 ½ cups thinly sliced or shredded napa cabbage
- 1 ½ cups thinly sliced or shredded red cabbage
- 1 cup shredded or julienne carrot
- 1 cup mung bean sprouts
- ½ cup thinly sliced green onion
- ¼ cup chopped fresh cilantro leaves
- 2 tablespoon soy sauce
- 3 tablespoons rice vinegar
- 2 teaspoons sesame oil
- Salt to taste
- freshly ground black pepper
- 1 cup small-diced fresh pineapple

Contains soy

For the Pork Chops:

- 8 to 10 bone-in pork chops
- Salt and freshly ground black pepper
- ¼ cup olive oil or peanut oil

Contains peanuts

Continued on next page

Tools

- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ paring knife
- ❒ large skillet
- ❒ serving platter
- ❒ meat thermometer
- ❒ mixing bowls
- ❒ chef's knife
- ❒ wooden spoons
- ❒ tongs
- ❒ oven mitts or pot holders

Directions

1. Prepare the Hoisin BBQ Drizzle by combining all the ingredients in a mixing bowl and whisking until smooth. Sauce may be kept in the refrigerator for up to a 1 month in a nonreactive airtight container.
2. Prepare the Pineapple Asian Slaw: In a medium mixing bowl combine the cabbages, carrot, mung bean sprouts, green onion, and cilantro. Add the soy sauce, rice vinegar, sesame oil and the salt and pepper to taste. Toss to combine and set aside briefly until ready to use. Right before serving, stir in the pineapple. The slaw can be made up to 1 day in advance, if desired. (If so, pull it out of the refrigerator to sit out at room temperature about an hour before serving.)
3. Season the pork chops lightly on both sides with the salt and pepper and heat a large skillet over medium-high heat until very hot.
4. When hot, add 2 tablespoons of the oil and cook half of the pork chops until browned on one side, 2 to 3 minutes. Turn and cook until golden around the edges on the second side and a meat thermometer inserted into the center of the chop registers 140 degrees F. Repeat with the remaining pork chops.
5. Serve the pork chops drizzled with the Hoisin BBQ Sauce with the Pineapple Asian Slaw.

FALL QUINOA TABBOULEH

Kitchen

YIELD: 8 to 10 servings

GRADE 7

Ingredients

- 4 cups cooked quinoa
- 1 ½ cups cored, diced apple, preferably Honey Crisp or Pink Lady
- 1 cup chopped, toasted walnuts
- 1 cup finely chopped flat leaf parsley
- ½ cup finely diced red onion
- ½ cup pomegranate seeds
- ¾ cup walnut oil
- ½ cup apple cider vinegar
- 3 tablespoons honey
- 1 teaspoon pomegranate molasses
- ½ teaspoon sumac
- Kosher salt and freshly ground pepper, to taste

Contains tree nuts

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife,
- ❒ wooden spoon
- ❒ cutting board
- ❒ large mixing bowl

Directions

1. Combine the quinoa, apple, walnuts, parsley, red onion, and pomegranate seeds in a large mixing bowl and mix well.
2. In a small mixing bowl combine the walnut oil, apple cider vinegar, honey, pomegranate molasses, sumac and salt and pepper and mix well. Toss the quinoa with the dressing and let stand at room temperature for at least 20 minutes before serving. Taste and adjust the seasoning if necessary.
3. Serve at room temperature.

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Emeril's CULINARY GARDEN & TEACHING KITCHEN

POSOLE

Kitchen

YIELD: 8 to 10 servings

GRADE 7

Ingredients

- 2 tablespoons olive oil
- 4 pounds pork shoulder, cut into 1 ½-inch pieces
- Emeril's Original Essence
- 2 cups chopped onions
- 2 cups peeled, seeded, and chopped plum tomatoes
- 2 tablespoons minced garlic
- Pinch of crushed red pepper, or to taste
- Pinch of cumin, or to taste
- 4 quarts pork stock
- 32 ounces canned, drained hominy
- ¼ cup chopped fresh cilantro
- Salt and pepper
- ½ cup chiffonade green leaf lettuce
- ¼ cup julienned radish
- ½ cup minced red onion
- ½ cup grated Monterey Jack cheese
- ¼ cup chiffonade fresh cilantro

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ tongs
- ❒ ladle
- ❒ cutting board
- ❒ large soup pot or dutch oven
- ❒ wooden spoon

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Directions

1. In a large soup pot or Dutch oven, heat the olive oil. Season the pork lightly with Essence. When the oil is hot, sear the meat until golden brown, about 2 minutes on each side. (Meat may also be browned in a large skillet if preferred, and then transferred to the soup pot.)
2. Add the onions and continue cooking for 2 minutes. Stir in the tomatoes, and garlic. Season the mixture with crushed red pepper and cumin.
3. Stir in the stock and bring the liquid to boil. Season the liquid lightly with salt and pepper. Reduce the heat so that the stock simmers gently and cook until the meat is nearly tender, 45 minutes to 1 hour.
4. Add the hominy and cook for 30 minutes longer, or until the meat is very tender and the stew thickens. Stir in the cilantro.
5. Spoon the soup into individual bowls and garnish each soup with the lettuce, radish, onions, cheese and cilantro.

FIVE GRAIN SALAD

Kitchen

YIELD: 8 to 10 servings

GRADE 7

There are numerous health benefits to eating whole grains: they are low in fat, high in fiber, and one of nature's super foods.

Ingredients

- 3 cups cooked wild rice
- 1 ½ cups cooked amaranth
- 1 ½ cups cooked quinoa
- 1 ½ cups cooked millet
- 1 ½ cups cooked brown Jasmati, brown basmati, or brown jasmine rice
- 2 teaspoons grated orange zest
- 1 ½ cup fresh orange segments
- 1 cup diced fennel (small dice)
- ½ cup diced radishes (small dice)
- ¾ cup extra-virgin olive oil
- ¼ cup plus 2 tablespoons freshly squeezed orange juice
- ¼ cup red wine vinegar
- 1 tablespoon chopped fresh fennel fronds
- 1 teaspoon chopped fresh dill
- 1 ½ teaspoons kosher salt
- ½ teaspoon freshly ground black pepper

Tools

- ❒ measuring cups and spoons
- ❒ paring knife
- ❒ chef's knife
- ❒ plastic wrap
- ❒ box grater or rasp
- ❒ cutting board
- ❒ large bowl,
- ❒ wooden spoon

Directions

1. Combine all the ingredients in a large bowl.
2. Refrigerate, covered, for at least 1 hour or as long as 3 to 4 days before serving. Remove from the refrigerator and allow to come to room temperature before serving.

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Emeril's CULINARY GARDEN & TEACHING KITCHEN

CREOLE RICE SALAD

Kitchen

YIELD: 8 to 10 servings

GRADE 7

Ingredients

- 6 cups cooked long-grain rice, at room temperature
- 1 cup finely chopped yellow onions
- 1 cup finely chopped celery
- 1 cup chopped green onions
- ½ cup finely chopped bell peppers
- ½ cup sliced pimiento-stuffed green olives
- ½ cup finely chopped Picked Banana Peppers
- 2 tablespoons finely chopped parsley
- 2 tablespoons apple cider vinegar
- ¼ cup Creole or whole-grain mustard
- 1 ½ teaspoons salt
- ½ teaspoon freshly ground black pepper
- 1 teaspoon Tabasco sauce
- ½ cup extra-virgin olive oil
- 8 hard-boiled eggs, coarsely chopped

Contains egg

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ whisk
- ❒ cutting board
- ❒ large salad bowl
- ❒ wooden spoon.

Directions

1. Combine the rice, onion, celery, green onion, bell pepper, olives, banana peppers, and parsley in a large salad bowl and toss to mix well.
2. In a small bowl, whisk together the vinegar, mustard, salt, pepper, and Tabasco until thoroughly combined. Add the olive oil in a slow stream until completely incorporated.
3. Drizzle the dressing over the rice mixture and stir until well-combined. Taste and adjust the seasoning if necessary. Add the eggs and toss gently to combine. Refrigerate for at least 2 hours before serving.
4. Serve chilled.

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Emeril's CULINARY GARDEN & TEACHING KITCHEN

FRIED WILD MUSHROOM SALAD

WITH WILD MUSHROOM SALAD DRESSING

Kitchen

YIELD: 8 to 10 salad servings, 1 ½ cups Salad Dressing

GRADE 7

Ingredients

For the Fried Wild Mushroom Salad

- 1 ½ cups Wild Mushroom Salad Dressing, or as needed for dressing greens (recipe follows)
- 1 ½ cups all-purpose flour
- 4 tablespoons Emeril's Original Essence or other Creole Seasoning
- 2 cups bread crumbs
- 4 large eggs
- 2/3 cup milk
- 6 cups assorted fresh wild mushrooms, such as chanterelles, morels, shiitakes, and porcinis
- 1 cup olive oil, or more as needed for frying
- 12 cups assorted greens (combine Bibb, mache, frisée, radicchio, watercress, arugula, or other salad greens)
- 1 cup, plus 2 tablespoons coarsely grated fresh Parmesan cheese
- 8 to 10 turns freshly ground black pepper

Contains dairy and egg

For the Wild Mushroom Salad Dressing

- ¾ cup olive oil
- ¾ cup sliced fresh wild mushrooms, such as chanterelles, shiitakes, oysters, black trumpets, or other wild mushrooms
- ¼ cup plus 2 tablespoons mayonnaise
- 3 tablespoons sherry vinegar
- 2 tablespoons minced shallots
- 1 ½ teaspoons minced garlic
- 1 ½ tablespoons freshly squeezed lemon juice
- ¾ teaspoon salt, plus more to taste
- ½ teaspoon freshly ground black pepper
- 2 tablespoons freshly grated Parmesan cheese

Contains dairy

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Tools

For the Fried Wild Mushroom Salad

- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ three medium bowls
- ❒ whisk
- ❒ box grater
- ❒ pepper mill
- ❒ large baking sheet
- ❒ large skillet
- ❒ tongs
- ❒ paper towels
- ❒ large salad bowl
- ❒ wooden spoons or salad tongs

For the Salad Dressing

- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ chef's knife
- ❒ small skillet
- ❒ wooden spoon
- ❒ blender
- ❒ box grater
- ❒ juicer

Directions

For the Fried Wild Mushroom Salad

1. Make the Wild Mushroom Salad Dressing, and set aside.
2. In a medium bowl, combine the flour and 2 tablespoons of the Essence. In another bowl, combine the bread crumbs with the remaining 2 tablespoons of Essence. In a third bowl, beat the eggs with the milk.
3. Stem the mushrooms. Working in small batches, dredge them first in the seasoned flour, then dip them in the egg wash, and then dredge them in the seasoned bread crumbs, coating each mushroom thoroughly. Transfer the breaded mushrooms to a baking sheet and repeat until all mushrooms have been breaded.
4. Heat the oil in large skillet over high heat. When the oil is hot, fry the mushrooms in batches until golden on all sides, 2 to 3 minutes. Remove them and drain on paper towels, and repeat with the remaining mushrooms.
5. Toss the greens in a salad bowl with enough of the dressing to coat. Add the fried mushrooms, and ¼ cup of the Parmesan and toss well.
6. To serve, divide the salad evenly among 8 to 10 small plates or bowls and garnish each with 1 turn of black pepper. Sprinkle each salad with some of the remaining Parmesan.

For the Wild Mushroom Salad Dressing

1. Heat ¼ cup of the oil in a small skillet over high heat. When the oil is hot, add the mushrooms and sauté, stirring occasionally, until golden, about 3 minutes. Remove from the heat.
2. After cooling slightly, spoon the mushrooms and any remaining oil from the skillet into a blender. Add the mayonnaise, vinegar, shallots, garlic, lemon juice, salt and pepper and purée until mostly smooth.
3. With the machine running, stream in the remaining ½ cup oil and process until thoroughly blended.
4. Add the Parmesan, taste, and adjust the seasoning if necessary.
5. Serve immediately or refrigerate for up to several days. Dressing may be thinned with a bit of milk if it becomes too thick.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

VEGETABLE FRITTATA

Kitchen

YIELD: 8 to 10 servings (or 1 (10-inch) frittata

GRADE 7

Use any veggies you like! This is a great dish for breakfast, lunch or dinner.

Ingredients

- 8 eggs
- 3 tablespoons heavy cream
- ½ teaspoon salt
- ¼ teaspoon freshly ground black pepper
- 3 tablespoons butter
- 1 cup thinly sliced onions
- 1 cup thinly sliced bell peppers (yellow, red, orange, or a mix)
- 1 cup thinly sliced zucchini
- 1 cup fresh spinach
- 1 cup small-diced smoked ham
- 2 tablespoons chopped fresh herbs, such as chives, basil, thyme, parsley, or your favorite mix
- 1 cup grated Swiss cheese (about ¼ pound)
- ¼ cup grated Parmigiano-Reggiano cheese, for serving

Contains dairy and egg

Tools

- ❒ medium mixing bowl
- ❒ cutting board
- ❒ box grater
- ❒ 10-inch ovenproof sauté pan
- ❒ heatproof rubber spatula
- ❒ oven mitts or pot holders
- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ whisk
- ❒ wooden spoon
- ❒ serving plate

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Directions

1. Set a rack in the upper third of oven and preheat broiler.
2. In a medium mixing bowl, whisk eggs, cream, salt, and pepper until combined.
3. In a 10-inch ovenproof sauté pan, melt 2 tablespoons butter over medium-high heat.
4. Add onions and peppers and cook, 7 to 8 minutes, stirring as needed, until soft. Add zucchini and spinach (or other chopped fresh vegetables) and cook, 2 minutes. Add ham and cook until warmed through, 1 minute. Add remaining tablespoon butter and, when melted, add egg mixture. Sprinkle fresh herbs over eggs and top with Swiss cheese.
5. Reduce heat to medium and cook eggs, undisturbed, 3 minutes, or until surface of eggs begins to bubble and bottom starts to set.
6. Immediately place pan in oven and broil eggs until golden brown on top and sides, 3 to 4 minutes.
7. Remove pan from oven. Using a rubber spatula, loosen frittata from sides of pan.
8. Tilt pan and gently slide frittata onto a serving plate.
9. Cut into portions, garnish with Parmesan cheese, and serve hot or warm.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

STEAMED BABY CAULIFLOWER

Kitchen

YIELD: 10 to 12 servings

GRADE 7

Ingredients

For the Cauliflower:

- 2 cups water
- 2 ribs celery (with leaves), cut into several pieces
- 1 lemon, cut in half
- 1 head garlic, cut in half
- 6 pounds assorted colored baby cauliflower, such as yellow, orange, and purple

For the Dressing:

- 2 lemons, juiced
- 1 teaspoon minced garlic
- ¾ cup extra-virgin olive oil
- Salt and pepper, to taste

Tools

- ❒ chef's knife
- ❒ juicer
- ❒ large saucepan
- ❒ large bowl
- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ steamer basket
- ❒ spoons or spatulas for tossing

Directions

1. Heat the water, celery, lemon, and garlic together in a saucepan that will accommodate a steamer basket and bring water to a boil.
2. Place half of the cauliflower in the steamer basket and set over the boiling water. Steam cauliflower for 5 to 7 minutes, or until fork tender. Turn cauliflower out into a large serving bowl and repeat with any remaining cauliflower.
3. While the cauliflower is steaming, combine the dressing ingredients in a small bowl. Season to taste with salt and pepper.
4. Toss the steamed cauliflower with the dressing and serve warm.

BLACK-EYED PEA SALAD

Kitchen

YIELD: 12 servings

GRADE 8

In the Deep South folks feel pretty strongly about their black-eyed peas! In fact, they love them so much that they even make a salad out of them! In a pinch, you can also make this dish with good-quality canned black-eyed peas. Just drain, measure, and replace them in the recipe.

Ingredients

- 10 cups cooked and drained dried black-eyed peas (see **Note**)
- 8 slices crisp cooked bacon, crumbled, fat reserved separately
- 1 cup red wine vinegar
- 1 cup olive oil
- 1 cup finely chopped red onions (½ medium onion)
- 1 cup finely chopped red bell peppers
- ¼ cup plus 2 tablespoons finely chopped green onions
- ¼ cup finely chopped jalapeños
- ¼ cup finely chopped fresh parsley
- 1 tablespoon minced garlic
- 1 tablespoon Emeril's Original Essence
- 1 ½ teaspoons salt
- 1 teaspoon freshly ground black pepper

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ wooden spoon or rubber spatula
- ❒ cutting board
- ❒ large bowl
- ❒ plastic wrap

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Directions

1. Combine the black-eyed peas, bacon, no more than 1/3 cup of the reserved bacon fat, and all the remaining ingredients in a large bowl; toss well to combine. Cover and refrigerate for at least 4 hours or preferably overnight, stirring occasionally.
2. Allow the salad to sit at room temperature for 30 minutes before serving. Toss well just before serving. Taste and adjust the seasoning if necessary.

Note:
To make 10 cups cooked black-eyed peas, soak 4 cups dried black-eyed peas for 4 hours or up to overnight. Drain the peas and place them in a large saucepan. Add water to cover by 2 inches and bring to a boil. Reduce the heat to a simmer and cook until just tender, 20 to 30 minutes. Drain and transfer to a bowl to cool.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

CANNELLINI BEAN SALAD
WITH PARSLEY PESTO

Kitchen

YIELD: 10 to 12 servings

GRADE 8

Ingredients

- 2 cups packed fresh parsley leaves
- 4 teaspoons minced garlic
- 4 tablespoons fresh lemon juice, or to taste
- 1 ¾ teaspoons salt
- 1 cup, plus 2 tablespoons extra virgin olive oil
- 4 (15-ounce) cans cannellini beans
- ½ cup minced yellow onions
- ½ teaspoon ground black pepper
- Pinch cayenne
- 2/3 cup very finely grated Parmesan cheese, or crumbled goat cheese
- Toasted pita bread triangles or ½-inch thick lightly toasted French bread

Contains dairy

Tools

- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ food processor or blender
- ❒ wooden spoon
- ❒ grill or grill pan
- ❒ box grater
- ❒ chef's knife
- ❒ colander
- ❒ large skillet
- ❒ juicer (optional)
- ❒ serving platter

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Directions

1. In a blender or bowl of a small food processor, combine the parsley, 1 ½ teaspoons of garlic, 2 tablespoons of the lemon juice and 1 teaspoon of salt in a blender or small food processor.
2. Process on high speed for 30 seconds. Slowly drizzle in ¾ cup of the oil with the motor running and process until smooth. Adjust the seasoning to taste.
3. Place the beans in a colander and rinse under cold running water. Drain.
4. Heat the remaining 6 tablespoons of the oil in a large skillet over medium heat. Add the onions and remaining 2 ½ teaspoons of the garlic and cook until soft and fragrant, about 2 minutes. Add the drained beans, remaining 2 tablespoons of the lemon juice, remaining ¾ teaspoon salt, the black pepper and cayenne, and cook, stirring, until softened and warmed through, about 3 minutes. Taste and adjust the seasoning by adding more salt and/or lemon juice to taste.
5. Place pita bread on the grill and cook.
6. Remove the beans from the pan and transfer to a decorative bowl or platter. Sprinkle with the Parmesan cheese.
7. Drizzle some of the parsley pesto over the beans and serve with the toast for dipping.

GALLO PINTO

Kitchen

YIELD: 8 to 12 servings

GRADE 8

Ingredients

- 6 tablespoons oil
- 1 cup chopped onions
- ½ cup chopped bell peppers
- 3 cups cooked black beans (drained)
- 2 tablespoons Salsa Lizano or Worcestershire sauce
- 5 cups cooked rice
- 2 tablespoons chopped coriander (cilantro)

Optional Ingredients

- Cooked eggs
- Bacon strips or sausage

Tools

❒ measuring cups and spoons
❒ chef's knife
❒ wooden spoon
❒ cutting board
❒ large heavy saucepan

Directions

1. Heat the oil in a large heavy saucepan over medium heat.
2. Add the onions and bell peppers and cook, stirring, for about 2 minutes.
3. Add the black beans and the sauce, and cook, stirring occasionally, or about 10 minutes.
4. Add the rice and cilantro and mix gently but thoroughly.
5. Add any additional ingredients if desired and/or serve hot as an accompaniment to fried eggs and/or pork or beef chops.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

PITA BREAD

Kitchen

YIELD: 8 to 12 breads

GRADE 8

Ingredients

- 1 tablespoon active dry yeast
- 1 teaspoon sugar
- 2 cups warm water, about 110 degrees F
- 5 to 6 cups unbleached all-purpose flour
- 2 teaspoons salt
- 3 tablespoons olive oil, or vegetable oil

Tools

- ❒ small bowl
- ❒ thermometer
- ❒ kitchen cloths
- ❒ rolling pin
- ❒ measuring cups and spoons
- ❒ large bowls
- ❒ heavy baking sheet
- ❒ oven mitts or pot holders

Directions

1. In a small bowl, dissolve the yeast and sugar in ¼ cup of the water. Set aside until foamy, about 5 minutes.
2. Into a large bowl, sift 5 cups of the flour and the salt, and make a well in the center. Pour the yeast into the center well and mix the yeast into the flour, working in the remaining water.
3. Turn out onto a lightly floured surface and knead into a soft, pliable dough. Continue working the dough until it is smooth and shiny, 10 to 15 minutes, adding more flour as necessary. Knead 2 tablespoons of the oil into the dough and work the dough over itself into a smooth ball.

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4. Pour the remaining tablespoon of oil into a large bowl. Place the dough in the bowl, cover with a damp kitchen cloth, and let rise in a warm, draft-free spot until doubled in size, about 1 ½ hours.
5. Preheat the oven to 450 degrees F at least 30 minutes before baking. Lightly oil a heavy baking sheet.
6. Punch down the dough and lightly knead for 2 minutes.
7. Divide into 8 to 12 equal portions, depending upon your preference, and roll into balls. Flatten and roll with a rolling pin to about ¼-inch thickness. Place on a lightly floured surface, cover with a lightly floured kitchen cloth and let rise until doubled in size, 30 to 40 minutes.
8. Transfer to the prepared baking sheet and bake until puffed and golden, about 5 minutes. Turn and bake on the second side, about 4 minutes. Remove from the oven and let cool on wire racks. Repeat with the remaining dough.
9. Enjoy warm or at room temperature.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

EGG DROP SOUP

Kitchen

YIELD: 8 to 12 servings

GRADE 8

This soup is based on the Chinese version, but the Italians have one too! This may be one of the easiest soups to make, but just because it's quick doesn't mean it's not packed with flavor. The best part is that you can get creative with the vegetables that you add, such as snow peas or Chinese baby corn. When I'm not feeling well, this is the perfect soup to make me feel better.

Ingredients

- 12 cups reduced-sodium chicken broth
- 12 to 16 large spinach leaves
- 1 cup green onions (about 4 small), sliced diagonally
- 8 shiitake mushrooms, stems removed, wiped clean, and thinly sliced
- 2 teaspoons soy sauce
- ¼ teaspoon ground white pepper
- 4 large eggs, lightly beaten

Contains egg and soy

Tools

- ❒ measuring cups and spoons
- ❒ cutting board
- ❒ large saucepan or small stockpot
- ❒ ladle
- ❒ can opener (optional)
- ❒ chef's knife
- ❒ fork or chopstick
- ❒ oven mitts or pot holders

Directions

1. In a large saucepan or small stockpot, bring the chicken broth to a simmer.
2. Stack the spinach leaves on top of each other and roll them up tightly. (You may need to do this in small stacks.) Thinly slice into ribbonlike strips.
3. Add the spinach, ¾ cup of the green onion, the mushrooms, soy sauce, and white pepper to the broth.
4. When the broth begins to simmer again, gradually add the beaten eggs in a slow and steady stream. Use a fork or a chopstick to stir the broth—this will shred the eggs into ribbons as they cook.
5. Cook the soup for 1 minute more and remove from the heat.
6. Ladle the soup into bowls and garnish with the remaining sliced green onion. Serve hot.

Adapted and used with permission from *There's a Chef in My World!*, pg 70

Emeril's CULINARY GARDEN & TEACHING KITCHEN

AFRICAN-INSPIRED SWEET POTATO PUREE

Kitchen

YIELD: 6 to 8 servings (or 6 cups puree)

This sweet potato puree is flavored with cane syrup, lemon, and ginger, three flavors that are used often in West African cooking. This dish is a wonderful accompaniment to roast pork or even roast chicken or turkey.

Ingredients

- 3 pounds sweet potatoes, peeled and cut into 1-inch cubes
- ½ cup dark cane syrup or molasses
- 4 tablespoons unsalted butter, softened
- ¼ cup heavy cream
- 1 tablespoon fresh lemon juice
- 1 ¼ teaspoons ground ginger
- ¾ teaspoon lemon zest
- 1/8 teaspoon salt
- Pinch of ground black pepper

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ zester or box grater
- ❒ fork
- ❒ food processor
- ❒ oven mitts or pot holders
- ❒ cutting board
- ❒ vegetable peeler
- ❒ medium saucepan
- ❒ colander
- ❒ wooden spoon

Directions

1. Place the peeled, cut sweet potatoes in a medium saucepan and add enough cold water to cover by 2 inches. Bring to a boil over high heat. Reduce the heat so that the potatoes remain at a low boil, and cook until fork-tender, about 10 minutes. Drain in a colander that is placed in the sink.
2. Transfer the potatoes to the bowl of a food processor along with all of the remaining ingredients, and process until fairly smooth, 1 to 2 minutes. Return the potato puree to the saucepan and warm gently over low heat, stirring frequently, before serving.

Note:
If you like a chunkier consistency or if you do not have a food processor, the potatoes may be mashed with a potato masher instead.

Adapted and used with permission from *There's a Chef in My World!*, pg 142

Emeril's CULINARY GARDEN & TEACHING KITCHEN

APRICOT WALNUT RUGELACH

Kitchen

YIELD: 32 cookies

These little cookies are great to eat any time of the day. They are made all over Eastern Europe and can be made with many different fillings and flavorings. You're gonna be surprised at how easy this dough is to work with.

Ingredients

- 1 cup unsalted butter, softened
- 1 (8-ounce) package cream cheese, softened
- 2 cups all-purpose flour
- 1/3 cup confectioners' sugar
- Pinch of salt
- 1 ½ cups apricot 100% fruit spread
- 2/3 cup chopped, toasted walnuts
- 3 tablespoons coarse or granulated sugar

Contains dairy and tree nuts

Tools

- ❒ measuring cups and spoons
- ❒ plastic wrap
- ❒ rolling pin
- ❒ small paring knife or pizza wheel
- ❒ parchment paper
- ❒ standing electric mixer with paddle attachment
- ❒ chef's knife
- ❒ small mixing bowl
- ❒ spatula or spoon
- ❒ two baking sheets
- ❒ oven mitts or potholders

Directions

1. Combine the softened butter and cream cheese in the bowl of a standing electric mixer fitted with a paddle attachment. Cream together on low speed for about 2 minutes, until smooth and creamy.
2. Continue mixing on low speed and gradually add the flour, sugar, and salt. Mix for 2 more minutes. Be careful here while the mixer is in motion!
3. Turn the mixer off and remove the dough mixture from the bowl, wrap with plastic wrap and refrigerate for 2 to 3 hours. (This dough can be made the day ahead.)

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Adapted and used with permission from *There's a Chef in My World!*, pg 182

4. In a small mixing bowl, combine the apricot fruit spread and the walnuts. Set aside.
5. When the dough has chilled, divide into 4 equal portions. You will only work with one portion at a time, so keep the rest in the refrigerator until ready to use.
6. Position rack in bottom third of oven and preheat oven to 350 degrees F.
7. On a lightly floured surface, use a rolling pin to roll one part of dough into a circle, about 1/8-inch thick.
8. Using a spatula or the back of a spoon, spread one-fourth of the apricot filling onto the circle all the way to the edges. (You should have just enough for a thin layer of filling; it shouldn't be a thick coating.)
9. Using a small paring knife or a pizza wheel, cut the dough circle into 8 equal triangles.
10. Roll up each triangle, starting with the wide end, and ending with the pointed end.
11. Place rugelach pointed ends down on a parchment-lined baking sheet. (It's important to line the baking sheet or any oozing apricot filling will stick to the pan while baking.) Sprinkle a few teaspoons of coarse sugar on the tops of the rugelach if desired. Repeat with remaining dough portions and filling.
12. Bake for 12 minutes. Using oven mitts or potholders, carefully open the oven and turn the pan 180 degrees. Continue baking for 13 to 16 more minutes, until golden brown.
13. Using oven mitts or potholders, carefully remove the rugelach from the oven and cool completely on the baking sheet before serving.

Caution

Be careful to keep utensils and fingers away from the rotating beaters of the mixer when adding ingredients.

BABY BAM

Kitchen

Yield: About ¾ cup

Here's something to season your food the way adults do with Emeril's Original Essence. Give food another dimension by sprinkling Baby Bam onto everything, from soups and sauces to protein. If you want to take it up a notch, you can add some cayenne—start with ¼ teaspoon and increase from there if needed.

Ingredients:

- 3 tablespoons paprika
- 2 tablespoons salt
- 2 tablespoons dried parsley
- 2 teaspoons onion powder
- 2 teaspoons garlic powders
- 1 teaspoon ground black pepper
- 1 teaspoon dried oregano
- 1 teaspoon dried basil
- 1 teaspoon dried thyme
- ½ teaspoon celery salt

Tools:

- ❒ measuring spoons
- ❒ small mixing bowl
- ❒ wooden spoon
- ❒ airtight container

Directions

1. Place all the ingredients in a small mixing bowl and stir well to combine, using a wooden spoon.
2. Store in an airtight container for up to 3 months.

Adapted and used with permission from Emeril's children's cookbook series *There's a Chef in My...*

BOILED ARTICHOKES

Kitchen

YIELD: 6 to 12 servings (or 6 artichokes)

If you ask me, artichokes are one of the most overlooked vegetables. Not only are they super-delicious, but they're fun to eat and easy to prepare... what could be better than that? Yum!

Ingredients

- 6 artichokes
- 1 lemon, halved, plus 2 ½ tablespoons lemon juice
- ¼ cup plus 1 ¼ teaspoons salt
- 2 sticks (1 cup) unsalted butter

Contains dairy

Tools

- ❒ 8-quart pot
- ❒ cutting board
- ❒ kitchen scissors
- ❒ slotted spoon or skimmer
- ❒ colander
- ❒ small saucepan
- ❒ pot lid or baking dish to fit inside the 8-quart pot
- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ juicer (optional)
- ❒ small bowl
- ❒ tongs
- ❒ wooden spoon
- ❒ oven mitts or pot holders

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Adapted and used with permission from *There's a Chef in My Family!*, pg 168

Directions

1. In a large pot, bring 3 quarts of water and ¼ cup of salt to a boil.
2. Place the artichokes on a cutting board. With a sharp chef's knife, trim the stem ends off until the bottom is flat. This way, the artichokes can sit upright. Cut the top third from each artichoke and discard.
3. With kitchen scissors, cut the pointed tip from each of the remaining outer leaves. Discard.
4. Rub the cut areas with the lemon halves.
5. Squeeze any remaining juice from the lemon halves and add the juice to the boiling water along with the juiced lemon halves themselves.
6. Using a slotted spoon or skimmer, carefully add the artichokes to the boiling water. Top with a heavy pot lid or heat-proof baking dish that will fit inside the pot, so that the weight will keep the artichokes submerged in the water. This is a bit tricky. Be sure to have an adult help with this.
7. Lower the heat and cook at a slow boil until the artichokes are tender, about 20 to 30 minutes. With oven mitts or pot holders, carefully remove the lid or weighted dish from the top of the artichokes.
8. With a slotted spoon or skimmer, and with a small bowl or dish held underneath to catch the hot water, carefully transfer the artichokes to a colander set in a sink. With tongs, turn each artichoke upside down and place in the colander. Let drain, inverted, until cool enough to handle.
9. To make the lemon-butter sauce, melt the butter over medium heat in a small saucepan.
10. Add the remaining 2 ½ tablespoons lemon juice and the remaining 1 ¼ teaspoons of salt, and stir to combine.
11. Remove the lemon-butter sauce from the heat and transfer to small dipping bowls to serve with the artichokes.
12. Serve the artichokes either warm or cold.

CAPRESE SALAD

Kitchen

YIELD: 6 to 10 servings

This super-simple, classic Italian salad pairs three of Italy's favorite Ingredients ripe tomatoes, fresh Mozzarella cheese, and sweet basil. A simple balsamic vinaigrette is the perfect dressing—and this is the perfect moment to use a top-quality extra-virgin olive oil if you happen to have a bottle on hand. Serve this refreshing salad at your next family summertime cookout!

Ingredients

- 1 ½ pounds vine-ripened tomatoes
- ¾ pound fresh mozzarella, in whey
- ½ cup packed fresh basil leaves
- ¼ cup plus 2 tablespoons extra virgin olive oil
- ¼ cup plus 2 tablespoons balsamic vinegar
- 1 ½ teaspoons sugar
- salt and fresh cracked black pepper to taste

Contains dairy

Tools

- ❒ cutting board
- ❒ chef's knife
- ❒ blender
- ❒ whisk
- ❒ serrated knife
- ❒ large plate or platter
- ❒ small mixing bowl

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Adapted and used with permission from *There's a Chef in My World!*, pg 60

Directions

1. Using a sharp serrated knife, slice the tomatoes about ½-inch thick, horizontally. Discard the very tops and the bottoms.
2. Using a sharp knife, slice the mozzarella into ¼-inch slices.
3. On a large plate or serving platter, arrange the tomato and cheese slices in an alternating, shingled pattern.
4. Place the basil leaves in a blender with the extra virgin olive oil, and puree until smooth, about 15 seconds.
5. Drizzle the basil oil evenly over the tomatoes and mozzarella. In a small mixing bowl, combine the balsamic vinegar and the sugar and whisk to combine. When the sugar is completely dissolved, pour the vinegar over the tomatoes and mozzarella.
6. Garnish the plate with fresh basil leaves and sprinkle with salt and fresh cracked black pepper to taste. Serve immediately.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

CORN OFF THE COB PUDDING

Kitchen

YIELD: 6 servings (or 10 tasting portions)

This traditional Southern side dish makes a wonderful addition to a holiday menu. It goes with any type of pork but is especially at home next to baked ham. You can cook it in either a casserole or a soufflé dish—but keep in mind that a deep dish will need to cook a little longer than a shallow dish. The secret to intense corn flavor is adding a little honey to wake up the sweetness in the corn. Mmmm.

Ingredients

- 1 ½ teaspoons unsalted butter
- 1/3 cup honey
- 6 ears fresh corn, husked and silk removed
- 3 large eggs
- 1 cup heavy cream
- ½ cup milk
- ½ teaspoon ground white pepper
- ½ teaspoon salt
- ¼ teaspoon nutmeg
- 1/8 teaspoon cayenne (optional)
- ¼ cup grated yellow onions

Contains dairy and egg

Tools

- ❒ one 8-inch casserole or 2-quart soufflé dish
- ❒ medium mixing bowl
- ❒ whisk
- ❒ cutting board
- ❒ oven mitts or potholders
- ❒ one 6-quart pot
- ❒ tongs
- ❒ large mixing bowl
- ❒ chef's knife
- ❒ measuring cups and spoons

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Adapted and used with permission from *There's a Chef in My Family!*, pg 158

Directions

1. Position a rack in center of oven and preheat the oven to 350 degrees F.
2. Butter a casserole or soufflé dish with the butter and set aside.
3. In a large pot, bring the water and honey to a boil over high heat. Add the corn and cook for 3 minutes. Remove the pot from the heat.
4. With tongs, carefully remove the corn from the water and transfer to a medium bowl. Let sit until cool enough to handle, about 5 minutes.
5. In a large bowl, whisk together the eggs, cream, milk, white pepper, salt, nutmeg, and cayenne pepper, if desired.
6. One at a time, hold the corn in one hand and stand it on the thicker end so that it is "standing up" on the cutting board.
7. Hold a large chef's knife in the other hand and with a downward motion, cut the kernels from the cob. Turn the cob with every cut so that you get all of the kernels. To get even more goodness, you can also scrape the corn cobs with the back side of the chef's knife or with a spoon—this will release some of the milk from the corn. Add any accumulated juices to the cut kernels. Discard the cobs.
8. Add the corn kernels and onion to the egg mixture, stirring well to combine, and pour into the prepared baking dish.
9. Bake until firm in the center and golden brown on top, 40 to 50 minutes.
10. Using oven mitts or pot holders, remove the baking dish from the oven and let sit for 10 minutes before serving. This is best if served hot.

FILL-'ER UP FOCACCIA
WITH ROASTED VEGGIES

Kitchen

YIELD: 10 Sandwiches

These sandwiches are big enough for the heartiest of appetites—put them in plastic wrap and bring them on picnics for a perfect "al fresco" lunchtime treat. You'll have a new favorite sandwich, for sure!

Ingredients

- 10 red bell peppers
- 10 pieces of focaccia bread, roughly 4- by 4 inches each, or one focaccia, cut into 10 portions
- 1 cup plus 2 tablespoons extra-virgin olive oil
- 8 tablespoons balsamic vinegar
- ¼ teaspoon salt
- ¼ teaspoon black pepper
- 1 ¼ pounds fresh mozzarella, Queso Blanco, or Provolone, cut into ¼-inch slices
- 5 cups baby spinach, cleaned and patted dry

Contains dairy

Tools

- ❒ two large sheet pans
- ❒ measuring cups and spoons
- ❒ electric mixer fitted with a dough hook
- ❒ one large mixing bowl
- ❒ chef's knife
- ❒ cutting board

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Adapted and used with permission from *There's a Chef in My Family!*, pg 84

Directions

1. Preheat the oven to 450 degrees F. Brush the peppers with 1 tablespoon of the olive oil. Put on the ungreased sheet pan and roast for 1 hour.
2. Using oven mitts or pot holders, remove the peppers from the oven and place them in a large mixing bowl. Cover with plastic wrap and let them steam until cooled, about 30 to 40 minutes.
3. When cool, peel the skin from the peppers. Cut or tear open the peppers so that they lay flat, and remove the seeds, but try to keep each pepper in one piece. Set aside.
4. To make the sandwiches, slice each piece of focaccia in ½ horizontally.
5. Separate the 20 pieces into 10 "top" pieces and 10 "bottom" pieces.
6. In a small mixing bowl, combine the remaining 1 cup of olive oil, balsamic vinegar, salt and pepper. Whisk to blend. Spread one tablespoon of this mixture on the cut side of each piece of bread.
7. Divide the mozzarella slices evenly among the bottom halves, then top each half with 1 bell pepper and ½ cup of the spinach. Drizzle the remaining olive oil mixture over the spinach, and then place the top half of the bread over the spinach. Slice the sandwiches in half diagonall to serve.

FRESH BERRY TOPPING

Kitchen

YIELD: 4 cups

This is a wonderfully simple strawberry topping that is super-easy to prepare. If you like, feel free to substitute part of the strawberries with other berries—blueberries, blackberries or raspberries would all be great additions. Make it your own!

Ingredients

- 2 pounds fresh strawberries, washed and hulled
- 1 cup sugar
- ½ cup fresh-squeezed orange juice
- 2 teaspoons orange zest

Tools

- ❒ cutting board
- ❒ medium mixing bowl
- ❒ zester or box grater
- ❒ small saucepan
- ❒ oven mitts or pot holders
- ❒ paring knife
- ❒ measuring cups and spoons
- ❒ juicer (optional)
- ❒ wooden spoon

Directions

1. Slice strawberries into ¼-inch slices and place in a mixing bowl.
2. In a saucepan combine the sugar, orange juice, and orange zest and bring to a boil over medium heat. Stir with a wooden spoon to dissolve sugar.
3. Once syrup is at a rolling boil remove from the heat and pour over the sliced strawberries. Let sit while cooking waffles.
4. Serve over waffles.

Caution

Be really careful with boiling syrup—it's very sticky and can really burn if you get it on your skin.

Note:
This recipe specifies using Fresh Berry Topping for waffles, but you can use the topping on just about anything you like!

Emeril's CULINARY GARDEN & TEACHING KITCHEN

FRUIT GALETTE

Kitchen

YIELD: 6 to 8 servings (or 1 fruit galette)

In France, a galette can be any of a number of flat, disk-shaped cakes, pies, or tarts, either savory or sweet. My version here is a great fruit tart for beginning cooks: You make a simple piecrust and roll it out, then fill it with fresh, ripe fruit, and bake the tart without a pie pan for a rustic, country feel. If your pastry happens to break or tear while you're working with it, don't worry—simply moisten the tear with a bit of water and pinch it back together.

Ingredients

For the Crust:

- 1 ½ cups plus 2 tablespoons all purpose flour, plus more for rolling out dough
- 3 tablespoons sugar
- ½ teaspoon salt
- 8 tablespoons cold unsalted butter, cut into ½-inch pieces
- 2 tablespoons cold vegetable shortening
- 3 tablespoons ice water

Contains dairy

For the Fruit Filling:

- 3 cups thinly sliced peaches
- 1 cup mixed berries, such as blackberries and cherries, rinsed well and picked over
- ½ cup plus 1 tablespoon sugar
- 2 tablespoons cornstarch
- 1 teaspoon lemon juice

Tools

- ❒ measuring cups and spoons
- ❒ large mixing bowl
- ❒ rolling pin
- ❒ rimmed baking sheet
- ❒ 2 metal spatulas (optional)
- ❒ wire rack
- ❒ pastry cutter or two knives (optional)
- ❒ paring knife
- ❒ plastic wrap
- ❒ parchment paper
- ❒ pastry brush
- ❒ oven mitts or pot holders
- ❒ large mixing bowl, juicer (optional)

Adapted and used with permission from *There's a Chef in My World!*, pg 196

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Directions

1. Combine the flour, sugar, and salt in a large mixing bowl. Add the butter and shortening and, using a pastry cutter, two knives, or your fingers, work the butter and shortening into the flour until the mixture resembles coarse crumbs.
2. Add the water, one tablespoon at a time, working it just until the pastry comes together. Form the dough into a disk and wrap in plastic wrap. Refrigerate for at least one hour and up to overnight.
3. When you are ready to bake the galette, position rack in center of oven and preheat the oven to 425 degrees F. Remove the pie dough from the refrigerator and allow to warm up slightly.
4. On a lightly floured work surface, use a lightly floured rolling pin to roll the pastry to a thickness of about 1/8-inch. Sprinkle a bit more flour if necessary so that the pastry does not stick to the rolling pin or the work surface.
5. Carefully roll the pastry onto the rolling pin and transfer to a parchment-lined rimmed baking sheet. Refrigerate while you prepare the fruit.
6. Combine the peaches, berries, ½ cup of the sugar, cornstarch and lemon juice in a mixing bowl and toss gently to combine.
7. Remove the pastry from the refrigerator and place the fruit in the center of the crust, leaving a 4-inch border. Gently fold the edges of the crust up and over the fruit so that the pastry forms a sort of bowl. Brush the top edges of the crust with a little water and sprinkle with the remaining tablespoon of sugar.
8. Bake for 20 minutes, until the crust is set and lightly golden around the edges. Reduce the heat to 375 degrees F and continue to bake until the crust is golden brown and the fruit is bubbly inside, about 20 minutes longer.
9. Using oven mitts or pot holders, transfer the baking sheet to a wire rack and allow to cool slightly before carefully transferring the galette to a serving plate. (Two metal spatulas work well for this.) Serve warm with vanilla ice cream, crème fraiche, or sweetened whipped cream, if desired.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

GARDEN PITA POCKETS
WITH EGG SALAD

Kitchen

YIELD: 10 to 12 servings

This pita pocket, stuffed with deliciously creamy egg salad and sliced avocadoes, is surprisingly crunchy because it's topped with crispy sunflower seeds. Talk about something to wake up tired taste buds! Make a personal statement by choosing some of your other favorite things to go on top: alfalfa sprouts would be my choice, but maybe you'd like some grated cheese, a sliced tomato, some crumbled crispy bacon... the possibilities are endless!

Ingredients

For the Egg Salad:

- 12 large eggs
- ½ cup mayonnaise
- ½ teaspoon salt
- ½ teaspoon paprika

Contains egg

For the Pita Pockets:

- 6 pita bread rounds, about 6-inches in diameter
- ½ cup Creamy Herb Dressing, recipe follows, or mayonnaise or bottled ranch dressing
- 2 avocados
- 3 cups Egg Salad
- ¼ cup shelled sunflower seeds

Contains egg

Optional Ingredients

- chopped, seeded tomatoes
- peeled cucumber slices
- lettuce leaves
- minced red onion
- alfalfa sprouts
- grated cheese, such as Monterey jack, Muenster or Havarti

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Adapted and used with permission from *There's a Chef in My Soup!*, pg 98

Tools

- ❒ measuring cups and spoons
- ❒ timer
- ❒ knife
- ❒ fork
- ❒ oven mitts or potholders
- ❒ 3- to 4-quart saucepan
- ❒ cutting board
- ❒ medium mixing bowl
- ❒ baking sheet

Directions

For the Egg Salad:

1. Place the eggs right out of the refrigerator into a large saucepan.
2. Add cold water until the water is 1 inch higher than the eggs and bring to a boil over medium-high heat.
3. Once the water comes to a boil, reduce the heat to medium-low, set a kitchen timer for 10 minutes, and cook the eggs at a low boil for exactly 10 minutes.
4. Remove the saucepan from the heat, place it in the sink, drain the hot water, and run cold water over the eggs (still in the saucepan) until they are cool enough to handle.
5. Peel the eggs.
6. Place the eggs on a cutting board. Cut each egg in half, then chop into ½-inch pieces.
7. Place in a medium mixing bowl and add the remaining ingredients, mashing with a fork to blend.
8. Serve immediately in sandwiches, or tightly cover and refrigerate for up to 2 days.

Caution

Be careful draining the hot water with the eggs—steam can burn you!

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For the Pita Pockets:

1. Preheat a toaster oven, (or regular oven with rack set in the middle) to 350 degrees F.
2. Heat the pitas on a baking sheet until just warm and soft, about 3 minutes. Using oven mitts or pot holders, remove the baking sheet from the oven.
3. Cut each pita round in half and spread 2 teaspoons of Creamy Herb Dressing (or mayonnaise or ranch dressing) inside each half.
4. Cut each avocado into quarters lengthwise, peel and discard the pit.
5. Cut each avocado quarter into 4 slices and place 3 slices inside each pita half.
6. Spoon about ¼ cup of the Egg Salad into each pita half and sprinkle with 1 teaspoon of sunflower seeds.
7. Add the optional ingredients, if desired, and serve.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

GREEN BEAN STIR FRY

Kitchen

YIELD: 8 to 12 servings

This super-quick Chinese veggie side dish will go great with lots of things. These green beans are so good, even a picky eater might change his or her mind after trying one. Make sure you have all your ingredients ready to go before you begin, because it really doesn't take long to make these beans, thanks to this Asian cooking technique!

Ingredients

- 2 pounds fresh green beans, washed and ends trimmed
- 2 tablespoons toasted sesame oil
- 2 tablespoons minced garlic
- 1 tablespoon minced fresh ginger
- ¼ cup sliced green onions (white part only)
- 1 cup julienned red bell pepper (about 1/2 medium pepper)
- 3 tablespoons soy sauce
- 2 teaspoons oyster sauce
- 4 teaspoons teriyaki sauce, store-bought or homemade (recipe follows)
- ½ teaspoon salt

Contains soy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ large mixing bowl
- ❒ colander
- ❒ wooden spoon
- ❒ clean, dry kitchen towels or paper towels
- ❒ cutting board
- ❒ large stockpot
- ❒ tongs or slotted spoon
- ❒ large 12- to 14-inch nonstick skillet
- ❒ oven mitts or pot holders

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Adapted and used with permission from *There's a Chef in My World!*, pg 134

Directions

1. Fill a large stockpot with salted water and bring to a boil over high heat.
2. Prepare a large mixing bowl by filling it with ice water.
3. Cook green beans in boiling water for 2 ½ to 3 minutes, until crisp-tender.
4. Using tongs or a slotted spoon, remove the green beans from the boiling water and place immediately into the bowl of ice water, to stop the cooking process.
5. When beans are cooled, drain and place on clean, dry kitchen towels or paper towels. Pat the beans dry, making sure there is no water on the beans before continuing.
6. Heat the sesame oil in a large nonstick skillet over medium-high heat. Carefully add the green beans and cook, stirring constantly, for 1 to 2 minutes.
7. Add the garlic, ginger, and green onions, and cook, stirring, an additional 30 seconds to 1 minute, being careful not to burn the garlic.
8. Stir in the red bell pepper, soy sauce, oyster sauce, teriyaki sauce, and salt. Stir to heat through, about 1 to 2 minutes longer. Serve immediately.

Note:
You will need a large 12- to 14-inch skillet for this dish. If your skillet is smaller, you can divide the ingredients in half and do this in two separate batches

Emeril's CULINARY GARDEN & TEACHING KITCHEN

HOMEMADE TERIYAKI SAUCE

Kitchen

YIELD: 1 cup

Ingredients

- ½ cup light soy sauce
- ¼ cup mirin sauce
- 2 tablespoons sugar
- 2 tablespoons peanut oil
- ½ teaspoon sesame oil
- 1 tablespoon minced garlic
- 1 tablespoon minced fresh ginger
- 1 tablespoon minced green onion, white part only

Contains peanuts and soy

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ airtight container
- ❒ cutting board
- ❒ blender

Directions

1. Place all of the ingredients in a blender and process on low for 1 minute, until the ingredients are well incorporated.
2. Use immediately or store in an airtight container in the refrigerator for up to 3 days.

Adapted and used with permission from *There's a Chef in My World!*, pg 99

Emeril's CULINARY GARDEN & TEACHING KITCHEN

HOT AND HEARTY MINESTRONE

Kitchen

YIELD: 2 quarts

This is one of my all-time favorite soups to make! It's one of those "feel-good" foods, and a pot of this simmering on the stovetop on a dreary day can revive just about anyone! Adding a piece of cheese rind while the soup is simmering is an authentic Italian trick that adds flavor, richness and body. Try it!

Ingredients

- 1 tablespoon olive oil
- 2 slices bacon or pancetta
- 1 large leek, white and light green parts only, split in half and rinsed well under running water, thinly sliced
- 1 ½ cups chopped yellow onion
- 6 cups reduced-sodium chicken broth
- 4 cups water
- 1 (28-ounce) can whole tomatoes, drained and chopped
- 2 carrots chopped, about ¾ cup
- 2 ribs celery, chopped, about ¾ cup
- ½ cup Great Northern beans, soaked overnight or 1 (15-ounce) can white beans, drained and rinsed
- 1 Parmesan cheese rind, about 5 by 2-inches
- 1 teaspoon dried basil leaves
- ¼ teaspoon crushed red pepper
- 1 medium zucchini, cubed, about 1 ¼ cups
- 2 medium new potatoes, scrubbed and cubed (6 ounces or 1 ¼ cups cubed)
- 1 teaspoon Baby Bam
- 1 teaspoon salt
- 2 cups packed fresh spinach leaves, coarsely chopped

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Adapted and used with permission from *There's a Chef in My Family!*, pg 78

Tools

- ❒ large (6-quart) saucepan
- ❒ chef's knife
- ❒ fork or tongs
- ❒ can opener (optional)
- ❒ ladle
- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ wooden spoon
- ❒ slotted spoon

Directions

1. In a large saucepan, heat the olive oil over medium-high heat. Add the bacon and fry until soft, using a fork or tongs to turn, about 2 minutes.
2. Add the leek and onion, and sauté until soft, about 4 minutes.
3. Add the chicken broth, water, tomatoes, carrots, celery, soaked beans, cheese rind, basil, and crushed red pepper. Bring to a boil, then reduce the heat to medium-low and simmer for 30 minutes.
4. Add the zucchini, potatoes, Baby Bam and salt. Return to a simmer and cook for 1 hour. If your soup gets too thick before serving, you may need to add a bit more water or chicken broth.
5. Add the spinach (and canned beans, if using and cook for 15 minutes.
6. Remove the cheese rind with a slotted spoon and serve.

Note:
For a heartier Minestrone, try adding about 1 cup of cubed French or Italian bread to the soup pot just before serving. Or, do like the Italians do and add ¼ cup of small, dried pasta to the pot when you add the spinach. Ditalini or another such small pasta shape works best.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

MEXICAN CORNBREAD

Kitchen

YIELD: 8 to 10 servings or 1 (9-inch cornbread)

I've added the flavors of Mexico to this quick bread. If you like a little more spice, try adding Pepper Jack cheese in place of the Monterey Jack. Cornbread is best eaten hot, but I have to say that I enjoy eating it cool as an afternoon snack as well.

Ingredients

- 2 tablespoons unsalted butter
- 1 ½ cups chopped yellow onion (about 1 medium onion)
- 1 teaspoon minced garlic (about 2 cloves)
- 1 small red bell pepper, seeded and chopped (about ¾ cup)
- 1 jalapeño, seeded and finely chopped
- 1 cup fresh or frozen corn kernels
- 1 ¼ teaspoons salt
- ¼ cup vegetable oil or bacon grease
- 1 cup all-purpose flour
- 1 cup yellow cornmeal
- 2 teaspoons baking powder
- ½ teaspoon sugar
- ¾ cup grated Monterey Jack cheese
- 2 large eggs
- 1 cup buttermilk

Contains dairy and egg

Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ box grater
- ❒ wooden spoon
- ❒ whisk
- ❒ cast-iron skillet, 9-inch or other heavy ovenproof skillet
- ❒ cutting board
- ❒ rubber gloves
- ❒ large nonstick skillet
- ❒ medium mixing bowl
- ❒ oven mitts or pot holders

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Adapted and used with permission from *There's a Chef in My World!*, pg 154

Directions

1. Position rack in center of oven and preheat the oven to 400 degrees F.
2. Melt the butter in a large nonstick skillet over medium heat. Add onion, garlic, red bell pepper, jalapeño, and corn. Cook, stirring occasionally, for 10 minutes, until the vegetables are softened. Add ¼ teaspoon of the salt to the vegetables. Remove from the heat and cool.
3. Pour 2 tablespoons of the oil or bacon grease into a 9-inch cast-iron skillet. Place the skillet in the preheated oven for 10 minutes.
4. In a medium mixing bowl, stir together the flour, cornmeal, baking powder, sugar, and the remaining 1 teaspoon of salt.
5. Add the cheese, cooled vegetables, eggs, buttermilk, and remaining 2 tablespoons of oil or bacon grease to the flour mixture. Whisk until just combined—do not overmix.
6. Using oven mitts or pot holders, carefully remove the hot skillet from the oven. Carefully pour the cornmeal batter into the hot skillet, making sure that the hot grease does not splash out.
7. Using oven mitts or pot holders, return the skillet to the oven. Bake for 25 to 30 minutes, until golden brown and cooked through.
8. Using oven mitts or pot holders, remove the cornbread from the oven and allow to sit for a few minutes before cutting into wedges and serving.

Caution

Always handle jalapeno peppers with rubber gloves and be careful not to touch your eyes or skin.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

QUICK AND CREAMY HERB DRESSING *Kitchen*

YIELD: 1½ cups

Ingredients

- ½ cup buttermilk
- ½ cup sour cream
- ¼ cup mayonnaise
- ¼ cup minced green onions (tops only)
- 1 tablespoon minced fresh parsley
- 1/8 teaspoon ground black pepper
- ¾ teaspoon salt
- 1 teaspoon minced garlic
- 2 teaspoons fresh lemon juice
- ½ teaspoon Baby Bam

Contains dairy and egg

Tools

- ❒ measuring cups and spoons
- ❒ knife, garlic press (optional)
- ❒ wire whisk
- ❒ cutting board
- ❒ large mixing bowl
- ❒ airtight container

Directions

1. Place all the ingredients in a large mixing bowl.
2. Whisk until smooth.
3. Serve immediately over salad or pour into a container, cover tightly, and refrigerate until needed, up to 1 week.

Adapted and used with permission from Emeril's children's cookbook series *There's a Chef in My...*

QUICK AND CRUNCHY SLAW

Kitchen

YIELD: 8 to 10 servings (or 5 cups)

Ingredients

- 2 cups shredded green cabbage
- 2 cups shredded red cabbage
- ½ cup minced yellow onion
- ½ cup mayonnaise
- ¼ cup finely chopped green onion (tops only)
- 2 tablespoons Creole mustard, or other whole-grain spicy mustard
- 2 teaspoons honey
- 1 teaspoon Baby Bam
- ½ teaspoon salt
- ¼ teaspoon ground black pepper

Contains egg

Tools

- ❒ measuring cups and spoons
- ❒ knife
- ❒ large spoon or rubber spatula
- ❒ cutting board
- ❒ large bowl

Directions

1. Combine all the ingredients in a large bowl.
2. Stir well with a large spoon or rubber spatula to mix.
3. Cover and refrigerate for 1 hour before serving, or keep refrigerated for up to 1 day.

Adapted and used with permission from *Emerils.com*

Emeril's CULINARY GARDEN & TEACHING KITCHEN

REAL WHIPPED CREAM

Kitchen

YIELD: 2 cups

Ingredients

- 1 cup heavy cream, well chilled
- 3 tablespoons confectioners sugar
- ½ teaspoon vanilla extract

Contains dairy

Tools

- ❒ large metal or glass mixing bowl
- ❒ plastic wrap (optional)
- ❒ electric mixer (handheld or standing)
- ❒ measuring cups and spoons
- ❒ oven mitts or pot holders

Directions

1. Place a mixing bowl and the beaters from your electric mixer in the freezer or refrigerator until well chilled, about 15 minutes.
2. Combine the heavy cream, confectioners sugar, and vanilla extract in the mixing bowl.
3. With an electric mixer on low speed, begin beating the cream, gradually increasing the speed to high as cream thickens. (Do this slowly, or the cream will splatter all over!)
4. Beat until the cream forms soft peaks. Test to see if it is ready by turning off the mixer and lifting the beaters out of the cream. If the cream makes soft peaks that topple over slightly, then it's done. Be careful not to overwhip, or the cream will separate and begin to taste like butter.
5. Serve immediately or cover with plastic wrap and refrigerate for up to 2 hours.

Adapted and used with permission from *There's a Chef in My Soup!*, pg 235

Emeril's CULINARY GARDEN & TEACHING KITCHEN

SPINACH DIP

Kitchen

YIELD: 10 to 12 servings (or 5 cups)

Without a doubt, this is my favorite way to eat spinach. It gets all creamy and cheesy and, oh, don't make me talk about it! It's a serious food-of-love thing. I like to eat it with crispy tortilla chips, but hey, just about anything would taste great dipped in this stuff, especially homemade bagel chips.

Ingredients

- 3 pounds fresh spinach, stems removed and washed (or 2 (10-ounce) packages frozen chopped spinach, thawed, drained and squeezed dry)
- 4 tablespoons butter
- 2 tablespoons finely chopped yellow onion
- 1 tablespoon minced garlic
- ¼ cup all-purpose flour
- 2 cups heavy cream
- ½ cup milk
- 1 cup finely grated Parmesan cheese
- 2 teaspoons fresh lemon juice
- 2 teaspoons Baby Bam
- ½ teaspoon salt
- 6 tablespoons sour cream
- ½ cup grated Monterey Jack or pecorino Romano cheese
- Tortilla chips or other chips of choice, for dipping

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ oven mitts or pot holders
- ❒ cutting board
- ❒ medium saucepan
- ❒ whisk
- ❒ box grater
- ❒ 6 quart saucepan
- ❒ colander
- ❒ chef's knife
- ❒ wooden spoon
- ❒ juicer (optional)

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Adapted and used with permission from *There's a Chef in My Family!*, pg 110

Directions

1. If using fresh spinach, bring a large saucepan filled 2/3 full with water to a rolling boil.
2. Add the spinach and cook for 1 to 2 minutes, or just until spinach wilts and water returns to a boil. Remove from heat and strain in a colander set in the sink. Rinse under cold running water until cool.
3. If using frozen spinach, skip steps 1 and 2. Let spinach thaw and drain in a colander set in the sink.
4. Using your hands, squeeze the spinach to remove as much liquid as possible. You should have about 3 cups of spinach.
5. Place spinach on a cutting board and chop finely. Set aside.
6. In a medium heavy saucepan, melt the butter over medium-high heat. Add the onions and cook until soft, about 3 minutes. Add the garlic and cook until fragrant, 1 to 2 minutes. Do not allow to brown.
7. Add the flour and stir to combine. Cook, stirring constantly, until mixture is a light blond color, about 1 to 2 minutes.
8. Whisk in the heavy cream and milk, little by little, until the mixture is smooth. Continue to cook until the mixture comes to a boil and thickens, about 2 minutes.
9. Reduce the heat to medium-low and simmer for 3 to 4 minutes.
10. Add the Parmesan cheese, lemon juice, Baby Bam, and salt and stir to combine well.
11. Remove from the heat. Add the sour cream, chopped spinach, and Monterey Jack or pecorino Romano cheese and stir until the cheese is melted.
12. Serve immediately, with tortilla chips or other dipping chips of choice.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

TOTALLY-FROM-SCRATCH BISCUITS Kitchen

YEILD: 8 (3-inch) biscuits

My friends! These biscuits are truly the real deal! Made totally from scratch, these will make you stop and think next time you consider using store-bought biscuits. Cake flour makes them extra tender, and heavy cream makes them super moist and delicious. Remember to go easy when mixing the dough or your biscuits will be tough and chewy instead of light and airy.

Ingredients

- 1 ¼ cups self-rising flour
- ¾ cup cake flour
- 1 tablespoon sugar
- ¾ teaspoon baking powder
- ½ teaspoon salt
- 1/8 teaspoon baking soda
- 4 tablespoons (½ stick) cold unsalted butter, plus 2 tablespoons melted butter
- 1 ¼ cups heavy cream
- ¼ cup all-purpose flour

Contains dairy

Tools

- ❒ measuring cups and spoons
- ❒ sifter
- ❒ rubber spatula (optional)
- ❒ baking sheet
- ❒ pastry brush
- ❒ medium mixing bowl
- ❒ pastry cutter (optional)
- ❒ cookie cutter, 3-inch (or smaller)
- ❒ small saucepan
- ❒ oven mitts or pot holders

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Adapted and used with permission from *There's a Chef in My Family!*, pg 30

Directions

1. Position rack in center of oven and preheat the oven to 475 degrees F.
2. Sift the self-rising flour, cake flour, sugar, baking powder, salt, and baking soda into a medium mixing bowl.
3. Using your fingers or a pastry cutter, work the cold butter into the flour until there are no butter pieces larger than a pea.
4. Add the heavy cream to the flour mixture and, using your hands or a rubber spatula, stir just until the cream and flour come together to form a dough. Do not overmix!
5. Sprinkle some of the all-purpose flour on a flat surface and place the dough on top of the flour. Using your hands, press the dough into a ½-inch thick disk about 8 inches in diameter.
6. Using a biscuit cutter dipped in flour, cut the dough into circles. Be sure to press straight downward when cutting the dough; a twisting motion will prevent the dough from rising. If you don't have a cutter, you can also use the rim of a sturdy glass or bowl. You can gather the scraps of dough and re-form them to make more biscuits. Simply gather the scrap pieces together and press them to re-form into a ½-inch thick disk, then cut as many additional biscuits as possible from the re-formed dough.
7. Place the biscuits on a small baking sheet and use a pastry brush to brush the tops with the melted butter.
8. Bake in the oven for 8 to 12 minutes, or until golden brown.
9. Using oven mitts or pot holders, remove the biscuits from the oven and allow to cool briefly and serve while still warm.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

VERY STRAWBERRY SHORTCAKES

Kitchen

YIELD: 8 to 10 servings

Perhaps the most all-American dessert, this cake makes a wonderful end to a summer day spent in the sun or for a Fourth of July celebration. It's a good one to make together with family or friends—just make sure you whip the cream immediately before serving, so that it stays nice and fluffy.

Ingredients

- 2 pounds fresh strawberries, washed, patted dry, hulled, and quartered
- ½ cup plus 1 tablespoon sugar
- 2 tablespoons water
- 1 teaspoon grated orange zest
- 1 recipe totally-from-scratch biscuits, baked with the exception noted in step 4
- 2 cups real whipped cream

Contains dairy

Tools

- ❒ large mixing bowl
- ❒ cutting board
- ❒ measuring cups and spoons
- ❒ oven mitts or pot holders
- ❒ forks (optional)
- ❒ box grater
- ❒ paring knife
- ❒ plastic wrap
- ❒ wire racks

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Adapted and used with permission from *There's a Chef in My Family!*, pg 190

You macerate fruit mostly by mixing it with sugar—a chemical reaction causes the berries to give up their good juices.

Directions

1. Position rack in center of oven and preheat the oven to 475 degrees F.
2. Macerate the strawberries by combining the strawberries, ½ cup of the sugar, water, and orange zest in a large bowl. Stir well to combine.
3. Cover with plastic wrap and refrigerate until the strawberries have softened and given up their juices and mixture is chilled, about 1 hour.
4. While the strawberries are chilling, make the Totally-from-Scratch Biscuits with the following exception: In step 7, after brushing the tops of the biscuits with butter, sprinkle the tops with the remaining 1 tablespoon of sugar before baking. Bake as instructed.
5. When the biscuits are done, using oven mitts or pot holders, remove them from the oven and transfer to wire racks to cool. The shortcakes can be served warm or at room temperature.
6. To assemble the shortcakes: Using a knife or fork, split the biscuits in half horizontally and place the bottom halves onto serving plates.
7. Spoon some of the macerated strawberries onto each bottom half. Top each serving with about 3 tablespoons of Real Whipped Cream. Lean a biscuit top against each bottom and serve.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

VERY VEGGIE LASAGNA

Kitchen

YIELD: 10 servings

We used almost a full box of lasagna noodles to make this lasagna. You might need more or less, depending on the size of your pan and how closely you space the noodles. We used a lot of different vegetables and had fun choosing what was freshest at the market. You can leave some of these veggies out, add others, or use more of what your family likes best. Just make sure you have 12 total cups of vegetables for the sauce. Lots of ingredients means that everybody can help out.

Ingredients

- 2 (15-ounce) containers ricotta cheese
- 2 tablespoons chopped fresh basil
- 2 tablespoons chopped fresh thyme
- 2 tablespoons chopped fresh parsley
- 4 teaspoons extra virgin olive oil
- 2 teaspoons salt
- 1 teaspoon ground black pepper
- ¼ cup olive oil
- 3 cups sliced mushrooms
- 1 ¼ cups finely chopped yellow onions
- 1 tablespoon Emeril's Italian Essence, or dried Italian seasoning
- 2 teaspoons minced garlic
- 1 head broccoli, cut into florets (about 2 cups)
- 2 carrots, peeled and coarsely chopped (about 2 cups)
- 1 ½ cups coarsely chopped red bell pepper
- 1 ½ cups coarsely chopped yellow bell pepper
- 1 ½ cups coarsely chopped green bell pepper
- 1 ½ cups coarsely chopped yellow squash
- 1 ½ cups coarsely chopped zucchini
- 2 (28-ounce) cans whole peeled tomatoes, undrained
- 2 tablespoons tomato paste
- 2 tablespoons sugar
- 12 to 15 large uncooked lasagna noodles
- 5 cups grated Mozzarella cheese (about 1 ¼ pounds)
- ½ cup grated Parmesan cheese

Contains dairy

Adapted and used with permission from *There's a Chef in My Family!*, pg 114

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Tools

- ❒ measuring cups and spoons
- ❒ chef's knife
- ❒ medium mixing bowl
- ❒ 6-quart pot
- ❒ large mixing bowl
- ❒ rubber spatula
- ❒ aluminum foil
- ❒ vegetalbe peeler
- ❒ cutting board
- ❒ wooden spoon
- ❒ can opener
- ❒ 10- by 14-inch roasting pan
- ❒ box grater
- ❒ oven mitts or pot holders

Directions

1. Position a rack in center of oven and preheat the oven to 375 degrees F.
2. In a medium bowl, combine the ricotta cheese, basil, thyme, parsley, extra virgin olive oil, 1 teaspoon of the salt and ½ teaspoon of the black pepper. Stir to combine and set aside.
3. In a large pot, heat the olive oil over medium-high heat. Add the mushrooms, onion, and Italian Essence and cook, stirring, until the onions are soft and the mushrooms are wilted and have released their juices, about 5 minutes.
4. Add the garlic and cook, stirring, for 1 minute.
5. Add all the remaining vegetables except the tomatoes, and cook, stirring, until they start to soften, about 10 minutes.
6. In a large bowl, using your fingers, crush the tomatoes into pieces.
7. Add the crushed tomatoes, tomato paste, and sugar to the pot, and cook, stirring, until thick and most of the liquid has evaporated, about 15 minutes.
8. Add the remaining teaspoon of salt and remaining ½ teaspoon of pepper, and stir well.
9. Remove the pot from the heat.
10. Spread 3 cups of the tomato-vegetable sauce evenly over the bottom of a large roasting pan. Arrange one layer of lasagna noodles on top, being careful not to overlap.

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11. Spoon 1 cup of the ricotta cheese mixture over the noodles, spreading evenly with a rubber spatula.
12. Sprinkle 1 cup of the mozzarella cheese evenly over the ricotta.
13. Repeat the layering with the remaining ingredients, for a total of 3 complete layers, ending with the remaining 2 cups of mozzarella cheese on top.
14. Sprinkle the Parmesan cheese over the mozzarella cheese.
15. Cover the pan tightly with aluminum foil and bake for 1 ½ hours.
16. Using oven mitts or pot holders, carefully remove the pan from the oven and remove the foil. Do not remove the foil with bare fingers.
17. Using oven mitts or pot holders, return the pan to the oven and bake the lasagna until golden brown and bubbly, about 15 minutes.
18. Using oven mitts or pot holders, remove the lasagna from the oven and let cool for 10 minutes before serving.

Caution

Hey, be extra careful with this dish. When all assembled, it's very heavy and very hot and bubbly from cooking so long. An adult should be in the kitchen to help.

Emeril's CULINARY GARDEN & TEACHING KITCHEN

YES-YOU-CAN BAGELS

Kitchen

YIELD: 12 bagels

Don't let the number of steps in this recipe fool you—bagels are very easy to make at home. Just be sure to follow the instructions on kneading and resting the dough, and you will end up with 12 big, super-light bagels! If the dough is too thick for you to mix and knead by hand, a standing electric mixer fitted with a dough hook will help you out. You'll never go back to store-bought bagels again!

Ingredients

- 2 cups warm water (110 degrees F on an instant-read thermometer)
- 4 tablespoons sugar
- 2 (¼-ounce) packets active dry yeast
- 5 to 6 cups all-purpose flour
- 2 teaspoons salt
- 2 teaspoons vegetable oil
- 2 tablespoons yellow cornmeal
- 1 large egg yolk beaten with 1 tablespoon water

Contains egg

Optional toppings:

- ½ cup lightly sautéed minced yellow onions (about 2 teaspoons per bagel)
- 2 tablespoons poppy seeds (about ½ teaspoon per bagel)
- 2 tablespoons sesame seeds (about ½ teaspoon per bagel)
- 1 tablespoon kosher salt (about ¼ teaspoon per bagel)

Tools

- ❒ two large mixing bowls
- ❒ standing electric mixer fitted with a dough hook (optional)
- ❒ wooden spoon
- ❒ pastry cutter or knife for cutting dough
- ❒ paper towels
- ❒ potholders or oven mitts
- ❒ large heavy pot, preferably at least 10 to 12 inches in diameter
- ❒ measuring cups and spoons
- ❒ measuring cups and spoons
- ❒ instant-read thermometer
- ❒ kitchen towel or plastic wrap
- ❒ large baking sheet
- ❒ slotted spoon or skimmer
- ❒ small bowl
- ❒ pastry brush
- ❒ wire cooling rack
- ❒ fork

Adapted and used with permission from *There's a Chef in My Family!*, pg 50

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Directions

1. In a large bowl combine the water, 3 tablespoons of the sugar, and yeast. Stir and let stand until foamy, about 5 minutes.
2. Gradually add 4 cups of the flour and the salt to the mixture and stir well with a wooden spoon until the mixture comes together.
3. Add 1 to 1 ½ cups of the remaining flour, ½ cup at a time, until a stiff dough is formed.If dough is too stiff to mix with a spoon, transfer it to a standing electric mixer fitted with a dough hook and knead the dough.
4. Turn dough out onto a lightly floured surface and knead with your hands until smooth and no longer sticky, about 5 minutes. If dough seems sticky, add a bit of the remaining flour until it is no longer so. This should be a very stiff and heavy dough.
5. Lightly oil a large bowl with 1 teaspoon of the vegetable oil and place the dough in the bowl, turning to coat. Cover the bowl with a damp clean kitchen towel or plastic wrap and set aside to rise in a warm, draft-free area until dough has almost doubled, about 1 hour.
6. Remove the dough from the bowl and punch dough down with your fist.
7. Divide the dough into 12 equal pieces, and form each piece of dough into a ball. Stick your finger through the middle of the dough to make a hole. Using your fingers, smooth the top and sides of the dough, and pull the sides gently apart to enlarge the hole and make a circle about 3 to 3 ½-inches in diameter. Repeat with the remaining pieces of dough.
8. Place the bagels on a lightly floured surface, cover with a clean damp kitchen towel and set aside to rest in a warm, draft-free area until risen but not doubled, about 15 to 20 minutes.
9. Position rack in center of oven and preheat the oven to 400 degrees F. Lightly grease a baking sheet with the remaining teaspoon of vegetable oil and sprinkle lightly with the cornmeal.

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10. In a large, heavy pot, bring 12 cups of water to a boil with the remaining tablespoon of sugar.
11. Carefully lower the bagels into the boiling water in batches, leaving enough room for them to expand as they cook (usually 3 or 4 per batch, depending on the size of your pot). Cook for 5 minutes, turning once midway through the cooking time using a slotted spoon.
12. Using a slotted spoon or skimmer, remove the boiled bagels and set aside to drain on paper towels.
13. Transfer bagels to the prepared baking sheet with the slotted spoon and brush each with the beaten egg mixture. Sprinkle with the optional toppings, if desired, and bake until golden brown and crusty, 25 to 30 minutes.
14. With oven mitts or pot holders, remove the baking sheet from the oven and transfer to a wire rack to cool.

Caution

Be extra careful when adding and removing bagels to and from the boiling water!

Emeril's CULINARY GARDEN & TEACHING KITCHEN

ZUCCHINI BREAD

Kitchen

YIELD: 8 to 10 servings (or 1 to 2 loaves)

I bet many of you might be saying to yourselves, "Self, is he really making bread with zucchini?" The answer is YES! If you've never tried it before, this is going to make you look at zucchini in a whole new way. "Bread" is really more like a very moist spice cake. Bake some for after-school treats or lunch-box snacks!

Ingredients

- 1 ½ teaspoons unsalted butter
- 3 large eggs
- ¾ cup vegetable oil
- 2 teaspoons vanilla extract
- 1 ½ cups granulated sugar
- 2 ½ cups grated zucchini, or yellow squash
- 2 ½ cup all-purpose flour
- ¾ teaspoon salt
- 1 teaspoon ground cinnamon
- 1 teaspoon baking soda
- ¼ teaspoon baking powder
- ½ cup chopped pecans or walnuts

Contains dairy, egg and tree nuts

Tools

- ❒ measuring cups and spoons
- ❒ sifter
- ❒ chef's knife
- ❒ whisk
- ❒ rubber spatula
- ❒ two medium mixing bowls
- ❒ cutting board
- ❒ box grater
- ❒ one 6- by 9-inch loaf pan
- ❒ oven mitts or potholders

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Directions

1. Preheat the oven to 350 degrees F.
2. Grease a large loaf pan (9- by 6-inches) with the butter. Set aside.
3. In a large bowl, whisk the eggs until yellow and frothy.
4. Add the vegetable oil, vanilla extract and sugar and whisk to combine.
5. Add the squash and mix well.
6. Into a medium bowl, sift together the flour, salt, cinnamon, baking soda, and baking powder.
7. Add the dry ingredients to the wet ingredients and, using a spatula, mix until just blended, being careful not to overmix. Fold in the nuts.
8. Turn into the prepared loaf pan and bake until risen and golden brown, and a cake tester inserted into the middle comes out clean, about 1 ½ hours.
9. Remove from the oven and let cool in the pan for 10 minutes. Turn out onto a wire rack, setting right side up, to cool completely before cutting.

Note:
Alternately, the bread may be baked in two small loaf pans, decreasing the cooking time to about 1 hour.

SIMPLE SYRUP

Kitchen

YIELD: 2¼ cups

GRADE K

Once you get used to making your own Simple Syrup, you'll find that it makes cooking lots of different things much easier. We use it to make our Fresh-and-Fruity Freeze Pops, but you can also use it to make easy homemade lemonade. Go ahead and make a full recipe and store it in the refrigerator, where it'll keep for a couple of months. That way, when you want to whip up a sweet drink or frozen treat, you'll be ready to go and won't have to wait for the syrup to cool.

Ingredients

- 1 ½ cups sugar
- 1 ½ cups water

Tools

- ❒ measuring cups
- ❒ 3-quart heavy saucepan
- ❒ sturdy airtight container

Directions

1. Combine the sugar and water in a medium, heavy saucepan.
2. Bring to a boil without stirring.
3. Remove the pan from the heat and let it cool.
4. Pour the syrup into an airtight container and place in the refrigerator to cool completely (about 2 hours) before using.
5. Use as needed.

Adapted and used with permission from *There's a Chef in My Soup!*, pg 208

Emeril's CULINARY GARDEN & TEACHING KITCHEN

FRESH-AND-FRUITY FREEZE POPS
WITH SIMPLE SYRUP

Kitchen

GRADE K

YIELD: 10 servings

Use whatever fruit is in season and whatever fruits you like best for these treats...I made these with strawberries, raspberries, and blueberries, but what you use is up to you! Oh, and if it's that in-between time of year and you can't get fresh berries, use frozen 100% natural fruit with no syrup added for the same great results; just pop the frozen berries in the blender.

Ingredients

- 3 ¾ cups sliced strawberries (sliced lengthwise, about ¼-inch thickness)
- 1 ¼ cups raspberries
- 1 ¼ cups blueberries
- 1 ¼ cups Simple Syrup, recipe follows

Tools

- ❒ measuring cups
- ❒ 10 (5-ounce) paper cups
- ❒ 10 4-inch squares of aluminum foil
- ❒ blender
- ❒ 10 popsicle sticks or plastic spoons

Directions

1. Place all of the ingredients in a blender and puree on high speed until well-blended and smooth, about 30 seconds.
2. Divide the fruit puree among 10 paper cups (about ½ cup puree per cup).
3. Stand 1 popsicle stick or plastic spoon in the center of each cup.
4. Poke a small hole in the center of each aluminum square and place aluminum foil squares over the cups, inserting the spoon handle through the hole, so that the spoon stands up straight.
5. Place the cups in the freezer standing up, and freeze until set, at least 8 hours or overnight.
6. Remove from the freezer and discard the aluminum squares. Gently tear the paper cups away from the fruit pops and serve.

Caution

Blender blades are sharp—keep your fingers away!
Make sure the lid is on tightly before pureeing the fruit!

Adapted and used with permission from *There's a Chef in My Soup!*, pg 208

Note:
Other fruit possibilities for pops are: mangoes, bananas, peaches, nectarines, pineapple, cherries. Use the fruits that you love.

APPENDIX

Emeril's
CULINARY GARDEN & TEACHING KITCHEN

RESOURCES REFERENCED IN INSTRUCTION

Garden

GRADE	LESSON # AND TITLE	DESCRIPTION OF RESOURCE	LINK, IF RELEVANT
All Grades	Schoolwide Event: Garden Work Party	Tips for hosting a successful school garden work day	https://www.lifelab.org/school-garden-resources-all/2014/09/garden-workdays
K	Lesson #1: Welcome to Garden	Van Zandt, Steve . Banana Slug String Band. "With People I Like."	https://bananaslugs.bandcamp.com/track/with-people-i-like
	Lesson #5: Living or Non-Living?	"Sun Soil Water and Air" Song	https://bananaslugs.bandcamp.com/track/sun-soil-water-air-2
	Lesson #8: Above and Below the Ground	Stevens, Janet. *Tops and Bottoms.* Houghton Mifflin Harcourt, 1995.	
	Lesson #9: What is Soil Made Of?	Cronin, Doreen. *Diary of a Worm: Teachers Pet.* Harper Collins, 201	
	Lesson #11: Season Collage	McClure, Nikki. *Mama is it Summer Yet?* Abrams Books for Young Readers, 2010	
	Lesson #11: Season Collage	Davis, L. J. *A Simple Brown Leaf.* Abovo Publishing, 2004.	
	Lesson #14: Insect Explorations	Cronin, Doreen. *Diary of a Worm: Teachers Pet.* Harper Collins, 201	
1	Lesson #5: Soil Web	Cronin, Doreen. *Diary of a Worm: Teachers Pet.* Harper Collins, 201	
	Lesson #5: Soil Web	Pfeffer, Wendy. *A Log's Life.* Simon and Schuster, 2007	
	Lesson #7: Planning a Spring Garden	Cherry, Lynne. *How Groundhog's Garden Grew.* Scholastic, 2003.	
	Lesson #10: Planning a Pizza Bed	Rey, H. A. and Rey, Margret. *Curious George and the Pizza.* Houghton Mifflin Harcourt, 2010.	
	Lesson #14: Bean Babies	T. Brown, Ruth. *Ten Seeds.* Andersen Press, 2010.	
	Lesson #15: Seed Dissection	Rockwell, Anne. *One Bean.* Bloomsbury Publishing USA, 1999	
	Lesson #18: Sheet Shake	Guide to planting for pollinators	http://www.pollinator.org/

GRADE	LESSON # AND TITLE	DESCRIPTION OF RESOURCE	LINK, IF RELEVANT
2	Lesson #4: Tending the Garden	Cherry, Lynne. *How Groundhog's Garden Grew.* Scholastic, 2003.	
	Lesson #7: Making Soil	Van Zandt, Steve. "Dirt Made My Lunch." *Dirt Made My Lunch.* Banana Slug String Band, 1989.	https://bananaslugs.bandcamp.com/album/dirt-made-my-lunch
	Lesson #14: Dissecting Weeds	Van Zandt, Steve. "Roots, Stems, Leaves." *Dirt Made My Lunch.* Banana Slug String Band, 1989.	https://bananaslugs.bandcamp.com/track/roots-stems-leaves-3
	Lesson #16: Investigating Pollination	Guide to planting for pollinators	www.pollinator.org
3	Lesson #1: Welcome to the Garden!	Henkes, Kevin. *Chrysanthemum.* Harper Collins, 2007.	
	Lesson #2: Bread is for Eating	Gershator, David and Gershator, Phillis. *Bread is for Eating.* Macmillan, 1998.	
	Lesson #5: Discovering Our Pests	Identifying Insect Damage	http://davesgarden.com/guides/articles/view/2287#b
	Lesson #5: Discovering Our Pests	Plants that attract beneficial insects	https://permaculturenews.org/2014/10/04/plants-attract-beneficial-insects/
	Lesson #11: Tracing the Journey of Food	Inches, Alison. *The Adventures of a Plastic Bottle.* Little Simon, 2009.	
	Lesson #12: Bioregions and Food Systems	Brisson, Pat. *Before We Eat.* Tilbury House Publishers, 2014	
	Lesson #16: Flower Dissection	Heller, Ruth. *The Reason for a Flower.* Paw Prints, 2009.	

GRADE	LESSON # AND TITLE	DESCRIPTION OF RESOURCE	LINK, IF RELEVANT
4	Lesson #8: Building a Worm Bin	Guide to building a worm bin	Life Lab's Resource Page
	Lesson #8: Building a Worm Bin	Pfeffer, Wendy. *Wiggling Worms at Work.* Harper Collins, 2003.	
	Lesson #8: Building a Worm Bin	Make Origami Seed Envelopes	Origami Seed Envelopes pg 458
	Lesson #9: Geography and Food, Part 1	d'Aluisio, Faith and Menzel, Peter. *What the World Eats.* Tricycle Press, 2008.	
	Lesson #10: Geography and Food, Part 2	List of Countries by Lattitude	https://en.wikipedia.org/wiki/List_of_countries_by_latitude
	Lesson #10: Geography and Food, Part 2	Morris, Ann. *Bread Bread Bread.* Harper Collins, 1993.	
	Lesson #11: The World Travels of a Fruit	Brisson, Pat. *Before We Eat: From Farm to Table.* Tilbury House Publishers, 2014.	
	Lesson #12: Exploring Our Worm Habitat	Van Zandt, Steve. "The FBI Song (Fungus, Bacteria, Invertebrates)." *Singing in Our Garden.* Banana Slug String Band, 2002.	https://bananaslugs.bandcamp.com/track/fbi-fungus-bacteria-and-invertebrates
	Lesson #14: Garden and Kitchen Math	Lagasse, Emeril. "Simple Salsa." *There's a Chef in My Soup!!.* HarperCollins, 2002. 106. Print.	
	Lesson #14: Garden and Kitchen Math	Dodds, Dayle Ann. *Minnie's Diner: A Multiplying Menu.* Candlewick Press, 2007	
5	Lesson #3: Saving Bean Seeds	Make Origami Seed Envelopes	Origami Seed Envelopes pg 458
	Lesson #3: Saving Bean Seeds	Bardoe, Cheryl. Gregor Mendel: *The Friar Who Grew Peas.* Harry N. Abrams, 2015	
	Lesson #4: Seed Movers	Cooney, Barbara. *Miss Rumphius.* Viking Press, 1982.	

GRADE	LESSON # AND TITLE	DESCRIPTION OF RESOURCE	LINK, IF RELEVANT
	Lesson #7: Rain Gauges	Make a Rain Gauge	https://www.amnh.org/explore/ology/earth/make-your-own-weather-station/make-a-rain-gauge
	Lesson #7: Rain Gauges	Locker, Thomas. *Water Dance.* Houghton Mifflin Harcourt, 2015.	
	Lesson #14: Planting for Ka-Bam Kabobs	Krauss, Ruth. *The Carrot Seed.* HarperCollins, 1993.	
	Lesson #16: Teaching Each other How to Plant Seeds	Aston, Dianna. *A Seed is Sleepy.* Chronicle Books, 2013	
6	Lesson #4: Saving Seeds with Popcorn	Ritchie, Carson I. *A. Food Civilization: How History has been Affected by Human Tastes.* Methuen Australia, 1981	
	Lesson #4: Saving Seeds with Popcorn	A Handful of Seeds by the Occidental Art and Ecology Center	
	Lesson #4: Saving Seeds with Popcorn	Make Origami Seed Envelopes	Origami Seed Envelopes pg 458
	Lesson #5: Why Do We Have the Foods We Do?	USDA's National Agricultural Statistics Service	https://www.nass.usda.gov/Statistics_by_State/
	Lesson #13: Compost Caretakers	How to Build a Compost Bin	https://extension.missouri.edu/publications/g6957
	Lesson #14: Soil Samples	Soil Shake Jars	https://cdn.agclassroom.org/va/teachers/lesson_subject/soil.pdf
	Lesson #16: Teaching Each other How to Plant Seeds	Aston, Dianna. *A Seed is Sleepy.* Chronicle Books, 2013	

GRADE	LESSON # AND TITLE	DESCRIPTION OF RESOURCE	LINK, IF RELEVANT
7	Lesson #3: Micro-climates	USDA Complete Guide to Home Canning	https://www.nifa.usda.gov/about-nifa/blogs/usdas-complete-guide-home-canning
	Lesson #5: Photosynthesis, Part 1	Life Lab's "Photosythesis Revealed" lesson	Photosynthesis Revealed pg 756
	Lesson #8: Considering Customers	Growing Ventures by the National Gardening Association	
	Lesson #15: Managing Insects	How to Propagate Salvia	http://homeguides.sfgate.com/propagate-salvia-33836.html
	Lesson #17: Interdependence	Kruse-Peeples, Melissa. "How to Grow a Three Sisters Garden." *Nativeseeds.org.* May, 2016.	https://www.nativeseeds.org/learn/nss-blog/415-3sisters
	Lesson #18: Cuttings and Slips	How to Plant and Grow Sweet Potatoes	http://www.diynetwork.com/how-to/outdoors/gardening/how-to-plant-and-grow-sweet-potatoes
K-8	All Lessons	Instruction Sequence Methodology	https://bscs.org/reports/the-bscs-5e-instructional-model-origins-and-effectiveness/

GRADE	LESSON # AND TITLE	DESCRIPTION OF RESOURCE	LINK, IF RELEVANT
K	Lesson #1: Welcome to Kitchen	Elhert, Lois. *Eating the Alphabet.* Houghton Mifflin Harcourt, 2013	
	Lesson #3: Yummy Wake-Up Smoothies	Falwell, Cathryn. *Rainbow Stew.* Lee & Low Books, Incorporated, 2013.	
	Lesson #3: Yummy Wake-Up Smoothies	Ehlert, Lois. *Planting a Rainbow.* Houghton Mifflin Harcourt, 2013.	
	Lesson #11: Who Grows and Prepares our Food?	Brisson, Pat. *Before We Eat: From Farm to Table.* Tilbury House Publishers, 2014.	
	Lesson #4: 5 Senses Tasting	Moore, Eluka. *End of the Rainbow Fruit Salad.* Bread & Butter Publishing, LLC, 2015.	
	Lesson #10: Herbed Mediterranean Yogurt Cheese Sprea	Karas, Brian G. *On the Farm, At the Market.* Henry Holt and Company (BYR), 2016.	
1	Lesson #13: Three Bean Salad	Aston, Dianna Hutts. *A Seed is Sleepy.* Chronicle Books, 2013.	
2	Lesson #9: Warm Greens with Emeril's Herb Vinaigrette	Davis, L. J. *A Simple Brown Leaf.* Abovo Publishing, 2004.	
	Lesson #14: Power-Packed Spinach Salad	Pryor, Katherine. *Sylvia's Spinach.* Readers to Eaters, 2014.	
	Lesson #18: Feast Around the World	Lagasse, Emeril. "Indian Naan Bread." *There's a Chef in My World.* HarperCollins, 2006. 156. Print.	
3	Lesson #1: Welcome to the Kitchen!	Chapman, Jared. *Fruits in Suits.* Abrams, 2017.	
	Lesson #3: Getting Started with Paring Knives	Gibbons, Gail. *The Tool Book.* Holiday House, Incorporated, 2017	
4	Lesson #4: Sweet and Spicy Pickles	USDA Complete Guide to Home Canning	https://www.nifa.usda.gov/about-nifa/blogs/usdas-complete-guide-home-canning
	Lesson #4: Sweet and Spicy Pickles	Lagasse, Emeril. "Emeril's Homemade Sweet and Spicy Pickles." *Emerils.com.*	https://www.emerils.com/127175/emerils-homemade-sweet-and-spicy-pickles
	Lesson #4: Sweet and Spicy Pickles	The National Center for Home Food Preservation	

GRADE	LESSON # AND TITLE	DESCRIPTION OF RESOURCE	LINK, IF RELEVANT
	Lesson #5: Freezing and Dehydrating	The Homemade Pantry's Roasted Tomatoes for the Freezer	https://www.seriouseats.com/oven-roasted-fresh-canned-tomatoes-recipe
	Lesson #9: Homemade Pasta	dePaola,Tomie. *Strega Nona.* Simon and Schuster, 2011.	
	Lesson #10: Latkes	Howland, Naomi. *Latkes, Latkes, Good to Eat: A Chanukah Story.* Houghton Mifflin Harcourt, 2004.	
	Lesson #13: Strawberry Jam	Owings, Lisa. *From Strawberry to Jam* Lerner Publications, 2015.	
	Lesson #13: Strawberry Jam	USDA Complete Guide to Home Canning	https://www.nifa.usda.gov/about-nifa/blogs/usdas-complete-guide-home-canning
	Lesson #14: Blueberry French Toast	McCloskey, Robert. *Blueberries for Sal.* Penguin, 1976.	
	Lesson #16: Food Groups in Food Purchases	d'Aluisio, Faith and Menzel,Peter. *What the World Eats.* Tricycle Press, 2008.	
5	Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole	Handout: Cook's Notes	
	Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole	Lagasse, Emeril. "Fiesta Quesadillas with Simple Salsa and Holy Guacamole." *There's a Chef in My World.* HarperCollins, 2006. 156. Print.	
	Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole	Paulson, Gary. *The Tortilla Factory.* Hampton-Brown Books, 2001	
	Lesson #7: Discovering Proteins	Proteins Lesson for Kids: Definitions and Facts	http://study.com/academy/lesson/proteins-lesson-for-kids-definition-facts.html
	Lesson #10: Cooking Beans	Rupp, Rebecca. *How Carrots Won the Trojan War: Curious (but True) Stories of Common Vegetables.* Storey Publishing, 2011.	
	Lesson #17: Garam Marsala	VeLure Roholt, Christine. *Foods of India.* Bellwether Media, Incorporated, 2014	

GRADE	LESSON # AND TITLE	DESCRIPTION OF RESOURCE	LINK, IF RELEVANT
6	Lesson #4: Ka-Bam Kabobs	Safe Minimum Cooking Temperatures	https://www.foodsafety.gov/food-safety-charts/safe-minimum-internal-temperatures
	Lesson #6: Grilled Fish Tacos with a Roasted Chile and Avocado Salsa	*Dragons Love Tacos* by Adam Rubin and Daniel Salmieri	
	Lesson #7: Breakfast Party Planning, Part 1	Rubin, Adam and Salmieri, Daniel. *Dragons Love Tacos.* Penguin, 2016.	
	Lesson #10: Homemade Yogurt	Lagasse, Emeril. "Homemade Yogurt." *Emerils.com.*	http://emerils.com/122265/homemade-yogurt
	Lesson #10: Homemade Yogurt	Science Buddies "Semisolid Science: Growing Yogurt" by *Scientific American*	https://www.scientificamerican.com/article/bring-science-home-yogurt-bacteria/
	Lesson #12: Nutrients	Your Digestive System	https://www.natgeokids.com/uk/discover/science/general-science/your-digestive-system/
	Lesson #14: Breakfast Business	Numeroff, Laura. *If You Give a Moose a Muffin.* Harper Collins, 1991.	
7	Lesson # 6: Fall Quinoa Tabbouleh	Lagasse, Emeril. "Fall Quinoa Tabbouleh." *Emerils.com.*	http://emerils.com/130097/fall-quinoa-tabbouleh
	Lesson #13: Brainstorming Recipes for the Feast Around the World	d'Aluisio, Faith and Menzel, Peter. *What the World Eats.* Tricycle Press, 2008.	
K-8	All Lessons	Instruction Sequence Methodology	https://bscs.org/reports/the-bscs-5e-instructional-model-origins-and-effectiveness/

Below is a detailed list with suggested quantities of kitchen tools, equipment, and cooking materials for schools.

GARDEN TOOLS AND EQUIPMENT LISTING	SUGGESTED QTY
5-Gallon Bucket	15
Action Hoe	15
Bow Rake	15
Chairs / Benches (sum for all)	30
Cleaning Brush	15-30
Compost Station	1
Digging Fork	30
Food Prep Station	1
Garden Beds	SITE SPECIFIC – SEE GARDEN LAYOUT
Garden Hoe	15
Garden String	
Gloves (per student)	30
Greenhouse	1
Hand Fork	30
Hand Pruner	30
Hand Tool Set	30
Hand Trowel	30
Hand Weeding Tool	15
Handwashing Station	1
Harvest Basket	15
Hoses	5
In-Ground Garden Bed	SITE SPECIFIC – SEE GARDEN LAYOUT
Irrigation / Watering Source (variable on market and size of garden)	SITE SPECIFIC – SEE GARDEN LAYOUT
Landscape Fabric	SITE SPECIFIC – SEE GARDEN LAYOUT
Leaf Rake	SITE SPECIFIC – SEE GARDEN LAYOUT
Long-handled Pruner	30
Perennials	SITE SPECIFIC – SEE GARDEN LAYOUT
Pick Ax	3
Potato Hook	15
Raised garden bed	
Restrooms (see garden specification guidelines)	
Rototiller	1
Seed Packets	50
Shaded outdoor classroom	1
Shovels (digging)	15
Shovels (transfer)	15
Signage	1/garden bed minimum
Soil – cubic ft (Assumes 10 x 3 x 6 ft beds with 10" @ 15 cubic ft of soil per bed)	CALCULATE – SCHOOL SPECIFIC
Spading Fork	30
Storage Area (tool shed)	1
Tool Cleaning Area	1
Trees	SITE SPECIFIC – SEE GARDEN LAYOUT
Watering Can	30
Wheelbarrow	5
White Board/ Instruction Board	1
Work Table with Benches	SEE GARDEN LAYOUT
Worm Bin	1 MIN

Below is a detailed list with suggested quantities of kitchen tools, equipment, and cooking materials for schools.

TOOLS & EQUIPMENT	QTY
1-Quart Saucepan	3
10-in Ovenproof Sauté Pan	3
10 x 14-in Roasting Pan	3
11 x 7-in Baking Dish	3
12-in Non-Stick Oven Proof Skillet	3
2 Large Baking Sheets	3
2 Medium Non-Reactive Heatproof Bowl	3
2-Quart Sauce Pan	3
3 1/2-Quart Heavy Saucepan	3
3-Quart Heavy Saucepan	3
3-Inch Cookie Cutter	3
4 Medium Sauce Pans	3
4-Quart Saucepan	3
5-Quart Heavy Pot	3
6-Quart Saucepan	3
6 x 9-Inch Loaf Pan	3
6-Quart Pot	3
8-Quart Pot	3
9-in Cast Iron Skillet (or other Heavy Oven-Proof Skillet)	3
9 Inch Pie Dish	3
9 X 13-in Baking Dish	3
9 X 5-in Loaf Pan	3
9 X 9-in Baking Dish	3
Airtight Storage Containers (various sizes)–set	3
Apple Corer	30
Baking Sheet (2) 9X 13 Inch	3
Bamboo Skewers or Metal Kabob Skewers–set	6
Baster	3
Blender, Vitamix/Food Processor	1
Box Grater	3
Can Opener	3
Candy Thermometer	3
Canning Funnel	3
Casserole/Soufflé Dish	3
Chefs Knife	15
Coarse Mesh Strainer	3
Colander	3
Compost Bucket	3
Cooling Rack	3
Corer	15
Cutting Board–plastic color coded	30
Dutch Oven or Large Heavy Saucepan with Lid	3
Electric Mixer Fitted with a Dough Hook	3
Electric Mixer Handheld and Standing	3
Fine Grater	3
Fine Mesh Sieve	3
Fine Mesh Strainer	3
Food Dehydrator	3
Food Mill	3
Food Scale	3
Garlic Press	3
Griddle	3
Grill or Grill Pan	3
Handheld mixer	3
Hot Pads	3

TOOLS & EQUIPMENT	QTY
Hot Water Canner or Large Pot	3
Instant-Read Thermometer	3
Juicer	3
Kitchen Scissors	3
Ladle	3
Large Glass or Non-Reactive Bowl	15
Large Mixing Bowl	15
Large Nonreactive Bowl	15
Large Roasting Pan	3
Large Salad Bowl	15
Large Saucepan	3
Large Sauté Pan	3
Large Sheet Pans (2)	3
Large Skillet	3
Large Thermos	15
Large Wooden Spoon	3
Loaf Pan	3
Manual Pasta Machine	3
Measuring Cups–glass	3
Measuring Cups–metal	3
Measuring cups–plastic	3
Measuring Spoons–metal	3
Measuring Spoons–plastic	3
Meat Thermometer	3
Medium Mixing Bowl	15
Medium Saucepan with Lid	3
Medium Skillet 8 or 10-in	3
Melon Baller	15
Metal Ladle	3
Metal Spatula	3
Metal Tongs	3
Metal turner	3
Microplane	3
Mortar & Pestle	3
Muffin Pan 12 Cup	3
Nonreactive Container	15
Oven Proof Sauté Pan	3
Paper Mill	3
Paring Knife	15
Pasta Roller	15
Pastry Bag with tips	15
Pastry Blender	3
Pastry Brush	15
Pastry Cutter	15
Peeler	15
Pie Pan	3
Pizza Wheel	3
Plastic Canning Funnel	3
Plastic Tongs	3
Potato Masher	3
Rasp	15
Reamer	15
Rimmed Baking Sheet	15
Rolling Pin	3
Rubber Spatula	15
Rubberized Jar Lifter	3

TOOLS & EQUIPMENT	QTY
Salad Bowl	3
Salad Servers	15
Salad Spinner	3
Serrated Bread Knife	3
Serving Platter	3
Shallow Dish	3
Sifter	3
Single Sided Grater	3
Small Baking Sheet or Pie Pan	3
Small Chef Knife	3
Small Ladle	30
Small Mixing Bowl	3
Small Sauté Pan	15
Small Skillet	3
Soup Pot or Dutch Oven	3
Spice Grinder	3
Spoons–mixing	15
Spoons–serving	3
Spoons–skimmer	6
Spoons–slotted	3
Spoons–tasting	3
Spoons–wooden	6
Squeeze Bottle	6
Standing Electric Mixer fitted with Dough Hook	6
Standing Electric Mixer with Paddle Attachment	3
Steamer Basket	3
Steamer Insert	3
Strainer	3
Strawberry Huller	3
Thermometer	15
Timer	15
Vegetable Brush	3
Vegetable Brush	15
Vegetable Peeler	15
Whisk	15
Whisk Attachment for Electric Mixer	15
Wire Cooling Rack	3
Wood Turner	3
Zester	6
Silverware Set (45)	15

Assumes 30 students per teaching kitchen with 3 fully equipped student cooking stations

COOKING MATERIALS*	
5 Ounce Paper Cups	Parchment Paper
Aluminum Foil	Plastic Wrap
Baking Cup Liners	Popsicle Sticks
Cheesecloth	Rubber Gloves
Dish Towel	Ruler
Kitchen Cloths	Toothpick
Labels for Jars	Towels
Oven Mitts/Potholders	Canning Jars with Lids
Paper Cups	Preserving Jars and Lids
Paper Towels	

Quantities determined at the school level

SCHOOL GARDEN BEST PRACTICES CHECKLIST

At the beginning of every school year, schools should review the Culinary Garden Best Practices Checklist and keep a record of when the checklist was reviewed. If there are any actions that should take place in order for the school to meet a best practice, it should be documented and shared with school administration or facilities team.

Adapted with permission from *School Garden Food Safety Training & Documentation Manual* by the Oregon Department of Education.

NO.		YES	NO	N/A
1.	Identify the garden coordinator (who will be in charge of the garden)	❒	❒	❒
2.	Identify one adult with a current food handler certification to supervise all preparation of food from the garden that is served at school. Name: _____	❒	❒	❒
3.	Soil			
	a. Identify the soil history of the garden. (This only needs to occur once and should be recorded to help determine areas of the garden that are not suitable for growing food or may need special amendments.)	❒	❒	❒
	b. Test soil of the garden for contaminants such as lead, arsenic, or other materials. (This only needs to be done once unless new soil from another site is introduced to the garden.) (Attach to checklist)	❒	❒	❒
4.	Water / Irrigation			
	a. Is municipal potable water used for irrigation? If yes, the water is being monitored by your municipality and should be safe to use for irrigation. If no, attach water test to checklist and you should test water once per year.	❒	❒	❒
5.	Location of the garden site			
	a. Growing plot is located and positioned so that it is not in the path of runoff from agricultural areas, parking lots, roads, or other sources of potential contamination.	❒	❒	❒
6.	Raised beds are made of non-toxic materials.	❒	❒	❒
7.	Chemicals are not stored in close proximity to the garden or harvested food.	❒	❒	❒
8.	Training			
	a. All garden staff and volunteers have been trained on safe food handling practices and garden best practices before working in the garden. (Attach training log to checklist)	❒	❒	❒
	b. All students have received the Welcome to the Garden lesson orientation (Attach attendance roster to checklist)	❒	❒	❒
9.	Seeds/plants are procured from reputable sources	❒	❒	❒
10.	Garden coordinator has connected with the school facilities staff to discuss proper location of the garden and any compost areas.	❒	❒	❒
11.	Pesticides and insecticides are not used in the school garden.	❒	❒	❒

Please list any actions needed to meet the garden Best Practices:

List any additional school, district, or regional guidelines to review and document at the beginning of each school year for your garden.

- ❒
- ❒
- ❒
- ❒
- ❒
- ❒
- ❒
- ❒
- ❒
- ❒
- ❒

BEST PRACTICES CHECKLIST

Kitchen

At the beginning of every school year, schools should review the Teaching Kitchen Best Practices Checklist and keep a record of when the checklist was reviewed. If there are any actions that should take place in order for the school to meet a best practice, it should be documented and shared with school administration or facilities team.

NO.		YES	NO	N/A
1.	Identify the cooking instructor (who will be in charge of the teaching kitchen) _____	❒	❒	❒
2.	Identify one adult with a current food handler certification to supervise all preparation of food that is cooked in the teaching kitchen _____	❒	❒	❒
3.	Food Safety			
	a. Identify any student allergies in each class and the district policies for food and health. (Attach allergy plan to checklist)	❒	❒	❒
	b. Establish hand washing rituals with each class.	❒	❒	❒
	c. Establish basic safety rituals with each class.	❒	❒	❒
4.	All sinks have sufficient hot and cold water under pressure.	❒	❒	❒
5.	All drains are working properly, and plumbing is maintained in good repair.	❒	❒	❒
6.	Hand sinks are adequate, accessible to all students, and equipped with soap and paper towels or an approved drying device.	❒	❒	❒
7.	Hand washing signs are posted at all hand sinks.	❒	❒	❒
8.	Food preparation and storage areas are clean and free from trash and food residue.	❒	❒	❒
9.	Cooking equipment and tools.			
	a. The school and/or district has approved student use of the kitchen cooking utensils and equipment. (Attach equipment listing by grade with school / district approval to checklist.)	❒	❒	❒
	b. Kitchen equipment is clean and in safe working condition.	❒	❒	❒
10.	Training			
	a. All staff and volunteers have been trained on safe food handling practices and cooking best practices before working in the teaching kitchen. (Attach training log to checklist)	❒	❒	❒
	b. All students have received the Welcome to the Kitchen lesson orientation. (Attach attendance roster to checklist)	❒	❒	❒
11.	Storage			
	a. Chemicals are not stored in close proximity to student cooking stations or food storage.	❒	❒	❒
	b. Personal belongings are stored in a separate, designated area away from food and equipment.	❒	❒	❒
	c. All food is stored in the correct place to avoid bacteria and food borne illness.	❒	❒	❒

Please list any actions needed to meet the kitchen best practices.

List any additional school, district, or regional guidelines to review and document at the beginning of each school year for your kitchen.

❒ _____

❒ _____

❒ _____

❒ _____

❒ _____

❒ _____

❒ _____

❒ _____

❒ _____

❒ _____

❒ _____

❒ _____

Adapted with permission from *Life Lab.*

INDOORS ❀ GRADES 5-6 ❀ FALL, WINTER, SPRING ❀ PROJECT

Photosynthesis Revealed

DESCRIPTION

Teacher conducts as a demonstration a simple experiment creating a visible chemical reaction, first with the carbon dioxide humans exhale and then with the oxygen released from an aquarium plant.

OBJECTIVE

To demonstrate how plants produce oxygen and use carbon dioxide in the course of photosynthesis.

TEACHER BACKGROUND

Plants have the unique capacity to make their own food. This process, called photosynthesis, requires carbon dioxide, sunlight, and water. The carbon dioxide is taken from the air, and from the chemical reaction of photosynthesis the plant gives off excess oxygen. Animals reverse the process, taking in oxygen and giving off carbon dioxide. This exchange between animals and plants recycles the earth's limited air supply. Most scientists are concerned about the increase of carbons in our atmosphere from the burning of petroleum. An increase in carbon can trap more heat in the atmosphere (the greenhouse effect). According to the US Environmental Protection Agency, this is leading to rising global temperatures, which have been accompanied by changes in weather and climate, the melting of glaciers, and a rise in sea levels. Plants help keep the carbon ratio in balance by using carbon dioxide in photosynthesis.

The chemical equation for photosynthesis is:

$6CO_2$	+	$6H_2O$	→	$C_6H_{12}O_6$	+	$6O_2$
Carbon Dioxide	+	Water	→	Sugar	+	Oxygen

MATERIALS

- ❀ Observation Sheet, 1 per student, page 416
- ❀ bromothymol blue (available in chemical supply catalogs)
- ❀ lab coat, apron, or smock
- ❀ 2 bottles or test tubes with tight-fitting stoppers that have holes for straws or pipettes
- ❀ 2 straws or pipettes that fit in stopper holes
- ❀ sprig of an aquarium plant (elodea or hornwort)

PREPARATION

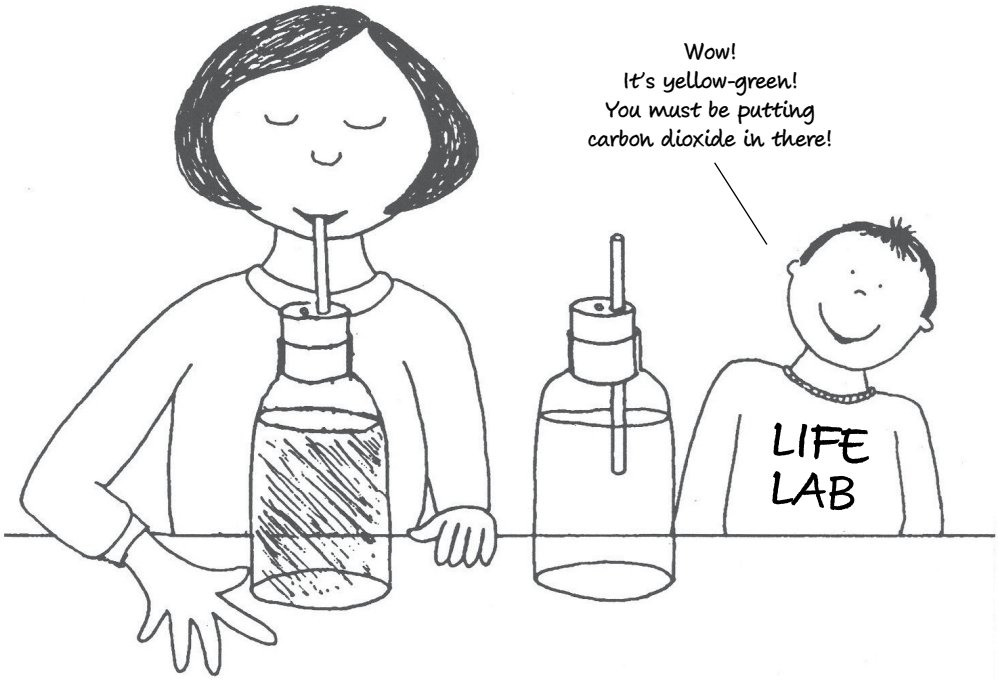
Fill a bottle half full with bromothymol blue. Seal with a stopper that has a straw or pipette inserted in the stopper hole.. The stopper must fit tightly in the bottle. If there are gaps around the stopper or straw, seal them with tape. *Note*: Bromothymol blue can stain clothing, so wear a lab coat, apron, or smock.

CLASS DISCUSSION

Animals inhale oxygen and exhale carbon dioxide as part of their respiration systems. Plants use the carbon dioxide and release oxygen into the air during photosynthesis. We can demonstrate this exchange by using a chemical, bromothymol blue, that changes color when carbon dioxide amounts are increased. When you breathe into the chemical, the carbon dioxide you exhaled changes the color of the chemical from blue to yellow-green.

ACTION

1. Demonstrate by breathing in a soft, steady rhythm into the straw of one of the rubber-stopped bottles. *Note*: It's best for the teacher to do this to ensure that no Bromomythol blue is inhaled.



2. Breathe into the bottles until the blue color becomes yellow-green. Explain that the yellow-green color signifies the presence of carbon dioxide.

3. Ask students to hypothesize how some of the carbon dioxide can be removed from the Bromothymol blue solution. How will they be able to tell if this has happened? (*The color will return to blue.*)

4. Have them test the hypothesis as you remove the stopper and place a sprig of elodea in one of the bottles. Place both bottles in bright sunlight and observe changes over several days. If students develop other hypotheses, follow through on their ideas.

5. Ask students to report the results of the experiment. Discuss the importance of plants in removing carbon dioxide from the atmosphere.

WRAP UP

What was released into the chemical to change its color? How was carbon dioxide removed from the chemical? How did the plant use the carbon dioxide? What is an important exchange that takes place between plants and animals? Why are plants important in maintaining the carbon dioxide balance in our atmosphere?

OUTDOORS ❀ GRADES 2-6 ❀ FALL, SPRING ❀ ACTIVITY

Splash

Adapted with permission from *Life Lab.*

DESCRIPTION

Students build a simple device from milk cartons to observe the effects of raindrops on soil erosion.

OBJECTIVE

To measure and graph the relationship of the force of moving water to the rate of soil erosion.

TEACHER BACKGROUND

Erosion — soil being moved by water or wind — is a natural process, but enormous amounts of topsoil are being washed off farmland, causing serious concern. This activity demonstrates and compares the impact of hard rain and soft rain on the soil. The soil splashed onto the milk cartons represents moved or eroded soil. The harder the rain, the bigger the splash. You can extend the activity by testing different types of soil, including freshly dug soil, compost, sand, clay, and plant-covered soil.

MATERIALS

- ❀ Splash Lab Sheet, one per group, page 430
- ❀ 1 half-gallon milk carton per group of 4
- ❀ enough sand or pebbles to weigh down the cartons
- ❀ 2 large sheets of white paper per group
- ❀ tape
- ❀ 1 ruler per group
- ❀ 1 watering can with a sprinkler head per group

CLASS DISCUSSION

When a raindrop hits hard ground, such as rock or concrete, what happens to the ground? What would happen if a raindrop struck a part of the earth's surface made out of soft soil? What would happen to the soil if the drop were bigger or coming out of the sky faster? *(Record all predictions.)* Imagine now the real situation of millions of raindrops striking the land.

Erosion is the name given to the movement of small rocks and soil from one place to another, either by wind or water. In this activity, you will build a special device called a splashboard and you will use it to investigate the part that raindrops play in erosion.

ACTION

1. Divide the class into groups of four.

2. Demonstrate splashboard construction:
   - ❀ Cut the top off of the milk carton.
   - ❀ Put sand or pebbles in the carton until it is ⅓ full.
   - ❀ Wrap a piece of white paper around the outside of the carton and tape the ends together. Do not tape the paper to the carton.
   - ❀ With a crayon, write the word "slow" along the top of one side, "medium" along the top of the next side, and "fast" along the top of the third side. Do not write on the taped side.

3. After all the groups have finished building their splashboards, show them (without water) how they will be used and have them guess what will happen. Record predictions.

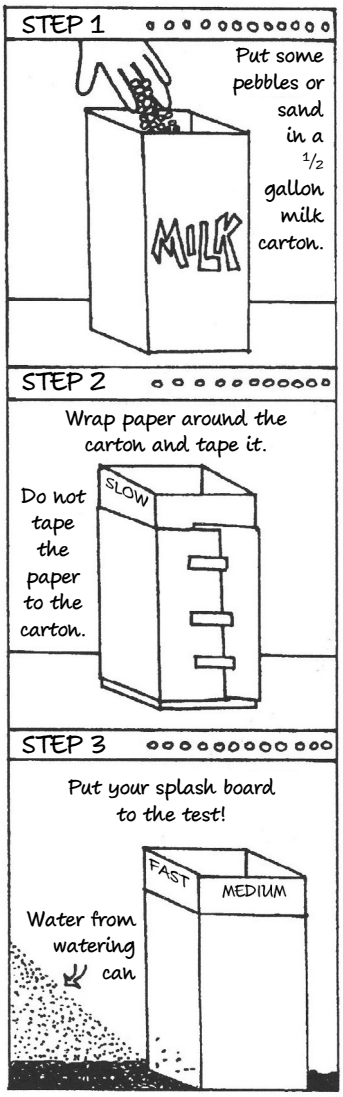
4. Have each group place its splashboard outside on open soil in an area at least 2 feet (0.6 m) in diameter. Be sure the splashboards are standing straight.

5. Have students fill watering cans and create a mini-rainstorm over the soil in front of the side marked slow. Gently pour water from the can from about knee height. Do not pour water directly on the paper, but rather on the soil as close to it as possible. Any soil splashed up by the water drops will stain the paper.

6. Leaving the splashboard in place, have students repeat the procedure in front of the medium side and then the fast side, pouring from waist and shoulder height, respectively.

7. When students have finished, have them slip the paper off, open it up, and measure and compare the soil splashing. When dry, the papers can be used to illustrate how graphs can be pictures of how nature works.

8. Discuss the results. With the splashboard sheet opened up and dry, have students draw a line along the top edge of the splashing, showing that as the water drops moved faster, bits of soil were heaved higher into the air.



WRAP UP

What did you learn from this experiment? Why hasn't all the soil on the earth washed away? What helps to keep it in place even in a heavy rain? *(Plants provide a protective cover, with their roots holding onto the soil.)* How could you use your splashboards to test your ideas?

DIGGING DEEPER

1. Have students put splashboards on different surfaces — sand, grass, in a garden, on pavement — and compare splashes.

2. Have students tour the school grounds looking for evidence of splash erosion. Does soil splashing along the base of the school buildings give any clues about the direction of the storm?

COMMON CORE STATE STANDARDS (CCSS)

Speaking & Listening

Grade K

CCSS.ELA-Literacy.SL.K.1 Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups.

CCSS.ELA-Literacy.SL.K.4 Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.

CCSS.ELA-Literacy.SL.K.6 Speak audibly and express thoughts, feelings, and ideas clearly.

Grade 1

CCSS.ELA-Literacy.SL.1.1 Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.

CCSS.ELA-Literacy.SL.1.4 Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

CCSS.ELA-Literacy.SL.1.6 Produce complete sentences when appropriate to task and situation.

Grade 2

CCSS.ELA-Literacy.SL.2.1 Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.

CCSS.ELA-Literacy.SL.2.4 Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly and in coherent sentences.

CCSS.ELA-Literacy.SL.2.6 Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Grade 3

CCSS.ELA-Literacy.SL.3.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse patterns on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.

Reading: Literature

Grade K

CCSS.ELA-Literacy.RL.K.1 With prompting and support, ask and answer questions about key details in a text.

CCSS.ELA-Literacy.RL.K.7 With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., what moment in a story an illustration depicts).

Grade 1

CCSS.ELA-Literacy.RL.1.1 Ask and answer such questions as *who, what, where, when, why and how* to demonstrate understanding of key details in a text.

CCSS.ELA-Literacy.RL.1.7 Use illustrations and details in a story to describe its characters, settings, or events.

Grade 2

CCSS.ELA-Literacy.RL.2.4 Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in as story, poem, or song.

Grade 2

CCSS.ELA-Literacy.RL.2.7 Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

Grade 3

CCSS.ELA-Literacy.RL.3.6 Distinguish their own point of view from that of the narrator or those of the characters.

Grade 5

CCSS.ELA-Literacy.RL.5.7 Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

Reading: Informational Text

Grade 1

CCSS.ELA-Literacy.RI.1.5 Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.

Grade 2

CCSS.ELA-Literacy.RI.2.5 Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.

CCSS.ELA-Literacy.RI.2.6 Identify the main purpose of a text, including what the author wants to answer, explain or describe.

Grade 3

CCSS.ELA-Literacy.RI.3.5 Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

Grade 4

CCSS.ELA-Literacy.RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from text.

CCSS.ELA-Literacy.RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

GRADE 6

CCSS.ELA-Literacy.RI.6.5 Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

GRADE 7

CCSS.ELA-Literacy.RI.7.5 Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.

GRADE 8

CCSS.ELA-Literacy.RI.8.7 Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.

Language

Grade K

CCSS.ELA-Literacy.L.K.5 With guidance and support from adults, explore word relationships and nuances in word meanings

CCSS.ELA K.L.5 With guidance and support from adults, explore word relationships and nuances in word meanings.

CCSS.ELA-Literacy.L.K.5.a Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent

CCSS.ELA-Literacy.L.K.5.c Identify real-life connections between words and their use (e.g., note places at school that are colorful).

Grade 1

CCSS.ELA-Literacy.L.1.5 With guidance and support from adults, explore word relationships and nuances in word meanings.

CCSS.ELA-Literacy.L.1.5.a Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent.

CCSS.ELA-Literacy.L.1.5.c Identify real-life connections between words and their use (e.g., note places at home that are cozy).

Grade 2

CCSS.ELA-Literacy.L.2.5 Demonstrate understanding of word relationships and nuance in word meanings.

CCSS.ELA-Literacy.L.2.5.a Identify real-life connections between words and their use (e.g., describe foods that are *spicy or juicy*)

CCSS.ELA-Literacy.L.2.5.b Distinguish shades of meaning among closely related...adjectives (e.g., *thin, slender, skinny, scrawny*).

Grade 3

CCSS.ELA-Literacy.L.3.5 Demonstrate understanding of word relationships and nuance in word meanings.

CCSS.ELA-Literacy.L.3.5.b Identify real-life connections between words and their use (e.g., describe people who are *friendly or helpful*)

Writing

Grade 1

CCSS.ELA-Literacy.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

Grade 3

CCSS.ELA-Literacy.W.3.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Grade 5

CCSS.ELA-Literacy.W.4.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

GRADE 6

CCSS.ELA-Literacy.W.6.1 Write arguments to support claims with clear reasons and relevant evidence

CCSS.ELA-Literacy.W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.W.6.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

GRADE 7

CCSS.ELA-Literacy.W.7.1 Write arguments to support claims with clear reasons and relevant evidence

CCSS.ELA-Literacy.W.7.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

GRADE 8

CCSS.ELA-Literacy.W.8.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.W.8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration

Math

Grade K

CCSS.Math.K.CC Count to tell the number of objects.
CCSS.MATH.K.MD Describe and compare measurable attributes

Grade 1

CCSS.Math.1.MD Measure lengths indirectly and by iterating length units
CCSS.Math.1.OA Represent and solve problems involving addition and subtraction
CCSS.Math.1.G.3 Partition circles or rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters.

Grade 2

Measure and estimate lengths in standard units.
CCSS.Math.Content.2.MD.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
CCSS.Math.Content.2.MD.A.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
CCSS.Math.Content.2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.
CCSS.Math.Content.2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
Represent and interpret data.
CCSS.Math.Content.2.MD.D.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
CCSS.Math.Content.2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems1 using information presented in a bar graph.

Represent and solve problems involving addition and subtraction.

CCSS.Math.Content.2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem

Work with equal groups of objects to gain foundations for multiplication.

CCSS.Math.Content.2.OA.C.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

CCSS.Math.Content.2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Grade 3

Solve problems involving measurement and estimation.

CCSS.Math.Content.3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

Represent and solve problems involving multiplication and division.

CCSS.Math.Content.3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 × 7.*

CCSS.Math.Content.3.OA.A.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*

CCSS.Math.Content.3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
CCSS.Math.Content.3.OA.A.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = _ ÷ 3, 6 × 6 = ?*

Use place value understanding and properties of operations to perform multi-digit arithmetic.
CCSS.Math.Content.3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
CCSS.Math.Content.3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
CCSS.Math.Content.3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Grade 4
CCSS.Math.Content.4.NF.B.4.c Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. *For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*

Use the four operations with whole numbers to solve problems. (H4 tan)
CCSS.Math.Content.4.OA.A.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
CCSS.Math.Content.4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

CCSS.Math.Content.4.OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Classify objects and count the number of objects in each category.

CCSS.Math.Content.K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Represent and interpret data.

CCSS.Math.Content.1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Social Studies

Elementary Themes

Social Studies Citizenship
Social Studies Geography
Social Studies Cultural Traditions
Social Studies Diversity and Community
Social Studies Economics
Social Studies Character/Heroes
Social Studies History

GRADES 6-8

CCSS.ELA-Literacy.RH.6-8.1 Cite specific textual evidence to support analysis of primary and secondary sources

CCSS.ELA-Literacy.RH.6-8.3 Identify key steps in a text's description of a process related to history/social studies

CCSS.ELA-Literacy.RH.6-8.7
Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts

NEXT GENERATION SCIENCE STANDARDS (NGSS)

Engineering Technology and Applications of Science

GRADES 6-8

NGSS.MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

NGSS.MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

NGSS.MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

NGSS.MS-ETS1-4 (H3A) Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.

Physical Sciences

GRADES 6-8

NGSS.MS-PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.

NGSS.MS-PS3-3 Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

Life Sciences

Grade K

NGSS.K-LS1-1
Use observations to describe patterns of what plants and animals (including humans) need to survive.

Grade 1

NGSS.1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow and meet their needs.
NGSS.1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

Grade 2

NGSS.2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.
NGSS.2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
NGSS.2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

Grade 3

NGSS.3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

GRADES 6-8

NGSS.MS-LS1-3 Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.
NGSS.MS-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.
NGSS.MS-LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
NGSS.MS-LS1-6 Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

NGSS.MS-LS1-7 Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.
NGSS.MS-LS2-1 Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
NGSS.MS-LS2-2 Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.
NGSS.MS-LS2-3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
NGSS.MS-LS2-4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
NGSS.MS-LS2-5 Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

EARTH AND SPACE SCIENCES

Grade K

NGSS.K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
NGSS.K-ESS3-1 Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

Grade 1

NGSS.1-ESS1-2 Make observations at different times of year to relate the amount of daylight to the time of year.

Grade 2

NGSS.2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.

Grade 5

NGSS.5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.But individuals and communities are doing things to help protect Earth's resources and environments.

GRADES 6-8

NGSS.MS-ESS2-1 Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
NGSS.MS-ESS2-4 Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
NGSS.MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

NGSS SCIENCE AND ENGINEERING PRACTICES

Asking Questions and Defining Problems
Constructing Explanations and Designing Solutions
Analyzing and Interpreting Data
Planning and Carrying Out Investigations
Developing and Using Models
Engaging in Argument from Evidence
Obtaining, Evaluating and Communicating Information

Art

Grade K

VA:Cr1.1.Ka Engage in exploration and imaginative play with materials.
VA:Cr2.1.Ka Through experimentation, build skills in various media and approaches to artmaking.

CDC NATIONAL HEALTH EDUCATION STANDARDS

National Health Education Standard 1 Students will comprehend concepts related to health promotion and disease prevention to enhance health.

National Health Education Standard 2 Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

National Health Education Standard 3 Students will demonstrate the ability to access valid information, products, and services to enhance health.

National Health Education Standard 4 Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

National Health Education Standard 5 Students will demonstrate the ability to use decision-making skills to enhance health.

National Health Education Standard 6 Students will demonstrate the ability to use goal-setting skills to enhance health.

National Health Education Standard 7 Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

National Health Education Standard 8 Students will demonstrate the ability to advocate for personal, family, and community health.

FEAST AROUND THE WORLD

At the end of each school year, students will prepare for a culminating community event titled Feast Around the World. At this gathering, students, family, and community members come together to enjoy a feast prepared by the students featuring produce from the garden. Students will prepare stations highlighting not only the food, but the geography, culture, and traditions of the country.

ELEMENTARY SCHOOL

In Elementary School, the Scope and Sequence outlines countries around the world for students to research cultural traditions, common produce, and dishes.

GRADE	COUNTRY
K	Vietnam
1	Mexico
2	India
3	China
4	Morocco
5	India

Tips:

- Have Grade 5 students serve as peer mentors to Grade 2 students in researching India.

MIDDLE SCHOOL

In Grade 7, students become the event planners for the Middle School Feast Around the World! They will use what they have learned from the Elementary School Feast to plan and prepare their own feast. Through research, student teams will explore recipes and cultures in various regions of the world. Then will then select countries for Grades 6, 7, and 8 to further research food, geography, climate, culture, and traditions of the country. Each middle school class will then prepare a dish from their country to enjoy at the feast, incorporating produce from the garden whenever possible.

Tips:

- Enlist help from parent volunteers, teachers, and community members. Look especially for parents or community members who can share recipes and mealtime traditions from their own cultures.

THINK-PAIR-SHARE DISCUSSION MODEL

Think-Pair-Share is an alternative to the traditional class discussion format. Instead of asking a question and then calling on a student with a raised hand, the teacher asks a question and then asks students to do the following:

1. Think quietly to themselves about an answer.
2. Turn to a partner to pair up and discuss each other's ideas.
3. Raise their hands to share thoughts, one at a time, and discuss with the whole group.

You can learn more about Think-Pair-Share at TeacherVision.com.

TRANSITION TECHNIQUES

BREAKING INTO SMALL GROUPS

When you want to explain a task to the whole class, and then have students break into small groups to complete it, it can be effective to start your explanation in an intentional way, such as by saying "When I say go, and not before I say go, each group will …" When you have finished all of your instructions, then you can say "Alright …go!" This ensures that students know specifically when it is time to listen and when it is time to start their task.

GATHERING TOGETHER

When you want to call your students back together after they have been actively working in small groups, it can be fun to use a call back signal such as a chime, a special call-and-response, or a coyote howl. Some teachers say, for example: "One, Two, Three, Eyes on Me", and have the students respond "One, Two, Eyes on You!" or "When I say Sun, You say Flower. Sun …" and students respond "Flower!"

Teach your students exactly what they are expected to do when they hear the call back, such as "Respond, and then return to the circle and give me your quiet attention within ten seconds." After you use the call-back, start a count-down to keep them motivated, as in "Ten, nine, eight …" Their goal is to be circled up, quiet, and ready to listen when you get to zero. Practice this routine until they've got it down.

READ ALOUD STRATEGIES

ECHO READ

In an Echo Read, the teacher simply reads a short passage, and students repeat. You can learn about this strategy on the Strategies for Special Interventions website.

CHORAL READ

In a Choral Read, the teacher and students read a passage together at the same time. You can learn about this strategy on the Reading Rocket website.

STRATEGIES FOR DIVIDING TASKS

The garden and the kitchen provide abundant opportunities to divide a large task across many hands. Whether your students are preparing salsa or planting zucchini together, it will be helpful to have some strategies for guiding them in divvying up tasks. There are many ways to do this. Below we've summarized a few possibilities:

CARDINAL DIRECTIONS

Post the cardinal directions in your garden or kitchen. When it's time to divide tasks within groups, say something like "The person standing at the north end of the table will chop the tomatoes; then working around clockwise, the next person will chop the onion …" and so on.

CHORE CHART

Create a Chore Chart in your garden or kitchen, and have groups rotate through various tasks. For example, when cleaning up the kitchen, Group A can be the Sweepers, Group B the Counter Wipers, etc. Then, each week, rotate the groups so that they are moved to a new task. The We Are Teachers website has loads of ideas for how these charts can look and operate.

POPSICLE STICKS

You can write each student's name on a popsicle stick and place all the names for one class in a cup. Then, when you want to select one individual student for a job, such as for example pushing the button on the blender, you simply pull a popsicle stick and call that student up.

CHORE CARDS

For regular chores, like Dishes, Sweeping, or Wiping Counters, you can write each chore onto a card and have students or groups pull cards from a bowl. The card they pull determines the task they will fulfill for that class period.

STUDENT CHOICE

When possible, it can be exciting and empowering for students to choose how they will contribute to the task at hand. Simply list the chores that need to happen, such as "Flipping Compost, Mulching Pathways, and Weeding" and ask students to sign up for the one they want to take on.

LEARNING GAMES

MEET A PLANT

In this game, students partner up. One student closes his/her eyes and the other guides his/her partner safely to a plant to explore with eyes closed. The partner then guides the student with his/her eyes closed back to a gathering area. The student opens eyes, and tries to find the plant they explored.

BLIND TASTE TEST GAME

In this game, students pair up. One student closes his/her eyes or puts on a blindfold and plugs his/her nose. The partner gives them something to taste, such as a slice of fruit, a basil leaf, or a green bean. The blindfolded person tries to guess what it is. Then they try the same food with their nose open and see if they can taste a difference and guess again. Then, they switch roles.

GARDENING SKILLS OBSERVATION CHECKLIST

Use the table below to observe and note areas of strength and suggestions for improvement on each student's development of the garden tools and behaviors learning objectives for gardening skills embedded in programming and curriculum of Emeril's Culinary Garden & Teaching Kitchen.

This table can be used as a reflection tool to coach and guide a student or as an evaluation tool to measure if you are achieving the program goals.

Name of Student: _____

	Garden Tools and Equipment Skills Insert garden tools and equipment learning objective(s) below.	**Pros** Specific ways student demonstrates this skill.	**Grows** Specific ways student can grow or improve in this area.
❒			
❒			
❒			
❒			
❒			
❒			
	Garden Behaviors Skills Insert garden behaviors learning objective(s) and/or garden agreements below.	**Pros** Specific ways student demonstrates this skill.	**Grows** Specific ways student can grow or improve in this area.
❒			
❒			
❒			
❒			
❒			
❒			

COOKING OBSERVATION CHECKLIST

Use the table below to observe and note areas of strength and suggestions for improvement on each student's development of the kitchen learning objectives for cooking skills embedded in the curriculum of Emeril's Culinary Garden & Teaching Kitchen.

This table can be used as a reflection tool to coach and guide a student or as an evaluation tool to measure if you are achieving the program goals.

Name of Student: _____

Cooking Skills Insert learning objective(s) below.		**Pros** Specific ways student demonstrates this skill.	**Grows** Specific ways student can grow or improve in this area.
❒			
❒			
❒			
❒			
❒			
❒			

CLEANING OBSERVATION CHECKLIST

Use the table below to observe and note areas of strength and suggestions for improvement on each student's development of the kitchen learning objectives for cleaning skills embedded in the curriculum of Emeril's Culinary Garden & Teaching Kitchen.

This table can be used as a reflection tool to coach and guide a student or as an evaluation tool to measure if you are achieving the program goals.

Name of Student: _____

	Cleaning Skills Insert learning objective(s) and/or kitchen agreements below.	**Pros** Specific ways student demonstrates this skill.	**Grows** Specific ways student can grow or improve in this area.
❒			
❒			
❒			
❒			
❒			
❒			

STUDENT LIFE SKILLS OBSERVATION CHECKLIST

Use the table below to observe and note areas of strength and suggestions for improvement on each student's development of the Personal and Community Life Skills embedded in Emeril's Culinary Garden & Teaching Kitchen. This checklist can be used as a reflection tool to coach and guide a student or as an evaluation tool to measure if you are achieving the program goals.

Name of Student: _____

Personal Life Skills		**Pros** Specific ways student demonstrates this skill.	**Grows** Specific ways student can grow or improve in this area.
PLS.1 ❒	Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Date: Example:	Date: Example:
PLS.2 ❒	Students are able to express empathy and caring for themselves, others, and the environment.	Date: Example:	Date: Example:
PLS.3 ❒	Students cultivate honest and responsible behaviors that contribute to the learning of the community.	Date: Example:	Date: Example:
PLS.4 ❒	Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	Date: Example:	Date: Example:
PLS.5 ❒	Students develop the ability to make informed and responsible decisions.	Date: Example:	Date: Example:
PLS.6 ❒	Students actively seek creative and resourceful solutions.	Date: Example:	Date: Example:
Community Life Skills		**Pros** Specific ways student demonstrates this skill.	**Grows** Specific ways student can grow or improve in this area
CLS.1 ❒	Students demonstrate problem solving and resolve conflict as a team.	Date: Example:	Date: Example:
CLS.2 ❒	Students cooperate and communicate well with each other.	Date: Example:	Date: Example:
CLS.3 ❒	Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.	Date: Example:	Date: Example:
CLS.4 ❒	Students appreciate and are respectful of differences and diversity in their communities.	Date: Example:	Date: Example:
CLS.5 ❒	Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	Date: Example:	Date: Example:

CLASS LIFE SKILLS OBSERVATION CHECKLIST

Use the table below to observe and note areas of strength and suggestions for improvement on each student's development of the Personal and Community Life Skills embedded in Emeril's Culinary Garden & Teaching Kitchen. This checklist can be used as a reflection tool to coach and guide a student or as an evaluation tool to measure if you are achieving the program goals.

Season: _____ **1 = Does not demonstrate this skill. 2 = Is actively developing this skill. 3 = Consistently demonstrates this skill**

Student Name	PL S.1	PL S.2	PL S.3	PL S.4	PL S.5	PL S.6	CL S.1	CL S.2	CL S.3	CL S.4	CL S.5	Notes/Examples

Personal Life Skills		Community Life Skills	
PLS.1	Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	CLS.1	Students demonstrate problem solving and resolve conflict as a team.
PLS.2	Students are able to express empathy and caring for themselves, others, and the environment.	CLS.2	Students cooperate and communicate well with each other.
PLS.3	Students cultivate honest and responsible behaviors that contribute to the learning of the community.	CLS.3	Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.
PLS.4	Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.	CLS.4	Students appreciate and are respectful of differences and diversity in their communities.
PLS.5	Students develop the ability to make informed and responsible decisions.	CLS.5	Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.
PLS.6	Students actively seek creative and resourceful solutions.		

CLASS LIFE SKILLS OBSERVATION CHECKLIST CONTINUED

Use the table below to observe and note areas of strength and suggestions for improvement on each student's development of the Personal and Community Life Skills embedded in Emeril's Culinary Garden & Teaching Kitchen. This checklist can be used as a reflection tool to coach and guide a student or as an evaluation tool to measure if you are achieving the program goals.

Season: _____ **1 = Does not demonstrate this skill. 2 = Is actively developing this skill. 3 = Consistently demonstrates this skill**

Student Name	PL S.1	PL S.2	PL S.3	PL S.4	PL S.5	PL S.6	CL S.1	CL S.2	CL S.3	CL S.4	CL S.5	Notes/Example

The Action Plan Template is designed to:

- Identify your implementation team.
- Help your team set key schoolwide goals.
- Plan the steps your team will take this year and into the future.
- Decide who will be responsible for leading and supporting each project in support of the school year goal.

This is a tool for success toward meeting your goals and creating a sustainable program. It is important to return to these goals throughout the year as a team and check your progress so that you can make adjustments as your program develops.

We suggest monthly team meetings to track your progress and troubleshoot any roadblocks that arise with your team members. It is ideal to build a diverse team with community members, teachers, students (if possible), professionals and family members. At the end of the year, please indicate whether or not you completed the goal in the desired timeline and use the insights from the year to develop your next year's action plan. The long-term goals section is ideal for recording goals that will take more than one year to accomplish.

BUILD YOUR TEAM

Please list the names of your culinary education / implementation team (include teachers, community members and students and parents who are responsible for getting your program off the ground and helping establish short and long-term goals. This team can be an existing wellness team, school garden team, farm to school team or a combination of farm to table champions working to bring Emeril's Culinary Garden & Teaching Kitchen to your school). You do not have to have 10 team members. Please adjust according to the size of your team. We suggest a minimum of five.

Name	School Admin	Teacher	Food Service	Other Staff	Student	Parent	Site Staff	Community Partner	Other
Ex: Jane Smith	X								

SCHOOL YEAR GOALS—CAPITAL IMPROVEMENTS

SET SCHOOL-WIDE GOALS

Capital Improvement Area Garden or Kitchen	**Goal** • What progress does the team want to make? • What does success look like?	**Action Steps & Timeline** • What needs to be done? • What are the key milestones? • What is the due date for each milestone?	**Role** • Who is the lead? • Who else will be involved?	**Resources Needed** • What contacts, materials, or resources does the team need?	**Status** • What progress was made? • Did you achieve the goal this year?
❑ Garden ❑ Kitchen			Leader: _____ Others Involved:		% Completed
❑ Garden ❑ Kitchen			Leader: _____ Others Involved:		% Completed
❑ Garden ❑ Kitchen			Leader: _____ Others Involved:		% Completed

SCHOOL YEAR GOALS—CAPITAL IMPROVEMENTS

SET SCHOOL-WIDE GOALS

Capital Improvement Area Garden or Kitchen	**Goal** • What progress does the team want to make? • What does success look like?	**Action Steps & Timeline** • What needs to be done? • What are the key milestones? • What is the due date for each milestone?	**Role** • Who is the lead? • Who else will be involved?	**Resources Needed** • What contacts, materials, or resources does the team need?	**Status** • What progress was made? • Did you achieve the goal this year?
❑ Garden ❑ Kitchen			Leader: _____ Others Involved:		% Completed
❑ Garden ❑ Kitchen			Leader: _____ Others Involved:		% Completed

LONG-TERM GOALS

SCHOOL YEAR GOALS—PROGRAM IMPLEMENTATION

Program Activity Area: • Cooking • Gardening • Academic Connections • Nutrition • Life Skills Development • Community & Family Engagement	**Goal** • What progress does the team want to make? • What does success look like?	**Action Steps & Timeline** • What needs to be done? • What are the key milestones? • What is the due date for each milestone?	**Role** • Who is the lead? • Who else will be involved?	**Resources Needed** • What contacts, materials, or resources does the team need?	**Status** • What progress was made? • Did you achieve the goal this year?
			Leader: _____ Others Involved:		% Completed
			Leader: _____ Others Involved:		% Completed

LONG-TERM GOALS

IMPLEMENTATION TIMELINE

ACADEMIC YEAR _____

Month	Start Date	End Date	Activity/Event	Person(s) Responsible
July				
August				
September				
October				
November				
December				
January				

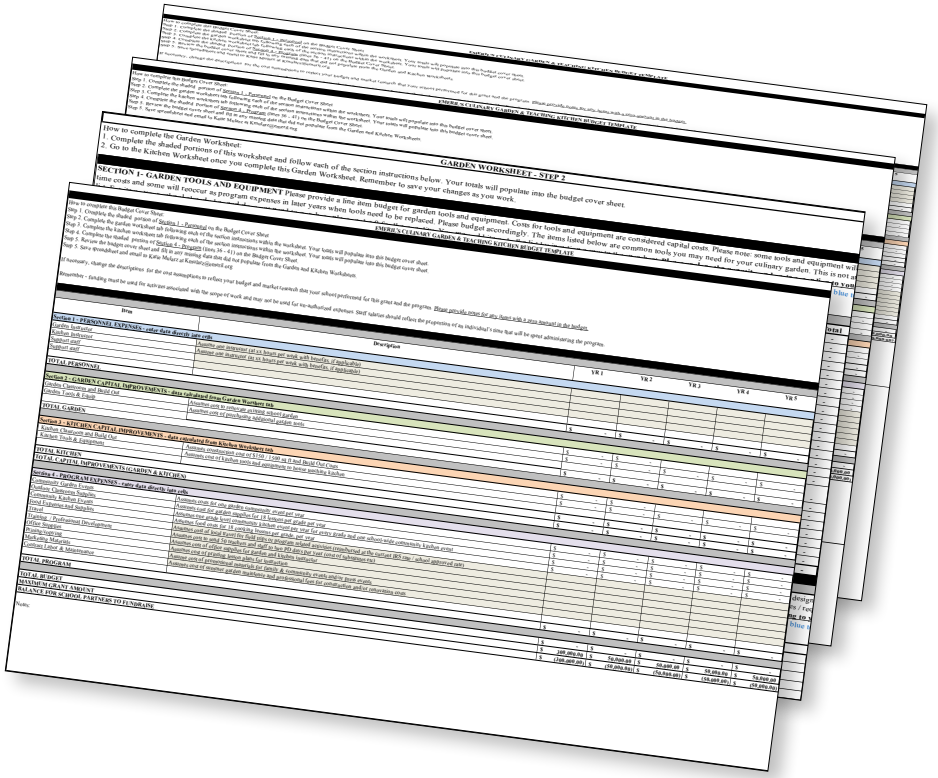
ACADEMIC YEAR _____

Month	Start Date	End Date	Activity/Event	Person(s) Responsible
February				
March				
April				
May				
June				
July				

HOW TO USE THE SCHOOL PARTNER BUDGET TEMPLATE:

The School Partner Budget Template is the excel spreadsheet budgeting tool provided to schools during the application process to help project expenses associated with implementing Emeril's Culinary Garden & Teaching Kitchen. The School Partner Budget Template includes the following worksheet tabs:

- **Overview:** An overview of how to complete the Budget Template, what are considered allowable costs and helpful information for completing the budget.
- **Budget Cover Sheet:** A 5 year budget for school partners
- **Garden Worksheet:** A budgeting tool for school gardens that lists sample items for capital and program expenses.
- **Kitchen Worksheet:** A budgeting tool for teaching kitchens that lists sample items for capital and program expenses.
- **Budget Report:** A report form to compare your annual program budget to actual expenses. This reporting form should be submitted every year with the School Partner Report Card.



Remember—funding must be used for activites associated with your scope of work and may not be used for un-authorized expenses. Staff salaries should reflect the proportion of an individual's time that will be spent administering the program.

BUDGET REPORT

At the end of every school year, use the budget template to report on all project activities completed to date with Emeril's Culinary Garden & Teaching Kitchen grant funds, and compare actual expenditures of foundation funds to your approved project budget. Please indicate any amount of grant funds that remain unspent at the end of the reporting period. If you have questions about how to complete the Budget Template and Budget Report, please e-mail programs@emeril.org

[INSERT SCHOOL LOGO]

POSITION: Garden instructor

School Background
ABC School is a high performing public school with a mission to educate, empower, and enable all students to become thoughtful, contributing citizens who can succeed in an ever-changing world. In 2017, ABC School was awarded a grant to implement Emeril's Culinary Garden & Teaching Kitchen, a signature program of the Emeril Lagasse Foundation that enriches the lives of kids through a fun, fresh perspective on food. We're so proud to be a partner of this initiative and bring this quality program to our community.

Program Background
Emeril's Culinary Garden & Teaching Kitchen is a national education initiative that integrates culinary garden and teaching kitchens in schools to create interactive learning environments centered on food. The program has four key pillars, which guide the overall goals and desired outcomes of its implementation: appreciation for the source of food; development of life skills through food; nutrition education; development of culinary skills.

Position Description
The garden instructor will be responsible for maintaining ABC School's culinary garden and leading instruction for K-8 grade garden lessons, integrating the garden content with core academic subjects, collaborating with academic teachers and the cooking instructor on lesson planning for grade levels and coordinating volunteer and community garden work days.

In collaboration with the school's wellness committee and/or culinary garden and cooking education and planning committee (farm to school team), the garden instructor will lead efforts developing annual action plans to set school wide program goals
for garden classes.

This position is full time, totaling approximately 40 hours per week. Teaching hours for ABC School are _____, Monday through Friday. The remaining _____hours are to be spent on garden maintenance, _____, and planning and executing projects at the Campuses. The garden instructor may also work these hours over the summer, with adjusted duties.

The garden instructor selected will have experience with similar school-based initiatives, lesson plan development and community engagement methods, and the ability to foster collaboration and best practices among colleagues the staff member. The ideal candidate is a certified teacher (or willing to complete a concurrent one-year teacher certification program) with previous experience in school garden education. Familiarity and experience with the Edible Schoolyard program, Life Labs or similar is a plus.

Compensation
Salary and Benefits: Commensurate with experience

Position Tasks

- Managing culinary garden, which grows produce for the school [cafeteria, teaching kitchen, etc]
- Coordinating school-wide garden volunteer days.
- Managing and/or ensuring the garden is maintained and cared for during the summer months.
- Working with the school's academic coaches to develop lessons that integrate the regular education curriculum into the outdoor garden learning spaces.
- Working with the school cafeteria manager to create planting plans for produce to be used in school lunches.
- Working with the home economics teacher and the cooking instructor to grow herbs and produce which will be used as part of the student's curriculum and to sell at local farmer's markets.
- Working with other area school garden and cooking programs to participate in joint gardening education events.
- Participating in the School Wellness Committee with the Program Cooking Instructor
- Assisting with grant writing and award competitions to help bring revenue and recognition to the ABC garden program.
- Planning and delivering gardening lessons to K-8 grade students in conjunction with the students' school day curriculum and common core standards.
- Attending professional development trainings as mandated by the district and/or school.
- Follow State and Child Development Center procedures and policies for safe operation of the program.

Experience

Preferred

- Bachelor of Education (B. Ed) with a focus on the sciences of botany or biology, or a focus on applied environmental studies.
- Experience building, managing, and/or maintaining an urban edible garden.
- Serve safe certified.
- Demonstrated experience in building, growing, and maintaining program outcomes.
- Experience in community outreach and building both within the school environment and the community of farmers and chefs.

Requirements

- State teaching certification.
- Bachelor's degree (BA) or equivalent work experience in a K-8 school environment.
- Ability to pass a background check.
- Horticultural knowledge.
- Demonstrated ability to implement, track, and report over all program goals and outcomes.

Skills and Characteristics

- **Attributes:** Knowledgeable about gardening and cooking, visionary, passionate about working with children, holistic education and the program's vision, creative, detail oriented, patient, entrepreneurial, flexible, personable.
- Desire to work as a team player with ABC School teachers and staff.
- Ability to interact professionally with parents and community members.
- Positive attitude and very strong work ethic.
- Ability to handle calmly and efficiently situations ranging from routine to emergency.

[INSERT SCHOOL LOGO]

POSITION: K-8 Cooking Instructor

School Background
ABC School is a high performing public school with a mission to educate, empower, and enable all students to become thoughtful, contributing citizens who can succeed in an ever-changing world. In 2017, ABC School was awarded a grant to implement Emeril's Culinary Garden & Teaching Kitchen, a signature program of the Emeril Lagasse Foundation that enriches the lives of kids through a fun, fresh perspective on food. We're so proud to be a partner of this initiative and bring this quality program to our community.

Program Background
Emeril's Culinary Garden & Teaching Kitchen is a national education initiative that integrates culinary garden and teaching kitchens in schools to create interactive learning environments centered on food. The program has four key pillars, which guide the overall goals and desired outcomes of its implementation: appreciation for the source of food; development of life skills through food; nutrition education; development of culinary skills.

Position Description
The K-8 cooking instructor will be responsible for leading K-8 cooking classes and integrating content across core academic subjects and gardening courses. The cooking instructor will collaborate on lesson development with academic teachers and
the garden instructor as well as plan and oversee family and community cooking nights at the school.

In collaboration with the garden instructor and the school's wellness committee, the cooking instructor will lead efforts developing annual action plans to set school wide program goals for cooking classes.

This position is full time, totaling approximately 30 hours per week (20 hours of classroom instruction and 10 hours of planning and preparation). Teaching hours for ABC School are 7:30am -3:00pm, Monday through Friday.

The cooking instructor selected will have experience with teaching elementary and middle school students cooking education and basic techniques in a classroom environment, have working knowledge with similar nutrition education and school-based initiatives, cooking education lesson plan development and community engagement methods, and the ability to foster collaboration and best practices among colleagues the staff members. The ideal candidate is a certified teacher (or willing to complete a concurrent one-year teacher certification program) with previous experience in cooking education.

Compensation
Salary and Benefits: Commensurate with experience

Position Tasks

- Managing teaching kitchen, which grows produce for the school [cafeteria, teaching kitchen, etc].
- Managing "Learning Garden" which is dedicated to pollinators and herbs.
- Managing the Interactive Learning Garden which contains 8 raised beds in various geometric shapes and 8 rectangular "experimental" beds used by science classes for experiments as well as eight 3-dimensional geometric sculptures, a coordinate plane and a walk-upon number line border.
- Work with the school's academic coaches to develop lessons that integrate the regular education curriculum into the teaching kitchen learning space.
- Work with the home economics teacher to plan student projects to sell at local farmer's markets.
- Work with other area school programs and/or area chefs to participate inedible education events.
- Participate in the school wellness committee with the garden instructor.
- Assist school fundraising team with grant writing and award competitions to help bring revenue and recognition to the ABC garden program.
- Plan and deliver cooking lessons to K-8 grade students in conjunction with the students' school day curriculum and Common Core standards;
- Attend professional development trainings as mandated by the school
- Follow State Education and Health Department procedures and policies for safe operation of the program.

Experience

Preferred

- Bachelor of Education (B. Ed).
- 3-5 years professional cooking experience.
- Serve safe certification.
- Demonstrated experience in seasonal cooking and food education in a K-8 school-based environment.

Requirements

- State teaching certification.
- Bachelor's degree (BA) or equivalent work experience in a K-8 school environment.
- Ability to pass a background check.
- Culinary knowledge.

Skills and Characteristics

- Attributes: Knowledgeable about gardening and cooking, visionary, passionate about working with children, holistic education and the program's vision, creative, detail oriented, patient, entrepreneurial, flexible, personable.
- Desire to work as a team player with ABC School teachers and staff.
- Ability to interact professionally with parents and community members.
- Positive attitude and very strong work ethic.
- Ability to handle calmly and efficiently situations ranging from routine to emergency.

TRACKING GARDEN CHANGES—PLANT GROWTH

Use this sheet to track how tall a plant in the garden grows over time. Each month, measure your plant and color in the boxes to mark how tall your plant has grown. Has it grown more or less than last month?

Name: _____ **Date:** _____ **Grade:** _____

Tracking: _____

	August	September	October	November	December	January	February	March	April	May	June
12 ft											
10 ft											
8 ft											
6 ft											
4 ft											
2 ft											
1 ft											

TRACKING GARDEN CHANGES

Track changes in the garden over time. Identify what you will track (a fruit, a plant, a type of bug, etc.). Then, fill in the blanks on the left side of the graph to measure the change. Finally, draw what you are tracking in the box provided.

Name: _____ **Date:** _____ **Grade:** _____

Tracking: _____

Draw a picture in the space below

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Fall | **Winter** | **Spring** | **Summer**

TRACKING GARDEN CHANGES—INSECT COUNT

How many insects are in your garden? Use this sheet to count how many insects are in the garden. Do you have more or less than the last time you counted?

Name: _____ **Date:** _____ **Grade:** _____

Insect(s) Tracking: _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
August															
September															
October															
November															
December															
January															
February															
March															
April															
May															
June															

Use different color sticky dots for each group, and have individuals from the group place their sticky dots in the column that represents their preference.

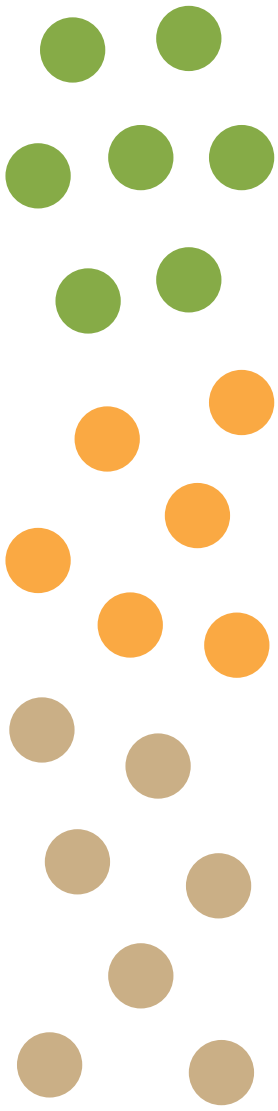
TASTE TEST OF TANGERINE

How many have never tried this before?

GROUP #1: 7 / 7

GROUP #2: 6 / 6

GROUP #3: 7 / 7



I liked it! But not my favorite	I tried it and I liked it!	I tried it and I LOVE IT!

Use different color sticky dots for each group, and have individuals from the group place their sticky dots in the column that represents their preference.

How many have never tried this before?

TASTE TEST OF _____

GROUP #1:

___/___

GROUP #2:

___/___

GROUP #3:

___/___

I liked it! But not my favorite	I tried it and I liked it!	I tried it and I LOVE IT!

COOK'S NOTES

STUDENT NAME:_____ DATE:_____

CULTURAL OR HISTORICAL SIGNIFICANCE:

NUTRITIONAL VALUE:

OPPORTUNITIES TO INCORPORATE LOCAL/SEASONAL PRODUCE:

MODIFICATIONS OR SUGGESTIONS ON COOKING IT FOR NEXT TIME:

FOOD CARDS

APPLES

GRAPES

FOOD CARDS

PEPPERS

MILK

FOOD CARDS

MIXED VEGETABLES

BEANS

FOOD CARDS

CHICKEN

FISH

FOOD CARDS

WHOLE WHEAT BREAD

BROWN RICE

Please complete form and email to programs@emeril.org

LESSON TITLE _____ Garden

EST. TIME ___ SEASON ❑F ❑W ❑SP ❑S LOCATION ❑INDOOR ❑OUTDOOR GRADE ___ LESSON #___

SUBMITTED BY:

Name _____ Email _____

School _____

ESSENTIAL QUESTION(S)

Insert here the big-picture, conceptual question the students will be exploring and working toward answering in this lesson.

MATERIALS

Insert here

- Things that May Be Growing in the Garden
- Things to Bring Out to the Garden
- Handouts

VOCABULARY

Insert here new words to define before the lesson (for the teacher/student).

ASSESSMENT

Insert here tools to assess student learning and development of life skills

- Observational Checklist
- Student Journals

PREPARATION
(INSERT ESTIMATED TIME___)

Insert here the steps the educator will need to take to prepare for the lesson.

TEACHER BACKGROUND

Insert here any major concepts the educator needs to know to teach this lesson effectively.

LESSON DESCRIPTION

Insert here a 1-2 sentence overview of the lesson, describing what students will do.

LEARNING OBJECTIVES

Insert here the learning objectives from the Scope and Sequence that are addressed in this lesson, making sure to include:

- Content Learning Objectives
- Life Skills Learning Objectives

ACADEMIC STANDARD CONNECTIONS

Insert here connections to Academic Standards from the Scope and Sequence, as well as any relevant state standards for English Language Arts, Social Studies, Math, Science, Art, etc.

HEALTH STANDARD CONNECTIONS

Insert here connections to the Health Standards from the Scope and Sequence, as well as any state health standards.

CULTIVATE CURIOSITY *engage*
(INSERT ESTIMATED TIME___)

Insert here a "hook," or an opening activity you will use to engage students with the essential question driving this lesson, connect to their prior knowledge on the subject, and inspire in them a thirst to learn more.

ROOT AROUND *explore*
(INSERT ESTIMATED TIME___)

Insert here an opportunity that you will provide students to explore physical materials and/or open-ended questions related to the lesson topic. Ensure time for students to make discoveries and raise questions.

GROW UNDERSTANDING *explain*
(INSERT ESTIMATED TIME___)

Insert here the steps for leading a discussion and introducing new information to students once they are fully engaged with the topic and have questions and discoveries to share. When introducing new, important vocabulary to students, write the terms in CAPITALS and define them.

OBSERVE THE FRUITS *elaborate*

(INSERT ESTIMATED TIME___)

Insert here an opportunity for students to apply new learning in a meaningful, real-world context, and an opportunity for you to evaluate how well they have achieved the learning outcomes. Remember to use the Observational Checklist while they are working to assess students' development of Personal and Community Life Skills.

REFLECT *evaluate*

(INSERT ESTIMATED TIME___)

Insert here guiding questions to engage students in a reflective discussion about what they've learned, and also about collaboration, communication, or other Life Skills they practiced.

ADAPTING FOR INDOORS

Insert here ideas for making this lesson work indoors in inclement weather.

CONNECTIONS TO KITCHEN LESSONS

Insert here opportunities to connect with specific kitchen lessons from the Scope and Sequence, or general ideas for connecting with the kitchen.

POSSIBLE EXTENSIONS

Insert here possible lesson extensions from the Scope and Sequence for the classroom, cafeteria, community, or BAM! Box connections; or any other ideas for extensions.

ADDITIONAL RESOURCES

List here any additional, relevant resources that might be useful for teaching this lesson, such as links to visual aids or other, published lesson plans.

OTHER COMMENTS

List here any additional comments

Please complete form and email to programs@emeril.org

See garden lesson plans in Instruction section for examples of how to develop each of the lesson plan key elements outlined in this template.

Please complete form and email to programs@emeril.org

LESSON TITLE _____ Kitchen

EST. TIME ___ SEASON ❑F ❑W ❑SP ❑S TYPE COOKING GRADE ___ LESSON #___

SUBMITTED BY:

Name _____ Email _____

School _____

ESSENTIAL QUESTION(S)

Insert here the big-picture, conceptual question the students will be exploring and working toward answering in this lesson.

VOCABULARY

Insert here new words to define before the lesson (for the teacher/student).

ASSESSMENT

Insert here tools to assess student learning and development of life skills

- Observational Checklist
- Student Journals

LESSON MATERIAL LIST

Materials for Lesson Introduction

Insert materials for lesson introduction making sure to include recipes, handouts and visual aids needed for the lesson.

Equipment

Insert equipment needed for the lesson (listed in recipe)

For Each Group of 10	*For Whole Class*

Ingredients

Insert food ingredients needed for the lesson making sure to include a list of items that may be found in the garden.

Materials for Enjoying the Food

Insert materials needed for enjoying the food.

Materials for Cleaning Up

Insert materials needed for cleaning up.

PREPARATION

(INSERT ESTIMATED TIME___)

Insert here the steps you will need to take to prepare for the lesson, organized into the following sub-categories:

- Set up for the lesson introduction
- Set up for cooking, including specific steps for preparing different stations when relevant
- Set up for enjoying the food
- Set up for clean-up

TEACHER BACKGROUND

Insert here major concepts you need to know to teach this lesson effectively.

LESSON DESCRIPTION

Insert here a 1-2 sentence overview of the lesson, describing what students will do.

LEARNING OBJECTIVES

Insert here the the learning objectives from the Scope and Sequence that are addressed in this lesson, making sure to include:

- Content Learning Objectives
- Life Skills Learning Objectives

ACADEMIC STANDARD CONNECTIONS

Insert here connections to Academic Standards from the Scope and Sequence, as well as any relevant state standards for English Language Arts, Social Studies, Math, Science, Art, etc.

HEALTH STANDARD CONNECTIONS

Insert here connections to the Health Standards from the Scope and Sequence, as well as any state health standards.

PREPARE TO COOK

(INSERT ESTIMATED TIME___)

Insert here steps the students will need to take to prepare to cook, such as: tie hair back, wash hands, put on aprons (if relevant) and take their seats.

RECIPE INTRODUCTION

(INSERT ESTIMATED TIME___)

Insert here a "hook," or an opening activity you'll use to engage students with the essential question driving this lesson, connect to their prior knowledge, and inspire excitement for what's ahead.

REVIEW FAMILIAR SKILLS

(INSERT ESTIMATED TIME___)

Insert here steps for reviewing any skills relevant to this recipe that students already know. Always include washing hands and other safety measures in addition to anything else relevant to the particular recipe.

DEMONSTRATE NEW TOOLS AND SKILLS

(INSERT ESTIMATED TIME___)

Insert here steps for introducing any new tools and demonstrating any new skills students will be using in this recipe. For each new tool or skill, include steps for physically demonstrating proper technique in a place where every student can see you. When including new vocabulary, write the term in CAPITALS and define it here.

DIVVY UP TASKS

(INSERT ESTIMATED TIME___)

Insert here steps for explaining who will complete each task. Divide tasks in such a way that every student can contribute actively to the recipe for the entire time allotted. This may involve assigning different tasks to different groups of students; explaining a rotation through various cooking stations; working assembly-line style; or the like.

COOK

(INSERT ESTIMATED TIME___)

Insert here steps for keeping every student actively engaged in the cooking activity. Include ideas for "early finishers" in order to keep everyone involved the entire time. Remember to use the Cooking and Cleaning Observational Checklist to assess student mastery of cooking skills.

ENJOY!

(INSERT ESTIMATED TIME___)

Insert here steps for sharing the final product with all students and enjoying it together. When time is short, Enjoy and Reflect can happen simultaneously.

CLEAN UP

(INSERT ESTIMATED TIME___)

Insert here a process for actively engaging every student in the clean-up process by dividing up tasks and/or assigning each group a particular station to clean up. Use the Observational Checklist to assess students' mastery of cleaning skills.

REFLECT

(INSERT ESTIMATED TIME___)

Insert here guiding questions to engage students in a reflective discussion about their experience with cooking and enjoying a new food. Focus questions on what they've learned and other Life Skills they practiced such as collaboration and communication.

CONNECTIONS TO GARDEN LESSONS

Insert here opportunities to connect with specific garden lessons from the Scope and Sequence or general ideas for connecting with the garden.

POSSIBLE EXTENSIONS

Insert here possible lesson extensions from the Scope and Sequence for the classroom, cafeteria, community, or BAM! Box connections; or any other ideas for extensions.

ADDITIONAL RESOURCES

List here any additional, relevant resources that might be useful for teaching this lesson, such as links to visual aids or other, published lesson plans.

OTHER COMMENTS

List here any additional comments

Please complete form and email to programs@emeril.org

See cooking lesson plans in Instruction section for examples of how to develop each of the lesson plan key elements outlined in this template.

Please complete form and email to programs@emeril.org

TITLE _____ Kitchen

EST. TIME ___ SEASON ❑F ❑W ❑SP ❑S TYPE COOKING CONCEPT GRADE ___ LESSON # ___

SUBMITTED BY:

Name _____ Email _____

School _____

ESSENTIAL QUESTION(S)

Insert here the big-picture, conceptual question the students will be exploring and working toward answering in this lesson.

MATERIALS

Insert here

- ❒ Recipe
- ❒ Handouts / Visual Aids
- ❒ Tableware
- ❒ Cleaning tools
- ❒ Other_____

VOCABULARY

Insert here new words to define before the lesson (for the teacher/student).

ASSESSMENT

Insert here tools to assess student learning and development of life skills

- Observational Checklist
- Student Journals

PREPARATION

(INSERT ESTIMATED TIME___)

Insert here the steps you will need to take to prepare for the lesson.

TEACHER BACKGROUND

Insert here any major concepts you need to know to teach this lesson effectively.

LESSON DESCRIPTION

Insert here a 1-2 sentence overview of the lesson, describing what students will do.

LEARNING OBJECTIVES

Insert here the learning objectives from the Scope and Sequence that are addressed in this lesson, making sure to include:

- Content Learning Objectives
- Life Skills Learning Objectives

ACADEMIC STANDARD CONNECTIONS

Insert here connections to Academic Content Standards from the Scope and Sequence, as well as any relevant state standards for English Language Arts, Social Studies, Math, Science, Art, etc.

HEALTH STANDARD CONNECTIONS

Insert here connections to the Health Standards from the Scope and Sequence, as well as any state health standards.

IGNITE INTEREST *engage*

(INSERT ESTIMATED TIME___)

Insert here a "hook," or an opening activity you will use to engage students with the essential question driving this lesson, connect to their prior knowledge on the subject, and inspire in them a thirst to learn more.

STIR DISCOVERIES *explore*

(INSERT ESTIMATED TIME___)

Insert here an opportunity that you will provide students to explore physical materials and/or open-ended questions related to the lesson topic. Ensure time for students to make discoveries and raise questions.

CLARIFY NEW IDEAS *explain*

(INSERT ESTIMATED TIME___)

Insert here the steps for leading a discussion and introducing new information to students once they are fully engaged with the topic and have questions and discoveries to share. When introducing new, important vocabulary to students, write the terms in CAPITALS and define them.

WATCH IT RISE *elaborate*

(INSERT ESTIMATED TIME___)

Insert here an opportunity for students to apply their new learning in a meaningful, real-world context, and an opportunity for you to evaluate how well they have achieved the learning outcomes. Use the Observational Checklist while they are working to assess students' development of Personal and Community Life Skills.

REFLECT *evaluate*

(INSERT ESTIMATED TIME___)

Insert here guiding questions you will use to engage your students in a reflective discussion about what they've learned, and also about collaboration, communication, or other Community Life Skills they practiced.

CONNECTIONS TO GARDEN LESSONS

Insert here opportunities to connect with specific garden lessons from the Scope and Sequence or general ideas for connecting with the garden.

POSSIBLE EXTENSIONS

Insert here possible lesson extensions from the Scope and Sequence for the classroom, cafeteria or community; BAM! Box connections; or any other ideas for extensions.

ADDITIONAL RESOURCES

List here any additional, relevant resources that might be useful for teaching this lesson, such as links to visual aids or other, published lesson plans.

OTHER COMMENTS

List here any additional comments.

Please complete form and email to programs@emeril.org

See cooking concept lesson plans in Instruction section for examples of how to develop each of the lesson plan key elements outlined in this template.

2020–2023

Emeril's CULINARY GARDEN & TEACHING KITCHEN

School Partner Lesson Plans

Each year, our school partners share lesson plans created by teachers using the curriculum for Emeril's Culinary Garden & Teaching Kitchen.

The scope and sequence documents and lesson plans in the pages that follow are either adaptations or new lessons from schools that were inspired by our curriculum. For this reason, you may notice differences in formatting and content.

Thank you to our contributors:

- Belle Chasse Academy (Belle Chasse, LA)
- Cunningham Elementary School (Austin, TX)
- DC Bilingual Public Charter School (Washington DC)
- Dr. John Ochsner Discovery Health Sciences Academy (Jefferson, LA)
- Life Lab (Santa Cruz, CA)
- Partners for Education, Agriculture & Sustainability (PEAS) (Austin, TX)
- Starlight Elementary School (Watsonville, CA)

Our hope in sharing these lesson plans is to further inspire teachers to continue building upon the lessons in our curriculum and to build a library for others to access.

2020–2023

Emeril's
CULINARY GARDEN & TEACHING KITCHEN

SCHOOL PARTNER LESSON PLANS

Garden

Emeril's CULINARY GARDEN & TEACHING KITCHEN

TABLE OF CONTENTS *Garden*

GRADE 2 882

GRADE 3 893

GRADE 4 901

FBI (FUNGI, BACTERIA, INVERTEBRATES)

Garden

Grades Pre-K–2 • 45 mins • Fall, Spring • Outdoor

ADAPTED GRADES PRE-K–2 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
PEAS • info@peascommunity.org

ESSENTIAL QUESTIONS

- Big Idea: The nutrients within soil are the product of decomposers working to break down organic matter.
- Big Question: Does nature create trash?

MATERIALS

- FBI Examples
- Samples of half-decomposed compost
- Bug catchers
- Gloves
- Magnifying glass
- Trays
- Compost sifters (optional)
- Large pitchfork (if compost pile present)

VOCABULARY

- Decompose/se descomponen
- Humus/humus
- Organic/orgánico
- Plant and animal remains/restos de plantas y animales
- Texture/textura
- Soil/suelo
- Fungus/hongo
- Bacteria/bacteria
- Invertebrate/invertebrado

ASSESSMENT

Farm & Food journals for tracking and note-taking (optional)

NOTE:
Adapted from **Grade 1 Garden Lesson #5: Soil Web**, pg 428.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

PEAS
PARTNERS FOR EDUCATION, AGRICULTURE & SUSTAINABILITY

CREATED BY
Cunningham Elementary School and Partners for Education in 2022

PREPARATION (15 MINS)

- Collect samples of compost in various stages.
- Collect various examples of FBI in jars.
- *Option—invite teachers ahead of time to collect food scraps from their class snacks/lunches to drop into the compost pile during this lesson. Be sure to inform them of what is and isn't appropriate for the compost pile.

TEACHER BACKGROUND

- Rotting food (or food that's gone bad) doesn't look or smell great but it contains a wealth of nutrients, including carbon, nitrogen, and phosphorus. Living organisms require these nutrients to create cells, tissues and to provide energy for life processes.
- Decomposers (fungi, bacteria, invertebrates such as worms and insects) have the ability to break down dead organisms into smaller particles and create new compounds. We use decomposers to restore the natural nutrient cycle through controlled composting.

LESSON DESCRIPTION

Decomposers are the link that keeps the circle of life in motion. The nutrients that decomposers release into the environment become part of the soil, making it fertile and good for plant growth. These nutrients become a part of new plants that grow from the fertile soil.

LEARNING OBJECTIVES

- Name the three types of decomposers necessary for decomposition.
- Understand decomposers are found throughout the food web at any point when a plant or animal dies.
- Understand that decomposers return nutrients back to the soil.

Content Learning Objectives

Garden and Food Systems

GFS.1.2 Describe a soil web. Identify fungi, bacteria, and invertebrates..

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

PK4.VI.B.1 Child observes, investigates, describes, and discusses the characteristics of organisms

PK4.VI.B.3 Child observes, investigates, describes, and discusses the relationship of organisms in their environments

K.2 Scientific investigation and reasoning. The student develops abilities to ask questions and seek answers in classroom and outdoor investigations. The student is expected to:
(A) ask questions about organisms, objects, and events observed in the natural world

K.3 Scientific investigation and reasoning. The student knows that information and critical thinking are used in scientific problem solving. The student is expected to:
(C) explore that scientists investigate different things in the natural world and use toolsto help in their investigations

1.2 Scientific investigation and reasoning. The student develops abilities to ask questions and seek answers in classroom and outdoor investigations. The student is expected to:
(A) ask questions about organisms, objects, and events observed in the natural world

1.9 Organisms and environments. The student knows that the living environment is composed of relationships between organisms and the life cycles that occur. The student is expected to:
(C) gather evidence of interdependence among living organisms such as energy transfer through food chains or animals using plants for shelter

2.9 Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to:
(C) compare the ways living organisms depend on each other and on theri environments such as through food chains

HEALTH STANDARD CONNECTIONS

4-M-3.1: differentiate between negative and positive behaviors used in conflict situations (e.g., compromise, avoidance, mediation, assertive/aggressive, non-violent behaviors).

Lesson Sequence

Engage **Cultivate Curiosity (5–10 mins):**
Gratitude: I am thankful for the many different living things that keep the world turning.Word of the Day: Decomposers! "munch, munch, munch!" (students repeat)

Explore **Root Around (5–10 mins):**
Begin with the Big Question: Does nature create trash? Invite students to Turn and Talk, reminding them to give both partners a time to share and to use the sentence stem,
"think that _____ because"

Remember to not immediately clarify all misconceptions—allow for all ideas to come to the table and let the lesson clarify. Clear anything up at the end if needed.

Explain **Grow Understanding (5–7 mins):**
- Briefly show the students the Compost Recipe anchor & explain that in order for compost to turn into healthy soil, it needs to have certain ingredients just like a recipe you follow in the kitchen!
- Share that if we add all of the proper ingredients to the compost stew, critters of all sorts will gather to help munch & break down the scraps, turning it into soil over time.
- Show the FBI Examples & share that today they will be hunting for these FBI in our compost.

Elaborate **Observe The Fruits (5–10 mins):**
- Invite students/pairs/groups to explore trays of compost to check to see what ingredients they can find.
- Show them the materials available to them: gloves, magnifying glass, recording sheet if they would like to draw what they find.
- Explain that they will likely not only find plant parts, food scraps, etc., but they will find some living things moving around as welL—we call these FBI, or Fungus, Bacteria and invertebrates!
- Invite them to share out as they find critters crawling around & identify them on your FBI Examples anchor chart.
- When they've shared all of the FBI they've found, mention the remaining FBI they are likely to find in the compost pile at some point.

Evaluate **Reflect (5 mins):**
- Bring the group back together to address the Big Question: Does nature create trash?
- Invite students to pair up and share out.

ADAPTING FOR INDOORS

- Explore the compost on trays indoors. Mix the compost ingredients in tubs to add more scraps to the garden compost. Talk about healthy compost and the role that decomposers play in our garden.
- Use the visual posters and book listed in 'additional resources' to aid discussion.

POSSIBLE EXTENSIONS

- Burlap sack or bucket with holes drilled, and recycled mushroom blocks if available locally to create your own mushroom grow bag/bucket.
- We utilized a community partner to aid in this by donating recycled mushroom blocks from local mushroom farmers and providing information to our staff on how to build the grow bags/buckets.

ADDITIONAL RESOURCES

Rotten Pumpkin by David Schwartz

GARDEN BUGS—FRIEND OR FOE?

Garden

Grades Pre-K–2 • 45 mins • Spring • Outdoor

NEW! GRADES PRE-K—2 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
PEAS • info@peascommunity.org

ESSENTIAL QUESTIONS

- Big Idea: Insects can be beneficial and detrimental to our garden.
- Big Question:
  - 1st Grade (Plant Parts) What parts of a plant need protection from insects?
  - 2nd Grade (Plants have basic needs) How can insects help or hurt plants' survival?
  - Simplify question for Pre-K/K: How many legs does this creature have?

MATERIALS

- Garden Bug—Friend or Foe Insect Data Sheet (draw in journals or on paper)
- Map of your garden space (you can provide a copy or have students draw a garden map)
- Paper for drawing
- Clipboards
- Magnifying glasses

VOCABULARY

- Niche/nicho
- Community/comunidad
- Ecosystem/ecosistema
- Environment/medio ambiente
- Interact/interactuar
- Habitat/hábitat
- Adaptations/adaptaciónes
- Function/función
- Structures/estructuras
- Flower/flor
- Symbiosis (helpful bugs)/simbiosis
- Parasitic (harmful bugs)/parásito

ASSESSMENT

- Farm & Food journals for tracking and note-taking (optional)
- Continue asking students: Is that an insect? Why?

CUNNINGHAM ELEMENTARY SCHOOL
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CREATED BY
Cunningham Elementary School and Partners for Education in 2022

PREPARATION (15 MINS)

- Make copies of the Garden Bug—Friend or Foe Insect Chart for each student.
- Collect small transplant pots, stickers, sticks, decorative tape, grass, leaves, nuts, and cones.

TEACHER BACKGROUND

Garden bugs have helpful and harmful relationships and this can be explained through symbiotic (helpful) or parasitic (harmful) interactions. A symbiotic relationship is an interaction between two different organisms that help each other thrive. A parasitic relationship is an interaction where a plant or animal lives or feeds on another type of plant or animal and usually does damage or kills. In the world, there are a total of thirty-eight harmful insects in the Insect Identification database.

LESSON DESCRIPTION

Bugs are present in every garden and it may take close inspection to find them. Teach your students to turn over rocks, inspect the underside of leaves and to get on their hands and knees to see what's happening in the soil. Many interactions occur in the garden and the students will love to hunt for them.

LEARNING OBJECTIVES

- The external characteristics of an animal are related to where it lives, how it moves, and what it eats.
- Physical characteristics of plants help them survive in different environments.
- Compare the parts of a plant to its function to see how it is uniquely suited to perform that role.
- An interaction is a relationship between two or more things.
- Each population inside an ecosystem has its own niche or role.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

K.10 Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to:

(A) sort plants and animals into groups based on physical characteristics such as color, size, body covering, or leaf shape

2.9 Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to:

(C) compare the ways living organisms depend on each other and on their environments such as through food chains.

Lesson Sequence

Engage

Cultivate Curiosity (5–10 mins):

- Opening ritual: Gratitude: I am grateful for the bugs that help our garden grow!
- Word of the Day: Insect! "Has six legs!" (students repeat)
- Engage: Introduce BIG QUESTION: Today we are going to be investigating if we want bugs in our garden. Now turn and talk to a shoulder partner and share: are insects good?
- Do not answer the big question, instead, encourage students to share their thoughts and suggest how they might gather information to answer their question.
- Explain that some bugs are helpful to the garden and some harm the plants we want to eat. Show the students examples on the Garden Bug—Friend or Foe Insect Chart.

Explore

Root Around (5–10 mins):

- Give students a copy of the Garden Bug—Friend or Foe Insect Chart (this can go on a clipboard) and the garden map (or have them draw a map of the garden). Tell the children we will be looking for these bugs in our lesson today.
- Divide into two groups. Specialists will work with students to explore the garden and look for bugs that are beneficial or harmful. Teachers will lead the students through the tasks listed below. If one student is having a great time at their station when it is time to switch, it is okay to let them stay there.

Explain

Grow Understanding (5–7 mins):

- Explain to the students that the garden is home to these bugs and every bug has a purpose in the garden.
- Discuss which bugs are safe to touch and remind them to be respectful to the bugs and not harm or remove them from the garden.
- Have students plot where they find the bugs on their garden map.

Elaborate

Observe The Fruits (5–10 mins):

- Explain to students that there are ways to attract good bugs and prevent pests in the garden.
- Have students share out ideas to attract good bugs and track on paper/white board.
- To attract beneficial bugs: Don't use pesticides. They kill bad bugs, but also the good ones. Plant perennials and herbs that bloom throughout the growing season to attract bees, butterflies, birds and beneficial insects. Provide water. All living things need water to live and grow.
- To get rid of garden pests: Add compost to the garden. Compost provides nutrients and improves the health of the soil and increases beneficial organisms. The more beneficial bugs that you have in your garden, the less harmful ones will come around.

Evaluate **Reflect (5 mins):**

- Make sure everyone has an opportunity to share and repeat all ideas written down, and help to correct any misconceptions students may have had.
- Gather in a circle and give the students one moment to think of one word that describes something they liked about the lesson.

ADAPTING FOR INDOORS

- Create a bug hotel using natural materials (leaves, bamboo, sticks, paper shreds, moss) and re-use plastic nursery pots. Students can fill the inside with materials they think a bug would like to call home, and decorate the outside to customize their project.
- You can talk about including different materials and textures for native bees and other insects that are beneficial to your garden.
- Next time you're in the garden, hang or display your bug hotels for your bug friends!

POSSIBLE EXTENSIONS

- After exploring the garden, have the students draw their garden bugs in their Farm & Food journals, count how many legs they have, label bug parts, and add color. They can decide whether they think that bug would help or hurt our plants as they grow.

ADDITIONAL RESOURCES

- Print out common insect ID guides, or purchase guides to help students identify what they find in the garden.
- Pre-draw an outlined map of their garden but let them fill in landmarks and color as a possible indoor classroom extension.

OTHER COMMENTS

- For younger students, you can practice counting the legs with them. Bringing in toy bugs/insects helps break down some fears about bugs, and makes it easier to count the legs together to decide whether it is an insect or not (six legs).
- We want to be mindful before calling any bugs inherently 'bad' in the garden as we discuss respecting nature and being a part of our garden ecosystem. One way to discuss this further is to reaffirm that when certain bugs are on certain parts of plants, they can be harmful to their growth or survival. We can 're-home' bugs that are harming our edible plants to other parts of the garden to help out.

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SEED BALLS

Garden

Grades Pre-K–K • 40 mins • Spring

NEW! GRADES PRE-K–K | SCHOOL PARTNER LESSON PLAN

ESSENTIAL QUESTIONS

• What are the different ways that seeds can spread and be planted?

MATERIALS

• Clay
• Compost
• Wildflower seeds
• Water cups
• A tarp for covering the table
• Bowls
• Wooden spoons
• Hand washing station
• Trays to dry the seed balls

VOCABULARY

• Compost

ASSESSMENT

• Observation

PREPARATION

Gather the ingredients for seed balls and measure out the proper amounts per station. For example, if there are 4 groups of students, set up 4 bowls with the "ingredients" for the seed balls pre-measured in correct ratios.

TEACHER BACKGROUND

The teacher should practice making the seed balls before creating them with the entire class. Seed balls are messy and it's good to understand the set up and clean up process.

LESSON DESCRIPTION

Students will review what seeds need to grow, and how they are planted (human planting, dropped by animals, carried by the wind, etc). Then, the students will create their own seed balls using compost, clay, and wildflower seeds, which will be planted around the garden once dry.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2023

LEARNING OBJECTIVES

- By the end of the lesson, students will be able to understand the concept of seed dispersal and create their own seed balls.

Content Learning Objectives

Garden Planning and Maintenance

GPM.K.1 Describe what lives in a garden and name what it needs to live.

ACADEMIC STANDARD CONNECTIONS

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

Lesson Sequence

Engage **Cultivate Curiosity:**
Ask questions to check their prior knowledge about seeds, such as "What do seeds need to grow?" and "How do seeds get planted?"

Explore **Root Around:**
Show the students a sample seed ball or use visuals to demonstrate what a seed ball looks like. Explain that seed balls are a fun and effective way to help plants grow in different areas.

Explain **Grow Understanding:**
Divide the class into small groups. Provide each group with a mixing bowl, pre-measured clay and compost, and water. Instruct the students to mix 1 part clay, 3 parts compost or soil, and a little water to form a workable dough-like consistency. Encourage the students to knead the mixture thoroughly until it is well combined. Have the students take a small portion of the mixture and flatten it on their palm. Place a few seeds in the center of the flattened clay mixture. Show them how to fold the clay mixture around the seeds and roll it into a ball. Repeat the process to make multiple seed balls.

Elaborate **Observe the Fruits:**
Discuss the importance of seed balls in helping plants grow and spread. Ask the students to share their thoughts on the activity and what they learned about seeds and planting. Congratulate them on their efforts and encourage them to observe and care for their seed balls as they dry.

Evaluate **Reflect:**
Encourage students to journal or draw about their seed ballmaking experience.

ADAPTING FOR INDOORS

This lesson can be conducted indoors or outdoors.

WEATHER VS. CLIMATE

Garden

NEW! GRADES PRE-K–2 | SCHOOL PARTNER LESSON PLAN

Grades Pre-K–2 • 45 mins
Fall, Winter, Spring, Summer • Indoor and Outdoor

SUBMITTED BY
PEAS • info@peascommunity.org

ESSENTIAL QUESTIONS

- Big Idea: Weather and climate affects the kinds of plants farmers can grow.
- Big Question: Can any plants grow right now in Texas?

MATERIALS

- Large print climate zone map
- Weather tools: rain gauge, large student-friendly thermometer, soil thermometer
- Clothes or pictures of clothes for different climates
- Pictures of native plants and animals for different locations
- Seed packets with climate map on the back and clues for seasons (F= Fall/S=Spring etc)
- Basic garden tools

VOCABULARY

- Air/aire
- Calm/calma
- Clear/despejado
- Cloudy/nublado
- Cold/frío
- Hot/caliente
- Icy/helado
- Mild/templado
- Rainy/lluvioso
- Temperature/temperatura
- Thermometer/termómetro
- Weather/tiempo
- Windy/viento

ASSESSMENT

- Farm & Food journals for tracking and note-taking (optional)

CREATED BY
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PREPARATION (15 MINS)

Weather is what we experience on a daily basis. It helps us decide what we should wear for the day or what to bring on an upcoming getaway in the next week. Weather is a prediction based on a variety of data collected in a variety of ways from ground stations to radars and weather maps are created to help us understand what to expect based on the evidence compiled by meteorologists. Weather includes sunshine, rain, cloud cover, winds, hail, snow, sleet, freezing rain, flooding, blizzards, ice storms, thunderstorms, steady rains from a cold front or warm front, excessive heat, heat waves and more. By collecting meteorological data, like air temperature, pressure, humidity, solar radiation, wind speeds and direction etc.

TEACHER BACKGROUND

- Meteorologists take real-time measurements of atmospheric pressure, temperature, wind speed and direction, humidity, precipitation, cloud cover, and other variables. Weather is the day-to-day state of the atmosphere, and its short-term (minutes to weeks) variation.
- Climate on the other hand allows us to see long term patterns in weather data collected over time. *Note: Time in relation to climate is usually no less than thirty years. Climate can tell us many things from seasonal information and planting zones to increases in global temperatures or carbon dioxide.

LESSON DESCRIPTION

- Students will identify how weather and climate affect our plants.
- Students will also discover which plants they can grow in their micro-climate and weather/season.

LEARNING OBJECTIVES

- Know that weather occurs over a short period of time & can be observed
- Identify how temperature changes and precipitation cause changes in growth and behavior of plants
- Identify which seeds to appropriately plant for the current weather/season

Content Learning Objectives

Weather and Season, Climate and Geography

WSCG.1.2 Describe what foods grow nearby and what foods come from other places.

Life Skills Learning Objectives

Personal Life Skills

PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

K.2 Scientific investigation and reasoning. The student develops abilities to ask questions and seek answers in classroom and outdoor investigations. The student is expected to:
(A) ask questions about organisms, objects, and events observed in the natural world
(C) collect data and make observations using simple tools

K.3 Scientific investigation and reasoning. The student knows that information and critical thinking are used in scientific problem solving. The student is expected to:
(B) make predictions based on observable patterns in nature
(C) explore that scientists investigate different things in the natural world and use tools to help in their investigations

K.8 Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:
(A) observe and describe weather changes from day to day and over seasons
(B) identify events that have repeating patterns, including seasons of the year and day and night

1.2 Scientific investigation and reasoning. The student develops abilities to ask questions and seek answers in classroom and outdoor investigations. The student is expected to:
(A) ask questions about organisms, objects, and events observed in the natural world
(C) collect data and make observations using simple tools

1.8 Earth and space. The student knows that the natural world includes the air around us and objects in the sky. The student is expected to:
(A) record weather information, including relative temperature such as hot or cold, clear or cloudy, calm or windy, and rainy or icy
(C) identify characteristics of the seasons of the year and day and night

2.2 Scientific investigation and reasoning. The student develops abilities necessary to do scientific inquiry in classroom and outdoor investigations. The student is expected to:
(C) collect data from observations using scientific tools

2.8 Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:
(A) measure, record, and graph weather information, including temperature, wind conditions, precipitation, and cloud coverage, in order to identify patterns in the data
(B) identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation

Lesson Sequence

Engage

Cultivate Curiosity(5–10 mins):

- Opening ritual: Gratitude: I'm grateful the weather changes!
- Word of the Day: Weather! "What we see!" (students repeat)
- Introduce the Big Question: Can any plant grow right now in Texas?
- Invite students to Turn and Talk, reminding them to give both partners a time to share & to use the sentence stem, "think that _____ because"
- Bring the class back together to share out—option to have students share what their partner said here.
- Remember to not immediately clarify all misconceptions—allow for all ideas to come to the table and let the lesson clarify. Clear anything up at the end if needed.

Explore

Root Around (5–10 mins):

- With you, students will examine seed packets to determine what type of weather they like to grow in.
- Remember to reference the big question often by asking probing questions, such as "Would this seed like to be planted in the weather we are having today? How do you know?/What on the seed packet tells you that?"
- *Seed packets may need to be adapted to support success.
- Optional: Have students physically touch the place on the map that the seeds would like to be planted.
- Reference the Texas seasonal map

Explain

Grow Understanding (5–7 mins):

- Show the map & ask students—Would you prefer to live where it is mostly cold with snow like Alaska, or mostly warm with no snow and lots of rain like Puerto Rico?
- Share that plants also have preferences about weather—some plants prefer to grow during warmer seasons, while others are just fine growing in the cold!
- We are going to explore what kind of plants we can plant in Texas during our fall weather & see what the plants already in our garden might need!
- Once you've explored the seed packets & found seeds that like the weather in Texas right now, plant those seeds in the garden.

Elaborate **Observe The Fruits (5–10 mins):**

- With their teacher, students will practice the skills they have learned such as watering, weeding, etc.
- Students can check on plants to determine if they need help growing—should they be watered? Are they too close to their neighbors? Are there any bugs nearby that may be harming the plant?
- The teacher may guide students with the weather tools—student-friendly thermometer, soil thermometer, rain gauge, etc.
- Optional: Students may use their farm & food journal to track what they would like to add or grow in their school garden in the coming seasons.

Evaluate **Reflect (5 mins):**

- Bring the group back together to address the Big Question: Can all plants grow right now in Texas?
- Invite students to Turn & Talk (with a new partner?), reminding them to allow both partners to share equally & using the sentence stem.
- Support student conversations as needed & offer time for all to share out their ideas.
- If any misconceptions arise, invite other students to share their ideas in response to each other before immediately correcting them.

ADAPTING FOR INDOORS

This activity can be easily adapted for indoor learning. Exclude the weather tools for indoor learning, and rather than planting seeds you can create 'seed tape' to plant in the garden the next time you can go outside. Look up how to make seed tape with paper strips, a squirt bottle, and some rulers to measure out the proper seed spacing.

CONNECTIONS TO KITCHEN LESSONS

Could connect to cooking what is currently in season in the garden or what the garden has an abundance of.

POSSIBLE EXTENSIONS

- With their teacher, students will practice the skills they have learned such as watering, weeding, etc.
- Students can check on plants to determine if they need help growing—should they be watered? Are they too close to their neighbors? Are there any bugs nearby that may be harming the plant?
- The teacher may guide students with the weather tools—student-friendly thermometer, soil thermometer, rain gauge, etc.

ADDITIONAL RESOURCES

- Texas Ag Planting Guide or your regional planting guide
- A map of your local watershed and rainfall totals

WELCOME TO THE GARDEN

Garden

ADAPTED GRADES PRE-K–K | SCHOOL PARTNER LESSON PLAN

Grades PreK–K • 35 mins
Fall, Winter, Spring, Summer • Outdoor

SUBMITTED BY
Lola Bloom • lbloom@dcbilingual.org

ESSENTIAL QUESTIONS

- How do we care for our community in the garden?

MATERIALS

- Garden scavenger hunt list (print outs)
- Clipboards
- Pencils
- Chart paper
- Bell

ASSESSMENT

- Student Work

PREPARATION

Make sure that the garden is clear of debris and there are sufficient dry seating areas for the students. Bring clipboards and scavenger hunt outside.

TEACHER BACKGROUND

Prepare yourself to be calm and centered and guide learning while children are present. Sometimes when students get very activated in a garden space, it can raise tension and anxiety for the teacher. Have a call and response ready to practice with the children. Stretch legs to be ready to squat down and get on eye level with children to speak and listen. Try doing the scavenger hunt by yourself to provide an example for students.

LESSON DESCRIPTION

This is a lesson to set expectations for how we treat each other and the space of the garden.

LEARNING OBJECTIVES

Life Skills Learning Objectives

Personal Life Skills

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

NOTE:
Adapted from **Grade K Garden Lesson #1: Welcome to the Garden**, pg 415.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2022

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Welcome to the garden! Students will find a seat and learn the teacher's name, and then the teacher will ask everyone to touch their ears. "How do we use our ears in the garden?"

Explore **Root Around (10 mins):**
- We are going to practice listening to sounds in the garden. What do you hear?
- Teacher will ring the bell/chime
- Do you hear that sound? Whenever you hear the chime sound, I want you all to come back to work with me. Let's practice. I want you to walk to a space in the garden where you find a (fill in the blank).
- Ring the chime and have the students come back to the teacher
- Practice 2–3 times

Explain **Grow Understanding (10 mins):**
Now that you see how we can use our ears to work as a team, I want you to use your eyes. Part of respecting the garden is observing and exploring with our eyes, without picking or breaking something or smushing it with our feet. Each one of you will get a pencil and scavenger hunt paper. You will look for these things in the garden and check them off when you find them. In the last square, I want you to draw something new that is not on this list. If you have trouble, we can ask a friend or you can come to me. When you are finished, you can return your paper to the table.

Elaborate **Observe The Fruits (15 mins):**
While the students are exploring the garden, narrate the positive actions that you observe students doing in the space. Correct students if they are exploring the garden in a way that could cause harm.

Evaluate **Reflect (5 mins):**
Ring the bell so that students come back to the learning area. Ask, "What were some of the ways we took care in the garden today? How did we listen to the garden and to each other?" Listen to/engage with students' answers.

ADAPTING FOR INDOORS

A similar scavenger hunt could be done with cooking tools in the kitchen. Lock cabinets and drawers that should not be opened.

COMPOST AND BIODEGRADABILITY

Garden

ADAPTED GRADES K–5 | SCHOOL PARTNER LESSON PLAN

TIME AND LENGTH
45 min

LOCATION
Garden

ESSENTIAL QUESTIONS

- Is soil living?
- What lives in the soil & how do they work together to help our garden?

MATERIALS

- "What does it mean to recycle?" items
  - Food scraps, recyclable/donatable items (soup cans, paper, etc./pair of shoes, t-shirt, etc.) and non-recyclable items (chip bag, plastic wrap, etc.)
- Healthy Compost Layers organizer Handout
- FBI sheet
- Colored pencils
- Worm bins
- Compost
- Lint
- Food scraps
- Leaves, paper scraps, etc.
- Clear tennis ball containers (1 per class)
- C/N Ratio Poster
- ebook
- Magnifying glasses
- Bug catchers
- Pruners
- Gloves/tweezers
- Trays
- Shovels/Forks
- "Compost Critters" ID page Handout—laminated/sheet protected
- *Compost Stew: An A to Z Recipe for the Earth* by Mary McKenna Siddals
- 5 gal bucket (if you don't have a compost bin at your school)
- 5 gal bucket of greens
- 5 gal bucket of browns

NOTE:
Adapted from **Grade 1 Garden Lesson #5: Soil Web**, pg 428.

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VOCABULARY

- Nitrogen/el nitrógeno
- Carbon/el carbón
- Compost/el abono orgánico
- Decomposition/la descomposición
- Soil/el suelo
- Fungi/los hongos
- Bacteria/la bacteria
- Invertebrate/el invertebrado

TEACHER BACKGROUND

The process of decomposition of a healthy compost pile can be hard for students to see in a single observation, but with a close look, evidence can be found; particularly when students are invited to actively participate in building out the proper layers of the compost as well as investigating for signs of specific decomposers.

LESSON DESCRIPTION

In this lesson, students will explore the idea that not everything in the garden is growing, some things are breaking down to let others grow. They will learn how to build a healthy compost pile through hands-on activities.

LEARNING OBJECTIVES

- Students will know that healthy soil allows for healthy plants.
- Students will know that recycling organic matter in compost is a good way to return nutrients to the garden.
- Students will know how to construct a healthy compost pile.
- Students will know the role of FBI as decomposers of organic matter.

Content Learning Objectives

Garden Planning and Maintenance

GPM.1.2 Demonstrate knowledge of what plants need.

Soil

S.2.3 Balance carbon (browns) and nitrogen (greens) in compost.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

K.7 Earth and space. The student knows that the natural world includes earth materials. The student is expected to:
(C) give examples of ways rocks, soil, and water are useful.

1.7 Earth and space. The student knows that the natural world includes rocks, soil, and water that can be observed in cycles, patterns, and systems. The student is expected to:
(A) observe, compare, describe, and sort components of soil by size, texture, and color;
(C) identify how rocks, soil, and water are used to make products

2.1 Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures. The student is expected to:
(B) identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal

2.9 Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to:
(A) identify the basic needs of plants and animals

3.7 Earth and space. The student knows that Earth consists of natural resources and its surface is constantly changing. The student is expected to:
(A) explore and record how soils are formed by weathering of rock and the decomposition of plant and animal remains

4.7 Earth and space. The students know that Earth consists of useful resources and its surface is constantly changing. The student is expected to:
(A) examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants
(C) identify and classify Earth's renewable resources, including air, plants, water, and animals, and nonrenewable resources, including coal, oil, and natural gas, and the importance of conservation

4.9 Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment. The student is expected to:
(A) investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food

5.9 Organisms and environments. The student knows that there are relationships, systems, and cycles within environments. The student is expected to:
(A) observe the way organisms live and survive in their ecosystem by interacting with the living and nonliving components
(B) describe the flow of energy within a food web, including the roles of the Sun, producers, consumers, and decomposers

Lesson Sequence

Engage

Cultivate Curiosity (5 mins):

- What does it mean to recycle?
  - Ask students to turn to their shoulder partner to discuss what it means to recycle. Provide ample time for discussion as you move about the space to listen & support conversation as needed.
  - After, ask students to share out what their partner said.

Explore

Root Around (6 mins):

- In groups/as a whole class separate various items (suggestions listed in Materials section) into groups.
  - Ask the students to think about what it means to recycle when grouping the items. Allow students to create their own groupings
  - Ask students to share out about why they categorized as they did
  - Discuss the importance of recycling in their homes, as well as in the garden—recycling organic matter returns nutrients to the soil
  - Healthy soil! Healthy plants!

Explain

Grow Understanding (7 mins):

For younger grades

- Read *Compost Stew: An A to Z Recipe for the Earth* by Mary McKenna Siddals

For older grades

- When we compost, we are feeding small critters that create healthy soil.
- When we have healthy soil, we have healthy plants!
  - To create a healthy compost pile you only need four things:
    - Carbon organic material (Brown materials)
    - Nitrogen organic material (Green materials)
    - Water
    - Oxygen

- Use the anchor chart to show the proper way to stack "browns" & "greens".
  - Demonstrate the appropriate ratio using a clear container—layering as you explain
  - Brown materials are carbon or carbohydrate-rich & they are the food sources for all the organisms that work with microbes to break down the organic material
    - Fall leaves, pine needles, twigs, chipped tree branches, bark, straw, hay, sawdust, corn stalks, paper, dryer lint, cotton fabric, corrugated cardboard
  - Green materials are rich in nitrogen or protein that tend to heat the compost up
    - Grass clippings, coffee grounds, tea bags, veggie & fruit scraps, plant trimmings, annual weeds (w/o seed heads & no Bermuda grass because the seed is held within the rhizome), eggshells. When tilled into the **soil**, ground **eggshells** provide your plants with calcium. Calcium is also essential for building healthy "bones"—the cell walls of a plant.

- Briefly Explain that a proper compost pile is a great home to decomposers, or Garden FBI (Fungus, Bacteria, Invertebrates)! (critters were the focus of last year's compost lesson, so this just needs to be touched on)
  - Bacteria do most of the work, even though they are invisible to the naked eye.
  - Other animals large enough to see, such as beetles, worms, centipedes, millipedes, and sow bugs, are also important decomposers.
  - Without decomposers all life would stop because new plants would not have the necessary nutrients needed to grow. Decomposers turn our garbage into plant food!

Elaborate **Observe the Fruits (20 mins):**

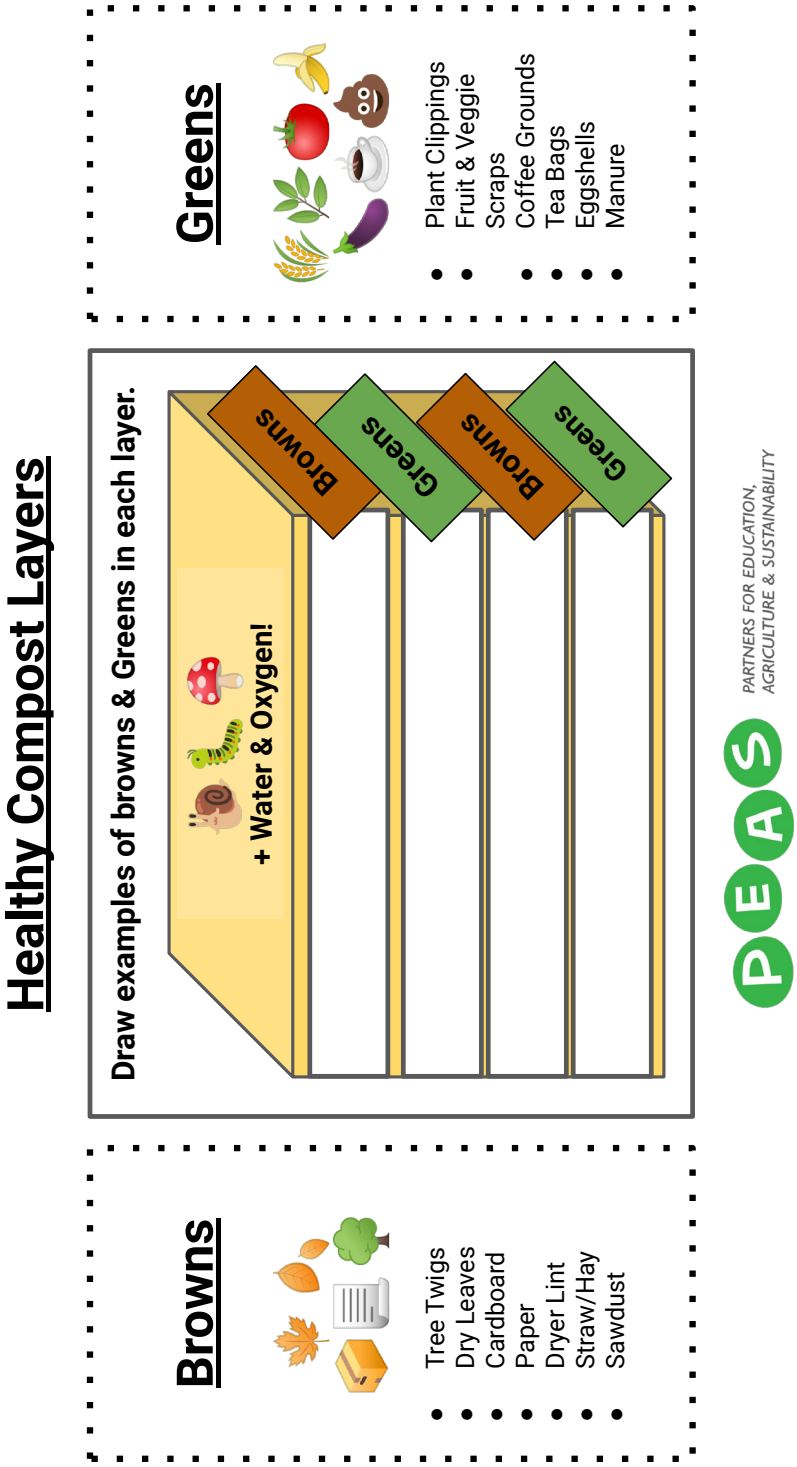
- Building compost—you can have each class do all three jobs, or have grade levels/classes do one job each
  - Chop (6 inches in size or less)
  - Add greens/browns
  - Mix/Turn
  - Water (as wet as a wrung out sponge)
- As you build, keep an eye out for critters in the compost!
- If you don't have a compost bin at your school, you can create—"Compost in a Bucket"—This is the same process, however you want to cover the top with about a gallon of soil, compost or potting mix so it doesn't turn rancid.

Evaluate **Reflect (7 mins):**

Fill in Healthy Compost Layers sheet

POSSIBLE EXTENSIONS

Read aloud: *Diary of a Worm* by Doreen Cronin



COMPOST CRITTERS WORKSHEET

Circle Me If You Can Find Me


collenbola


springtail


mite


slug


worm cocoon


sow bug


fruit fly

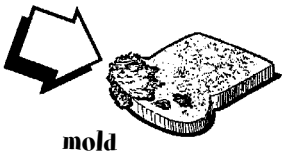

white worms


beetle


redworm


spider


snail


mold


ant


millipede


centipede


bacteria


pill bug

Name: _____ Date: _____

Source: Compost Critters Worksheet

LIVING OR NON-LIVING

VIVOS O NON VIVOS

Garden

ADAPTED GRADE K | SCHOOL PARTNER LESSON PLAN

Kindergarten • 30 mins • Fall

ESSENTIAL QUESTIONS

- How can we tell the difference between living things and nonliving things in the garden?
- How can we tell the difference between plants and animals in the garden?

MATERIALS

- Egg cartons OR charts
- Clipboards
- Pencils

VOCABULARY

- Living
- Non Living
- Plants
- Animals
- Soil

ASSESSMENT

Students will accurately identify the 6 plant parts and describe their function.

PREPARATION (15 MINUTES)

The teacher will need to check the garden to make sure that there are a variety of living and non-living items in various areas of the garden.

TEACHER BACKGROUND

Be familiar with where examples of living and non living things are in the garden.

LESSON DESCRIPTION

Students will demonstrate their understanding of living and non-living organisms in a natural environment.

NOTE:

- Adapted from **Grade K, Garden Lesson #5: Living or Nonliving**, pg 421; **Scope and Sequence**, pg 98.
- This lesson was designed to go along with DC Bilingual's Science Scope and Sequence. Science is taught in Spanish at DC Bilingual. The school views these lessons as a way to reinforce science standards in the garden.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2021

LEARNING OBJECTIVES

Content Learning Objectives

Garden Planning and Maintenance

GPM.K.1 Describe what lives in a garden and name what it needs to live.

Garden Tools and Equipment

GTE.K.1-4 Garden Tools and Equipment

ACADEMIC STANDARD CONNECTIONS

NGSS.K.LS1.C Organization for Matter and Energy Flow in Organisms

All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Bring students outside to the seating circle. Ask the group to name some examples of living things that they can see nearby. What are the things that are NOT living?

Explore **Root Around (10 mins):**
Provide groups of students (3–4 students each) with an egg carton. Instruct the students to find items to fill one side that are from living things, and to fill the opposite side with non-living things. Demonstrate how to collect responsibly in the garden. Start by having one student demonstrate how to collect an item in front of the class.

Explain **Grow Understanding (5 mins):**
When the students return to the seating circle, invite students to share their findings

Elaborate **Observe the Fruits (10 mins):**
Students will draw a picture of one living thing and one non-living thing that they found.

Evaluate **Reflect:**
What is an example of a living thing we did NOT find in the garden today?
How about a non-living thing?

ADAPTATIONS

Collect a variety of materials (non-living and living) and encourage students to group them based on different descriptors, i.e. colorful vs non colorful; edible vs non edible, smelly vs non smelly.

WEATHER STATION CREATION

Garden

ADAPTED GRADES K–5 | SCHOOL PARTNER LESSON PLAN

TIME AND LENGTH
45 min

LOCATION
Garden

ESSENTIAL QUESTIONS

- Why do we plant the seeds and plants we do?
- How does weather data help guide us as farmers & gardeners?

MATERIALS

- 4 good anemometers
- 4 thermometers that are little-kid friendly
- 4 3-in-1 soil ph/temp deals
- Hourglass timer
- 4 trays
- Seeds in small plastic pots of soil (2 dry and the other 2 watered really well)
- Earth/Sun Model
- Weather Station Creation Water Cycle Handout (can be optional)
- Anchor charts ("Weather and Seasons in Austin Anchor Chart K–2 Handout" or "Weather and Seasons in Austin Anchor Chart 3–5 Handout")
- Twine (daily box)
- Tent stakes (daily box)
- Magnifying glasses (daily box) Not needed if teachers are leading weather tools
- Clipboards (daily box)
- Paper (daily box) Not needed if teachers are leading weather tools
- Pencils (daily box)
- "Weather/Season/Plants Background Handout"

NOTE:
Adapted from **Grade 2 Garden Lesson #8: Weather Station Creation**, pg 137.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

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Abc VOCABULARY

- Anemometer
- Thermometer
- Rain gauge
- Soil
- Transect line

TEACHER BACKGROUND

See Weather/Seasons/Plants Background handout at the end of lesson.

LESSON DESCRIPTION

In this lesson students will learn the importance of observing & recording weather data in order to guide our behaviors in the garden. Students will learn how to use the tools necessary to create a weather station.

LEARNING OBJECTIVES

- Students will understand that certain plants are planted at certain seasons and in certain regions. Gardeners have to be aware of weather and how changes in weather will affect the garden.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

1.8 Earth and space. The student knows that the natural world includes the air around us and objects in the sky. The student is expected to:

(A) record weather information, including relative temperature such as hot or cold, clear or cloudy, calm or windy, and rainy or icy

(D) demonstrate that air is all around us and observe that wind is moving air

2.8 Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:

(A) measure, record, and graph weather information, including temperature, wind conditions, precipitation, and cloud coverage, in order to identify patterns in the data

(B) identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation seasonal information to make choices in clothing, activities, and transportation

3.8 Earth and space. The student knows there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:

(A) observe, measure, record, and compare day-to-day weather changes in different locations at the same time that include air temperature, wind direction, and precipitation

4.8 Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:
(C) collect and analyze data to identify sequences and predict patterns of change in shadows, seasons, and the observable appearance of the Moon over time

5.8 Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:
(A) differentiate between weather and climate

HEALTH STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Health Education, Elementary, Revised 2022

1.2 Physical health and hygiene—personal health and hygiene. The student understands health literacy, preventative health behaviors, and how to access and evaluate health care information to make informed decisions. The student is expected to:
(B) describe personal hygiene and health habits that enhance individual health such as personal hygiene, oral hygiene, and getting enough sleep

3.2 Physical health and hygiene—personal health and hygiene. The student understands health literacy, preventative health behaviors, and how to access and evaluate health care information to make informed decisions. The student is expected to:
(A) explain the importance of seeking assistance in making decisions about health
(B) describe methods of accessing information about health
(C) identify the benefits of decision making about personal health
(D) identify the importance of taking personal responsibility for developing and maintaining personal hygiene and health habits

3.11(B) gather data to help make informed health choices

Lesson Sequence

Engage

Cultivate Curiosity:

- Present two or more plant starts (or pots with soil in them) at varying degrees of dampness.
  1. Help students take turns feeling the dry soil and the wet soil with their fingers.
  2. Prompt students to pair-share as they describe the soil.

- Ask:
  - How does the soil feel?
  - How does the soil look?
  - What would it mean if the soil felt squishy or muddy? (Too much water.)

Explore **Root Around:**

- Ask students to think about how the weather affected the way the soil might have felt? If the soil was dry, what kind of weather might we have had? If the soil was wet, what kind of weather might we have had? What is the weather this week? Will the weather be the same in December? Will it be the same in the spring? No! Weather is different during different seasons.

- Show students the anchor chart ("Weather and Seasons in Austin Anchor Chart K–2" or "Weather and Seasons in Austin Anchor Chart 3–5") and fill in JUST THE INFORMATION FOR SUMMER. See Weather Station Creation PEAS for handout. This is based on what students can remember about the summer. Was it rainy? Hot? Cold? Cloudy? Windy? Was it dark in the afternoon, or light? Does it feel the same now that it did in summer? Why not?

- **Grades Pre-K–2:** Use the more seasons anchor chart and discuss seasons. Finish with the season we are in right now.

Explain **Grow Understanding:**

- Seasons are caused by the amount of direct sun the earth gets as it revolves around the sun. Show students the model (ordered). In summer, the earth is tilted towards the sun, and we get lots of hours of sunlight! It gets very hot! In fall, we are not tilted towards or away from the sun, and so we get some days that are warm and some days that are cooler. Some plants can grow in colder temperatures and others can tolerate a lot of heat. (Farmers and gardeners are guided by seasons and weather to determine when to plant and harvest fruits and vegetables.)

- What was the weather like in summer? After debriefing summer, ask if it is a good time to plant vegetables? Fill in the typical weather for fall and tell students we are going to measure the weather to see what the fall weather is like in our garden.

Elaborate **Observe the Fruits:**

- Today we will investigate how the fall weather has affected our garden, and plant some plants in our garden that will do well in the fall and winter weather. We are also going to explore our garden to find out how the weather is affecting the soil that plants grow in. Gardeners have to know what the conditions are in the garden to know what we have to do to take care of our plants. We also plant certain plants at certain times of the year.

- **Grades Pre-K–2:** Omit the 3-in-1 soil ph/temp tool. Outdoor Education Specialist can record on the laminated line transect data sheet.

- **Grades 3–5:** Complete the transect line in one of the garden beds with the weather station tools. Students can record on their own data sheet.

Evaluate **Reflect:**

- **Grades Pre-K–2:** How is our garden doing? Was there enough moisture in the soil? What's the weather song...?

- **Grades 3–5:** In northern climates where it is cold in the winter, many farmers do not farm in the winter because it is just too cold for many plants to grow. In Texas, farms try to find crops that do not need as much water in the summer or they have to use a lot of irrigation to keep things alive because we do not get enough rain to support the plant life. Who can tell me what irrigation means?
  - How is the garden doing? Do we need to change anything? Did what we plant go along with the seasons? (root vegetables, squash, carrots?)
  - Why did we plant the plants we planted? Why did we plant carrot seeds? Radish seeds?
  - How does the weather and seasons affect our planting?
  - How do we know if the outdoor space is getting enough/too much rain?
  - Bring it back to their garden space.

ADAPTATIONS

Students will plant seasonally appropriate seeds with their teacher. Students can use magnifying glasses to observe soil. Students can check on and measure the height of plants (see"Tracking Garden Changes—Plant Growth" handout). Students can draw a picture of the weather in the outdoor space today, listing things that are different from previous lessons (evidence of fall).

POSSIBLE EXTENSIONS

Students could create a weather station at multiple locations on the school campus to collect more extensive data.

ADDITIONAL RESOURCES

Texas A&M Ag Extension Planting Guide

Grades K–2

PEAS PARTNERS FOR EDUCATION, AGRICULTURE & SUSTAINABILITY

Weather
Temperature
Plants

Weather
Temperature
Types of plants

WEATHER and SEASONS

Weather
Temperature
Types of plants

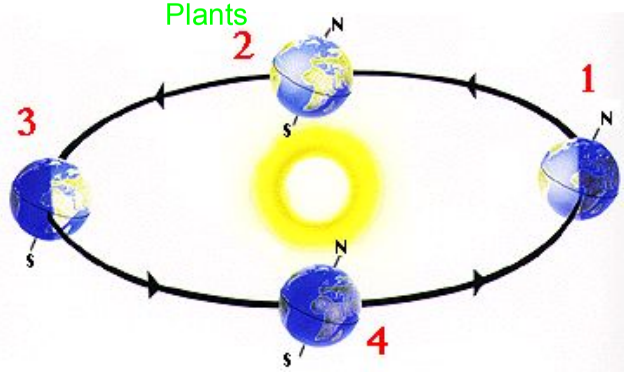
Weather
Temperature
Types of plants

Grades 3–5

WEATHER and SEASONS

PARTNERS FOR EDUCATION, AGRICULTURE & SUSTAINABILITY

Weather
Temperature
Plants



Weather
Temperature
Types of plants

Weather
Temperature
Types of plants

Weather
Temperature
Types of plants

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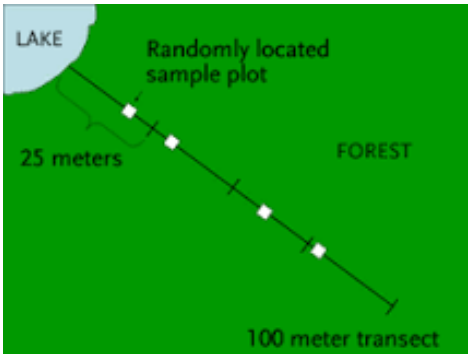
WEATHER/SEASONS/PLANTS BACKGROUND

Soil Sampling Tasks

Make a line transect A tape or string laid along the ground in a straight **line** between two poles as a guide to a sampling method used to measure the distribution of organisms. Sampling is rigorously confined to organisms that are actually touching the **line**.
Every 3 feet in the garden bed measure wetness, temp., air temp.

For upper grades- when a plant freezes it affects the water in the cell walls.



What is Ph?- PH is potential hydrogen- used to rank the basicity or acidity of substances based on the amount of hydrogen ion activity in a substance. Visit - https://www.sunset.com/garden/garden-basics/acid-alkaline-soil-modifying-ph

How to Use a 3-In-1 Soil Tester
Use a 3-in-1 soil tester to tailor the optimal conditions for your garden.
Signs of a Low pH in Plants

A 3-in-1 soil tester is a metal pronged instrument that is inserted into the soil to test soil pH, light intensity, and moisture levels. A soil tester takes some of the guesswork out of where and how to plant your flowers, shrubs or trees. You can use the tester to determine the current levels of the soil, and alter them according to the specific needs of the plants you wish to place there. Plant grasses, shrubs, flowers or trees that need similar conditions together in one area, with those needing different conditions in a separate area of the yard or garden.

1

Clean the prongs of the tester with distilled water and a clean cloth before use, and between uses. This will keep the readings from being affected by the pH of a previous test or tap water.

2

Insert the prongs into the soil you wish to measure. The first reading that appears will be a pH, which is measured on a scale from 1 to 14, with 1 being the most acidic and 14 being the most alkaline. Seven is a neutral pH. Most plants will grow in a pH between 6 and 7.5. The soil tester measures pH levels from 3.5 to 8. Alter soil pH by adding limestone to raise it, or sulfur to lower it.

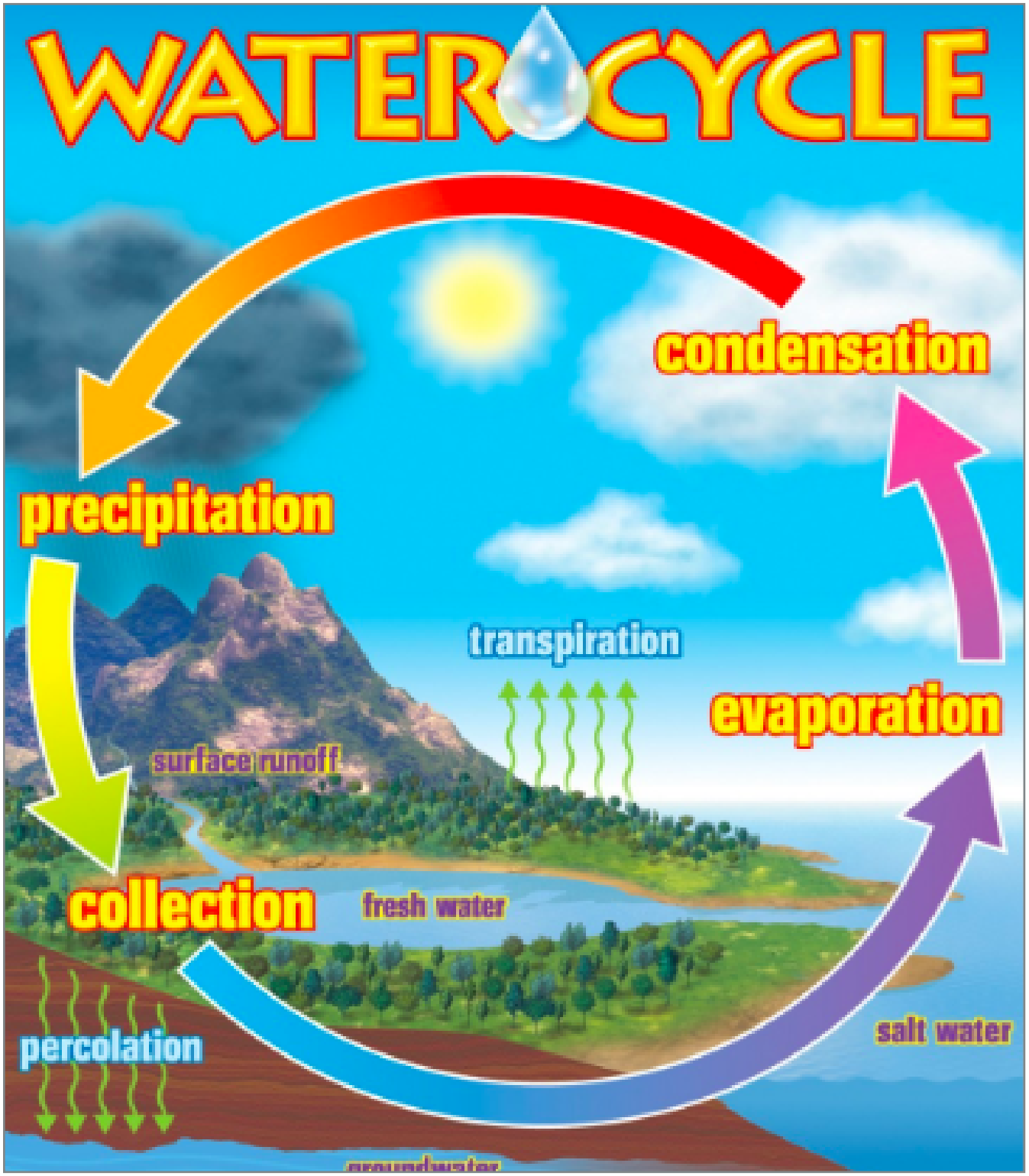
3

Press the button on the tester to view the moisture readings. The tester measures the percentage of moisture content in 10 percent increments, from no moisture to complete saturation. Most plants will want moist soil in the mid-range. Sand can be added to soil to increase drainage capabilities for excessively wet soil.

4

Press the button on the tester again to view the light readings. Light readings measure light intensity in foot-candles from 0 to 2,000. For reference, average indoor home lighting is around 100 foot-candles. Plants requiring full sun can be planted in the upper light ranges, and plants requiring shade can be planted in the lower light areas.

Believe it or not, foot candles are the most common unit of measure used by lighting professionals to calculate light levels in businesses and outdoor spaces. In a nutshell, a foot candle is a measurement of light intensity and is defined as the illuminance on a one-square foot surface from a uniform source of light.



Source: Water Cycle Poster

WELCOME TO THE GARDEN

Garden

NEW! GRADES K–5 | SCHOOL PARTNER LESSON PLAN

TIME AND LENGTH
45 min

LOCATION
Garden

ESSENTIAL QUESTIONS
- How can I be my best self in the garden?
- How can I be my best for my community?
- How can I be my best for my environment?
- What types of energy do we encounter in the garden?
- How does energy move through the garden?

MATERIALS
- Carrot and radish seeds
- Hand trowels
- Watering cans
- Popsicle sticks (for seeds markers and plant markers)
- Energy anchor chart
- Tarp
- Broken tool
- PEAS Garden Expectations Handout
- Name tags (bring extras)
- Dry erase marker
- Clip boards
- Manila paper

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Abc VOCABULARY

- Energy/energía
- Forms/formas
- Heat energy/energía térmica
- Radiant energy/energía luminosa
- Sound energy/energía del sonido
- Mechanical energy/energía mecànica
- Conservation of energy/conservación de energía
- Seed/semilla
- Respect/respeto
- Community/communidad
- Walk/camina
- Run/corre
- Slow/despacio

TEACHER BACKGROUND

- 10 Types of Energy
- Types of Energy Video
- Energy Transformations Video, Explanation, Game and Engage: Ready for an Energy Makeover?

LESSON DESCRIPTION

In this lesson, students will explore what energies can be found in the garden space—including themselves! They will then discuss how to be the best for themselves, their community, and their environment in this garden space. The teacher will guide them to cohesive language around these understandings before modeling behaviors that align with these understandings. Finally, students will explore, plant and enjoy the garden while practicing these behaviors and types of energy we focused on.

LEARNING OBJECTIVES

- Explore ways in which we use energy in everyday life.
- Trace changes in energy as it transforms from one form into another.
- Learn how the energy we use affects our green space (planting, watering, pulling weeds, etc.).
- Develop a sense of community and ownership.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

K.6 Force, motion, and energy. The student knows that energy, force, and motion are related and are a part of their everyday life. The student is expected to:
(A) use the senses to explore different forms of energy such as light, thermal, and sound

1.6 Force, motion, and energy. The student knows that force, motion, and energy are related and are a part of everyday life. The student is expected to:
(A) identify and discuss how different forms of energy such as light, thermal, and sound are important to everyday life

3.6 Force, motion, and energy. The student knows that forces cause change and that energy exists in many forms. The student is expected to:
(A) explore different forms of energy, including mechanical, light, sound, and thermal in everyday life

5.6 Force, motion, and energy. The student knows that energy occurs in many forms and can be observed in cycles, patterns, and systems. The student is expected to:
(A) explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy

HEALTH STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Health Education, Elementary, Adopted 2022

K.6 Healthy eating and physical activity—food and beverage daily recommendations. The student identifies and explains healthy eating strategies for enhancing and maintaining personal health throughout the lifespan. The student is expected to:
(C) identify types of foods that help the body grow, including fruits and vegetables, dairy, and protein
(D) identify healthy and unhealthy snack choices.

1.9 Injury and violence prevention and safety—safety skills and unintentional injury. The student identifies and demonstrates safety and first aid knowledge to prevent and treat injuries. The student is expected to:
(B) identify the purpose and demonstrate proper use of protective equipment such as seat belts, booster seats, and bicycle helmets.

1.3 Mental health and wellness—social and emotional health. The student identifies and applies strategies to develop socio-emotional health, self-regulation, and healthy relationships. The student is expected to:
(F) identify ways to respectfully communicate verbally and nonverbally

3.11 Injury and violence prevention and safety—healthy home, school, and community climate. The student understands that individual actions and awareness can impact safety, community, and environment. The student is expected to:
(B) identify characteristics of safe home, school, and community environments;

Lesson Sequence

Engage

Cultivate Curiosity:

- Intro to PEAS:
  - Introduce yourself
  - Introduce Partners in Education, Agriculture & Sustainability
  - Tell students how often you will be there
  - Future things students will need (clothes and shoes that can get dirty, jacket, etc.)

- Core Routines:
  - Name tags
  - Get settled: Have students walk in carefully, walk around the edge of the tarp (to keep it clean) and take a seat.
  - Opening ritual: Gratitude: share one thing you are grateful for related to the lesson. "Today I am grateful for the energy of the sun that will help our plants grow. If you are grateful for that or something else, please whisper it to the wind now."
  - Word/Phrase of the Day: To get students attention, Teacher begins a phrase, and invites students to finish it. Teacher says, "Mechanical Energy", students finish, "is movement!"

Explore

Root Around:

- Learn by doing!
  - Take students out into the garden to practice the proper garden behavior as well as take a tour of the garden.
  - Use different forms of energy to help guide your discussion:
  - Mechanical energy—we should use calm mechanical energy with our bodies as we move through the garden & interact with plants
  - Sound energy—we should give everyone respect by listening to others when it is not our turn to talk. We can enjoy the sounds of nature when we use our listening skills
  - Heat/Thermal energy—we can appreciate the thermal energy provided to us by the sun. This will remind us to dress appropriately for gardening!
  - Radiant energy—We are thankful for the sun's energy that keeps our plants growing!
  - Chemical energy—stop somewhere in the garden to taste one or two plants!

- Discuss the importance of asking an adult before tasting in order to keep our bodies safe & healthy. Throughout the tour of the garden, be sure to plant a tool in the pathway for an opportunity to stop & discuss proper behavior with tools.

Explain **Grow Understanding:**

- Return to the seating area to review expectations with an anchor chart. Show & fill in Energy anchor chart based on what they learned during the tour.

Elaborate **Observe the Fruits:**

- Return to the garden to plant!
  - Invite students to show what they have learned today by using the proper garden behavior to plant some carrots & radishes! Help guide students to the proper behavior should they need support.

- Questions to ask while planting:
  - How are we using energy in the garden/natural space today?
  - Are you feeling any heat energy?
  - What will the seeds/plants need to grow food energy?
  - Are we making any sound energy?
  - Are we moving with mechanical energy?
  - Where did you get energy to move around in the garden today?
  - Will our seeds use energy, how?

Evaluate **Reflect:**

- Debrief
  - A garden is an ecosystem just like a forest or a desert or a prairie, but the special part about a garden is that it only exists because we take care of it. Whatever energy we use to work in the garden we will see because the garden will be healthy and productive, if we don't use energy to put work into the garden it will not look nice. Energy in equals energy out! What are the best ways to use our energy in the garden? Have students share out things we can do to help the garden thrive!
  - Share out the ways students exhibited the proper behavior during today's lesson. Create a "YES!" circle to share out those behaviors & celebrate by counting 1, 2, 3 & shouting "YES!" all together.

ADAPTATIONS

Rainscape Education: At the beginning of the EXPLORE, tell students they are going to be hunting for 3 things: something eating or evidence of eating, evidence of radiant energy (light) and something moving. Pay special attention to the way water is moving on campus and through their rainscape! They can take a clipboard if they want to draw or make notes.

Make hand lenses available to them. After 10 minutes, call them together and debrief the anchor chart. Have them discuss with each other what type of energy they saw. Then allow them to go back to the garden to search for more types of energy. They may take their clipboards again if they wish.

Urban Forestry: At the beginning of the EXPLORE, tell students they are going to be hunting for 3 things: something eating or evidence of eating, evidence of light energy and something moving. Challenge them to find all three things on the same tree! They can take a clipboard if they want to draw or make notes.

Make hand lenses available to them. After 10 minutes, call them together and debrief the anchor chart. Have them discuss with each other what type of energy they saw. Then allow them to go back to the garden to search for more types of energy. They may take their clipboards again if they wish.

Connecting to Nature: At the beginning of the EXPLORE, tell students they are going to be hunting for 3 things: something eating or evidence of eating, evidence of light energy and something moving. They can take a clipboard if they want to draw or make notes.

ADDITIONAL RESOURCES

Berkeley Garden Curriculum

PARTNERS FOR EDUCATION
AGRICULTURE & SUSTAINABILITY

GARDEN EXPECTATIONS

- ALWAYS WALK IN THE GARDEN AND STAY ON PATHWAYS (DON'T STEP IN THE BEDS).
- RESPECT EACH OTHER, THE WILDLIFE AND PLANTS .
- LISTEN TO LEARN (LISTEN TO TEACHERS/OTHER STUDENTS WHO ARE SHARING).
- BE SAFE WITH THE TOOLS.
- ALWAYS ASK BEFORE HARVESTING.
- WHEN YOU ENCOUNTER A CHALLENGE IN THE GARDEN, AGREE ON A PLAN TO OVERCOME IT AND TAKE ACTION.

INSECT STRUCTURES
ESTRUCTURAS DE LOS INSECTOS

Garden

ADAPTED GRADES 1–2 | SCHOOL PARTNER LESSON PLAN

Grades 1–2 • 30 mins • Fall • Outdoors or Indoors

ESSENTIAL QUESTIONS
How do the different parts of insects help them survive?

MATERIALS
- Chart/whiteboard with basic insect diagram
- Magnifying boxes
- Pencils
- Clipboards
- Paper

VOCABULARY
- Head
- Thorax
- Abdomen

ASSESSMENT
ABCDE drawing of an insect

PREPARATION (15 MINUTES)
Arrange materials and check for where the insects are hanging out (i.e. milkweed, spider flowers, vines, under leaves, etc)

TEACHER BACKGROUND
Most of what we call "bugs" are insects in the garden. An insect generally has 3 body parts and 6 legs. Know that roly polies, centipedes, millipedes, spiders, and worms are not insects. Know which insects are poisonous or harmful (i.e. wasps). Identify common insects in the garden such as honey bees, milkweed beetles, aphids, ladybugs, butterflies, moths, crickets, harlequin beetles, etc)

LESSON DESCRIPTION
Students will review their knowledge of insect parts to identify differences in species.
Students will create detailed scientific drawings of insects in the garden.

NOTE:
- Adapted from **Grade 2 Garden Lesson #17: Insect Structures**, pg 433.
- This lesson was designed to go along with DC Bilingual's Science Scope and Sequence. Science is taught in Spanish at DC Bilingual. The school views these lessons as a way to reinforce science standards in the garden.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2021

LEARNING OBJECTIVES

Content Learning Objectives

Garden and Food Systems

GFS.2.2 Describe structure and function of insect parts

ACADEMIC STANDARD CONNECTIONS

NGSS Crosscutting Concept: Structure and Function

The shape and stability of natural and designed objects are related to their function(s).

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
What is the same about all insects? What is different?

Explore **Root Around (10 mins):**
Students will pair up to find and collect insects in magnifying containers. Encourage students to "think like an insect" and look under plants and close to the ground. Demonstrate how to safely collect insects, and remind students not to collect stinging insects.

Explain **Grow Understanding (5 mins):**
Give time for students to observe their insects and notice differences between their insect and other pairs' collections. Observe: does the insect have wings? how many? how are the feet different? What kinds of mouths do they have? What do you think they eat?

Elaborate **Observe the Fruits (10 mins):**
Create an ABCDE drawing of the insects.

Evaluate **Reflect:**
While students are drawing, walk around and ask: Why do you think that insects have different body parts? How do those parts help them survive or pollinate flowers?

ADAPTATIONS

One option for observing different insect types would be to procure a set of realistic plastic insects, and to pass them to students to observe and draw. Another option would be to pre-collect insects outdoors and bring them inside.

POSSIBLE EXTENSIONS

Let's talk about how varieties of insects help to keep a garden healthy. What are some varieties that we notice in each other, and how does that keep our community healthy?

ADDITIONAL RESOURCES

- insectlore.com
- ABCDE drawing of an insect

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2021

BIODIVERSITY IN THE GARDEN

Garden

NEW! GRADE 2 | SCHOOL PARTNER LESSON PLAN

2nd Grade • 30 mins • Fall • Outdoors

ESSENTIAL QUESTIONS

Why is diversity in the garden important?

MATERIALS

- Yarn
- Scissors
- Seeds or transplants for fall planting

Each pair of students:

- Magnifying lens
- Watering can

For each student:

- Pencils/sharpener
- Student Journals

VOCABULARY

- Companion Plant
- Beneficial
- Diversity
- Biodiversity

ASSESSMENT

Student Journals—Student will answer reflection questions

PREPARATION

- Gather seeds for fall crops
- Measure and cut a 48-inch piece of yarn for each student
- Prepare a bed for planting

LESSON DESCRIPTION

Students consider the importance of biodiversity by observing and drawing all the life in one square foot of the garden. They then learn about companion planting, and beneficials and not-so-beneficials in the garden.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2020

LEARNING OBJECTIVES

- Students will be able to describe the diversity they find in the garden.
- Students will be able to sow seeds.
- Students will begin to understand our role as caretakers of the garden.

Content Learning Objectives

Garden Planning and Maintenance

GPM.2.2 Understand when to plant seeds and transplant seedlings into the garden

Life Skills Learning Objectives

Personal Life Skills

PLS.2 Students are able to express empathy and caring for themselves, others and the environment.

Community Life Skills

CLS.4 Students appreciate and are respectful of the difference and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

NGSS.LS4.D Biodiversity and Humans There are many different kinds of living things in any area, and they exist in different places on land and in water.

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Gather students in a circle and explain that today they'll explore the different types of plants and animals in nature and the garden. Show them how to tie a string into a circle and place it on the ground. Ask: How many living things do you think we'd find if we looked closer? Each student will get a string to place on the ground and use a magnifying glass to observe. Review garden expectations.

Explore **Root Around (5 mins):**
Explain students will draw pictures of each different plant or animal they find in their square. Label the living things if you know their names. Note some of the creatures might be in the soil.

Explain **Grow Understanding (5 mins):**
Call students back together. Have volunteers share their findings. Explain that having all these different living things is called diversity. Discuss how diversity is beneficial to the things living in our garden. Explain how the plants we are planting today work together.

Elaborate **Observe the Fruits (10 mins):**
Plant the seeds radish/carrots red clover

Evaluate **Reflect (5 mins):**
Ask: What is diversity? How does diversity work in our garden? How does it work in your class?

IF OUR CLASS WERE A SOUP

Garden

NEW! GRADE 2 | SCHOOL PARTNER LESSON PLAN

2nd Grade • 30 mins • Fall • Outdoors or Indoors

ESSENTIAL QUESTIONS

How does sharing help a community?

MATERIALS

- Copy of *Stone Soup* by Heather Forest or Marcia Brown
- Butcher paper
- Marker/crayons/colored pencils/
- Pencils and sharpener
- Example of favorite vegetable
- Scissors
- Student Journals

VOCABULARY

- Cooperation
- Community
- Cauldron

ASSESSMENT

Students can articulate how sharing and cooperation helps a community.

PREPARATION

- Use butcher paper to create a large soup pot or cauldron that will represent the classroom soup pot, leave room to attach each student's vegetable drawing.
- Create a model vegetable the ideal size for student drawings.
- Have supplies (paper, markers, crayons scissors) divided up for students to use

LESSON DESCRIPTION

Students will consider the importance of sharing within a community through reading *Stone Soup* and creating a classroom poster of a soup cauldron to which they'll each contribute their favorite vegetable as an ingredient.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2020

LEARNING OBJECTIVES

• Students will be able to identify and describe what they contribute to their class community.

Life Skills Learning Objectives

Personal Like Skills

PLS.2 Students are able to express empathy and caring for themselves, others and the environment.

Community Like Skills

CLS.4 Students appreciate and are respectful of the difference and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-LITERACY.RL.2.7 Use information gained from the illustrations and words in print or digital text to demonstrate understanding of its characters, setting or plot.

CCSS.ELA-LITERACY.SL.2.1 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Begin with a discussion about sharing. Ask, Think of time you shared food, a toy, or something else with a friend. What is difficult about sharing? What are some good things about sharing?

Explore **Root Around (7 mins):**
Gather in circle and read Stone Soup. Ask questions to check for understanding. (How did the villagers treat the strangers at first? What happened when the villagers saw their neighbors contributing to the soup? What else did the villagers do at the banquet in addition to just eating?

Explain **Grow Understanding (5 mins):**
Discuss themes of the book getting to how we enjoy things more when everyone contributes a little of what they have. Tell students we are creating our own stone soup as a class by drawing pictures of our favorite vegetable and putting them into this classroom soup pot. Have students write their name and what special quality you bring to the class community (good friend, tell funny jokes).

Elaborate **Observe the Fruits (8 mins):**
Give students time to draw. Then have students clean up and return to the circle.

Evaluate **Reflect (5 mins):**
Students share their spirit veg with the group. Affix the vegetables in the pot after class.

PLANT PART SCAVENGER HUNT

Garden

NEW! GRADE 2 | SCHOOL PARTNER LESSON PLAN

2nd Grade • 30 mins • Fall • Outdoors

ESSENTIAL QUESTIONS

Why is each plant part important?

MATERIALS

- *Tops and Bottoms* by Janet Stevens
- Plant Part Poster
- 6 containers for students to collect plant parts
- Student Journal
- Pencils/sharpeners

ASSESSMENT

Students will accurately identify the 6 plant parts and describe their function.

PREPARATION

- Print poster

LESSON DESCRIPTION

In this lesson, students learn the six plant parts through reading a picture book and hunting for the six plant parts in groups in the garden.

LEARNING OBJECTIVES

- Students will be able to identify the parts of a plant and describe what those parts do.

Content Learning Objectives

Plants

P.2.1 Describe the structure and functions of plant parts.

P.2.2 Identify edible leaves and stems in the garden.

Life Skills Learning Objectives

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

CLS.4 Students appreciate and are respectful of the difference and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

NGSS.2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Gather students in the garden, and tell them they'll be learning about the six parts of a plant. Read *Tops and Bottoms* by Janet Stevens, about how a clever hare and a lazy bear agree to split tops and bottoms of plants. Hare grows on Bear's land. During the reading ask questions about characters, setting and plot (How do you think Bear is feeling right now? How do you know? What do you think Hare is going to do next? Why do you think that? Discuss how like Hare in the story we grow plants to eat different parts of the plant.

Explore **Root Around (5 mins):**
Show students a poster of a plant (with the plant parts labeled but covered with paper) and ask students if they can name other parts of the plant as you point to the parts. Reveal the correct answers.

Explain **Grow Understanding (5 mins):**
Explain the function of each plant part.

Elaborate **Observe the Fruits (10 mins):**
Divide students into six groups one for each plant part. Explain that they'll have to find their assigned plant part. Give each group a container to hold their collection. Remind students to only pick plants that have ten or more of their plant parts and to harvest with their hands to protect the plant. Remind them of the call back signal.

Evaluate **Reflect (5 mins):**
Come back to the group to show and tell about their different plant parts.

PLANT PART WRAPS

Garden

NEW! GRADE 2 | SCHOOL PARTNER LESSON PLAN

2nd Grade • 30 mins • Fall • Outdoors or Indoors

ESSENTIAL QUESTIONS

How can we work together to prepare a healthy snack?

MATERIALS

- 1 set of Plant Part Sorting Cards for each group of 4 students
- Plant Part Poster
- Simple Kid friendly dressing
- 4 cutting mats for each group
- 1 set of measuring spoons for each group
- Small jar with lip for each group
- Cleaning supplies
- Student Journal
- Pencils/Sharpener
- Recipe handouts for each child
- Tape for each group

A tray for each group with one sample of each plant part. For example, the trays might have the following:

- ½ head of cauliflower
- 5 Swiss chard leaves
- 2–3 clementines
- Bowl of shredded beets
- Bowl of sliced Celery
- Bowl of sunflower seeds
- Rice vinegar
- Olive oil
- Honey
- Salt
- Pepper

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2020

VOCABULARY

- Crunchy
- Crisp
- Dry
- Juicy
- Succulent
- Tender
- Tough
- Bitter
- Salty
- Sweet
- Sour

ASSESSMENT

Observational Checklist:

- Student works with others to portion out ingredients so that everyone has what they need to make a wrap and dressing.
- Student cleans and leaves their space ready for the next group
- Student properly records in their journal the plant part ingredients they used to build their wrap.
- Student follows instructions.

PREPARATION

- Create a small poster for each plant part including its name and multiple visual examples.
- Prepare Plant Part Playing Cards for each group.
- Wash the produce, and sort it into amounts for each group
- Print salad dressing recipe sheets
- Create and print observational checklist

LESSON DESCRIPTION

In this lesson students create plant part wraps to reinforce their knowledge of the six plant parts.

LEARNING OBJECTIVES

• Students will be able to prepare fruits and vegetables for a healthy snack

Content Learning Objectives

Plants

P.2.2 Identify edible leaves and stems in the garden.

Life Skills Learning Objectives

Community Life Skills

CLS.4 Students appreciate and are respectful of the difference and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

NGSS.2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Have students turn and talk about what they like to eat for breakfast. Then say I had seed and sticks for breakfast. Can you guess what I had? (oatmeal with cinnamon) We eat different parts of the plants. Today we are going to make Plant Part Wraps.

Explore **Root Around (5 mins):**
Ask students if they can name the six plant parts? Reveal the parts on the poster as students name them. Different plants are grown because we like to eat different parts of the plant. People like to eat celery and asparagus but we don't eat strawberry stems. Some plants we can eat the whole thing like beets, Pass out the Plant Part cards and have students sort them sinto parts.

Explain **Grow Understanding (5 mins):**
Model making Wrap and dressing

Elaborate **Observe the Fruits (10 mins):**
Make Wraps. Pass our ingredients. Remind students not to take more than they will use.

Evaluate **Reflect (5 mins):**
When everyone is done we can taste our creations. What do we think? What are the textures? What are the flavors in your wrap? How did those elements work together? How did your team work together?

WELCOME TO THE GARDEN

Garden

ADAPTED GRADE 2 | SCHOOL PARTNER LESSON PLAN

2nd Grade • 30 mins • Fall • Outdoors

LESSON DESCRIPTION

This lesson serves as an introduction to the garden by providing exploratory time and reviewing garden agreements.

ESSENTIAL QUESTIONS

How can we be kind to the living things in the garden, including plants, animals and people?

MATERIALS

- Garden Bingo Sheets (1 per student)
- Vinyl slip covers (1 per student)
- Clipboards (1 per student)
- Dry erase markers (1 per student)
- Student Journals (1 per student)
- Pencils (1 per student)
- Hand-held sharpeners (1 per student)
- Chime or whistle (1)

VOCABULARY

- Safe
- Brave
- Kind
- Decompose
- Compost
- Weed
- Pest

ASSESSMENT

Observational Checklist

- Student returns quickly when signaled
- Student makes an effort to abide by the Garden Agreements
- Student engages with activity

NOTE:
Adapted from **Grade 2 Garden Lesson #1: Welcome to the Garden**, pg. 131.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2020

LEARNING OBJECTIVES

• Students will be able to explain the care and safety agreements they will follow in the garden.

Life Skills Learning Objectives

Personal Like Skills

PLS.2 Students are able to express empathy and caring for themselves, others and the environment.

Community Like Skills

CLS.4 Students appreciate and are respectful of the difference and diversity in their communities.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-LITERACY.RL.2.7 Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

CCSS.ELA-LITERACY.SL.2.1 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

PREPARATION

• Print Garden Bingo Sheets
• Gather Materials

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Gather students explain that they will be getting to know the garden today. It is full of life. What do you think you'll find? But first lets play a game to get to know each other. Play name game (My name is ____ and my favorite fruit/vegetable is _____)

Explore **Root Around (5 mins):**
Play garden I spy, demonstrate. Pair students to play socially distant I spy. Before they play let them know what the call to return is (chime/whistle) and where to come back to. Play I spy then have students return on call.

Explain **Grow Understanding (5 mins):**
Flesh out Garden Agreements (Be Safe, Be Brave, Be Kind) What does that look like in the garden?

Elaborate **Observe the Fruits (10 mins):**
Play Garden Bingo! Give each student a bingo card and marker. Explain students will be exploring the garden crossing out the square as they find the items. When someone wins they shout Bingo and class returns to circle. The winner takes a bow while the class applauds them. Play a couple of rounds.

Evaluate **Reflect (5 mins):**
• Review Garden Agreements
• Give Olés for good listening, excitement, etc

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2020

DISCOVERING OUR PESTS

DESCUBRIENDO PLAGAS DEL JARDIN

Garden

ADAPTED GRADE 3 | SCHOOL PARTNER LESSON PLAN

Grade 3 • 30 mins • Fall • Outdoors or Indoors

ESSENTIAL QUESTIONS

How do we prevent pests in our garden?

MATERIALS

- Pictures of typical garden pests and the damage they create
- Pencils
- Paper
- Clipboards
- Poster of insect life cycle

VOCABULARY

Stages of the insect life

- Larva
- Pupa

ASSESSMENT

Student journals

PREPARATION (30 MINUTES)

Get familiar with garden pests and what they look like in different stages of life cycle.

TEACHER BACKGROUND

At DCB we do not use poisons or synthetic chemicals to deal with pests. We use Integrated Pest Management (IPM) techniques. IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control (like using special bacteria to interrupt life cycles or planting for beneficial insects), habitat manipulation (like interplanting and rotating crops), modification of cultural practices (like weeding, cleaning up areas to prevent habitats for pests, watering carefully), and use of resistant varieties (like planting specific varieties of plants that have been bred for their resistance to pests).

NOTE:

- Adapted from **Grade 3 Garden Lesson #5: Discovering Our Pests**, pg 152.
- This lesson was designed to go along with DC Bilingual's Science Scope and Sequence. Science is taught in Spanish at DC Bilingual. The school views these lessons as a way to reinforce science standards in the garden.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2021

LESSON DESCRIPTION

Students will learn to identify pests in the garden at the different stages of their life cycle. By understanding how life cycles of pests look, we can better prevent pest damage.

LEARNING OBJECTIVES

Content Learning Objectives

Garden and Food Systems

GFS.3.1 Understand how to increase the beneficial insects in a garden environment.

Life Skills Learning Objectives

Personal Life Skills

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

NGSS.3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

Social Studies: Citizenship, Cultural Traditions.

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Take students to a plant with damage. Ask "What caused this plant to get sick? Let's look for evidence."

Explore **Root Around (10 mins):**
Show students examples of pests that have been found on the plants and what they look like. For example: Harlequin beetles and their eggs; Cabbage worms and cabbage moths; japanese beetle damage, squash bug larva and adults. These examples can be live or photos. Talk about how it is important to remember what different stages of life look like for insect pests so that we can identify their presence early (at the egg/larva stage) and prevent them from damaging our crops.

Explain **Grow Understanding:**
Ask students to imagine how we prevent these pests from taking over the plants without using toxic sprays?

Elaborate **Observe the Fruits (15 mins):**
Students will work in teams to draw and write signs for the garden to show people how to idenitfy pests on plants at different stages.

Evaluate **Reflect:**
Once these signs are complete, they will be laminated and installed in the garden.

POSSIBLE EXTENSIONS

Next lesson connects to beneficial insects and their role in IPM.

ADDITIONAL RESOURCES

- Searching Dave's Garden
- *Good Bugs Bad Bugs* by Jessica Walliser
- *What's wrong with my plant (And how do I fix it)?* by Dean Deardorff and Kathryn Wadsworth
- Butterfly Insect Complete Metamorphosis Life Cycle Display Poster (Minibeasts)

WHAT'S GROWING?

Garden

Grades 3–8 • 45 mins • Fall, Winter, Spring, Summer • Outdoor

NEW! GRADES 3—8 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY

Jane Madden • jane.madden@discoveryhsf.org

ESSENTIAL QUESTIONS

- What is seasonality?
- What crops grow in our region in (current season)?
- What is currently growing in our garden and where is it growing?
- How can a map of our garden help us?

MATERIALS

- Clipboards
- Pencils
- Garden Map
  - A map of your garden, with landmarks to help orient students, a clear system for naming garden rows or beds, and places to write, draw, and label crops. You may need to create different maps for different grade levels and/or you may want to assign different areas to classes or small groups depending on the size of your garden. Be sure to include a space to record the date and season to reinforce the concept of seasonality.
- Student Binders
  - Students should add work to their garden binder (grades 5 and up).

VOCABULARY

- Seasonality
- Region
- Orient
- Crop

ASSESSMENT

- Completed Maps
- Students can name 3 crops growing in the garden and the season

PREPARATION

Ensure signs are in place for each crop in your garden. Designate names for each bed (letters, numbers, colors, shapes, whatever you choose). Create a map of your garden for the specific grade level and photocopy it for each student. (This map can be used several times throughout the year to document the changes in the garden through the seasons). Place photocopies on clipboards for each student.

Dr. John Ochsner DISCOVERY HEALTH SCIENCES ACADEMY

CREATED BY

Dr. John Ochsner Discovery Health Sciences Academy in 2022

TEACHER BACKGROUND

The educator will need to understand basic concepts of seasonality, know the layout of the garden and how to orient students to the garden, explain to students that they may need to turn the map as they move through the garden to accurately record the location of each crop. It will also be helpful to have a completed map of the garden and know the number of different crops that are growing.

LESSON DESCRIPTION

Students' agenda: Opening question and discussion. Work independently or with others to locate and record crops growing in the garden on a map. Come together to name the crops growing as a whole group. Harvest from the garden. Recognize themselves and others through appreciations or shout-outs.

LEARNING OBJECTIVES

Content Learning Objectives

Weather and Season, Climate and Geography

WSCG.4.1 Understand and describe how geographic place and cultural significance might influence what and when foods grow in your location.

WSCG.6.1 Describe the growing climate and seasons of your school/home garden.

WSCG.7.2 Demonstrate knowledge of seasonal gardening.

Life Skills Learning Objectives

Personal Life Skills

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.

Community Life Skills

CLS.4 Students appreciate and are respectful of differences and diversity in their communities

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA 4.SL.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse patterns building on others ideas and expressing their own clearly

NGSS Science and Engineering Practice: Obtaining, Evaluating and Communicating Information.

Lesson Sequence

Engage

Cultivate Curiosity (10 mins):
Students are seated in small groups or partners, choose a structure for your discussion, it can be a timed pair share, round robin, or student led whole group discussion (described below).

Opening Question: "Today we will create and label a map of our garden, think of how we could use this map, what are the different ways a gardener or farmer might use a map of their growing space? There are many possible answers, I am excited to hear your ideas. Let's think for a moment before we share our ideas."

Pause for thinking time then say: "Now we get to share our ideas. You are going to lead the discussion, here is how: I will choose the first speaker, they will choose the next speaker by selecting someone who has their hand up and listened while they were speaking. Remember, we'd like to hear from as many voices as possible so please allow others to answer if you've already had a turn. Be sure to listen closely because your classmates might build on your answer or share something you hadn't thought of. What do you think—should we have a hand up while others are speaking or wait until they are finished?"

Facilitate speaker selection process if needed, choose students to record a list of ideas if desired, praise for great listening and contributions to the discussion.

Once all ideas have been expressed, explain: "We will be able to use the map we create in many ways. One way it will help us is (something you might have mentioned already—it will show us what is growing in our garden right now, right here in our region) it will help us understand seasonality—everyone say seasonality—raise your hand if you can describe what it means. (allow for a few answers) Seasonality is a big concept that we will learn about this year—it includes what grows well at what time of year in a specific place or region. We'll be exploring seasonality throughout our classes in the garden. Let's get to the mapping!"

Ask students to fill in Name, Date, and Season on your Map Handout, our hand out had our region listed as South East Louisiana. Finally, line up with clipboards and pencils and move to the garden.

Explore **Root Around (20 mins):**
Travel to the garden and have students stand shoulder to shoulder looking toward the garden. Orient students to the map by using a landmark on the map, then by asking all students to point to each row when you name it. Then check for understanding again by doing the opposite, you point to a row and on cue all students call out the name of that row. Model how to label the crops on the map, where to write or draw on the map and point out the signs that you are gathering the information from. If needed move to another location opposite where you are standing so students understand that if they change their vantage point they need to move the map, also explain that you can always go back to the first vantage point if needed. Tell students how many different crops there are and challenge them to find all of the crops, remind students to look at the plants so they begin to learn the names of each crop.

Allow students to work in teams or solo to find each crop. As they work, check student work and encourage students to help another student when they have completed the map. (Alternately students can water plants or explore with a magnifying glass if they finish early). When all have finished and had time to water, come back together in the garden classroom.

Explain **Clarify New Ideas (5 mins):**
Once students are seated again, challenge the class to name as many crops as they can without repeating. Tally a point (or assign a student to tally them) for each crop. Congratulate students for great effort and teamwork. Ask: Each of these crops are growing in what region? In what season? Did anyone find any (out of season crop) growing in the garden? Why not—explain it is not the right season for that crop to grow in our region—why, what's not right (weather conditions, hours of sunlight etc.) These are key components of Seasonality.

Elaborate **Observe The Fruits (5 mins):**
If available, harvest a snack from the garden, use the map to describe the location of the mystery snack, and demonstrate how to harvest if needed. Ensure that students sanitize hands and rinse harvest before consuming.

Evaluate **Reflect (5 mins):**
Timed pair share or mix pair share: "Name something new you learned today in the garden. It could be new knowledge about the crops we are growing, new vocabulary, or a new skill like map reading or harvesting that you hadn't done before." To establish an evaluation routine, the following questions can serve as a guide for each lesson.

- What did you enjoy about today's class, what was your favorite part? Did you learn any new information or skills in class today? What could you teach someone based on what we did today?
- Did anything about our class surprise you? Did you learn any new information or skills in class today? What could you teach someone based on what we did today?
- What connections can you make between what we did today and the kitchen?
- How did you or a classmate show a school value or honor our garden agreements?

ADAPTING FOR INDOORS

- Garden Plan Map-Use the same opening questions, but have students use a simple planting calendar or regional guide to create a garden plan on the map.
- Create collages of seasonal crops or a seasonality guide using images cut from magazines.

CONNECTIONS TO KITCHEN LESSONS

Use an ingredient list from a recipe from the kitchen as a guide for a scavenger hunt in the garden. Research the source of ingredients that we did not find in the garden, find out if we could grow them and if so when.

POSSIBLE EXTENSIONS

- Predict how soon different crops will be ready for harvest and create a chart for the Chef Educator so that the produce can be used in the teaching kitchen.
- Research simple recipes or share family recipes that use the seasonal crops.
- Create a seasonal crop bingo board or scavenger hunt for garden visitors.
- Schedule student ambassadors to lead tours of the garden using the map.

OTHER COMMENTS

A common map of the garden can be very useful for assigning jobs to students and volunteers and setting up observation stations. Collecting and comparing maps of each season can help reinforce the idea of seasonality. Numerous questions and observations about the plants and the stage of their life cycle can take place to build a greater understanding of seasonality as well.

COMPOST CONNECTIONS: BUILDING A WORM BIN

Garden

Grade 4 • 45 mins • Fall, Winter, Spring, Summer • Outdoor

ADAPTED GRADE 4 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
Jane Madden • jane.madden@discoveryhsf.org

ESSENTIAL QUESTIONS

- What is composting and how is it beneficial?
- What is vermicomposting?
- How is a homemade vermicomposting system created and maintained?
- How are the materials that we can compost alike?
- What is a decomposer and what role do decomposers play in the garden?
- How do decomposers break down organic matter?

MATERIALS

- An opaque plastic tupperware bin with a tight fitting lid and pre drilled holes (at least 1 per class) It is helpful to have several so that once they are set up, small groups of 2–4 children can observe the worms and care for them.
- Bedding Materials
  - Used brown cardboard boxes, paper grocery or lunch bags, newspaper, etc.
- A Bowl or Bucket of Water for each group to dip and squeeze bedding materials in
- Food Scraps
  - Fruit and vegetable peels and scraps (no citrus), garden scraps (surplus cuttings, leaves, stems that can be cut or broken into smaller pieces)
- Decomposer Hand Out (linked under additional resources)
- Organic Matter/Biodegradable Materials or a printed handout (teacher created handout with pictures of fruit peels, newspaper, fallen leaves, fallen twigs or sticks, apple cores, etc.)

VOCABULARY

- Compost
- Decompose/Decomposer
- Biodegradable
- Organic Matter
- Vermicompost
- Bedding
- Castings

NOTE:
Adapted from **Grade 4 Garden Lesson #8: Building a Worm Bin**, pg 174.

DR. JOHN OCHSNER DISCOVERY HEALTH SCIENCES ACADEMY

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

ASSESSMENT

Student selected assignment to be completed as group or independent work:

- Create a video explaining how to set up a worm bin.
- Bring in 1 bedding material and 1 food material suitable for vermicomposting to our garden and add it to the bin.
- Create a collage, poster, or other visual aid showing materials that are suitable for vermicomposting.
- Create a guide for setting up and maintaining a worm bin.
- Create a song, rap or poem about what can and cannot be composted by the red wigglers. Turn in a video performance or written work.

PREPARATION (ESTIMATED TIME VARIES)

Print out and laminate (if desired) handouts. Prepare enough bedding, water bowls, and food scrap materials for each small group or station, plan how you will distribute these materials or how students will rotate through. Pre drill holes in your worm bin containers. (I often combined the worm bins that students had set up after class to allow for an empty bin for the next group.)

TEACHER BACKGROUND

The educator needs to know the basics of **vermicomposting** and how to set up a worm bin.

LESSON DESCRIPTION

- Compost Concept Review: Revisit the compost tumbler by spinning it at that start of class and discussing how it works.
- Compost Connections: Student Led Discussion about Organic Materials and Decomposers
- Worm Bin Set Up and Clean Up
- Vermicompost Do's and Don'ts Guided Handout
- Closing Appreciations

LEARNING OBJECTIVES

Content Learning Objectives

Soil

S.4.1 Identify and describe structure and function of organisms living in soil.

Garden Tools and Equipment

GTE.4.1-4 Garden Tools and Equipment

Life Skills Learning Objectives

Personal Life Skills

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC STANDARD CONNECTIONS

NGSS Science and Engineering Practice: Planning and Carrying Out Investigations.

CCSS.ELALITERACY.W.4.2.D Use precise language and domain-specific vocabulary to inform about or explain the topic.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks

Lesson Sequence

Engage

Cultivate Curiosity:
On the way to the garden classroom tables, have each student spin the compost tumbler. Once everyone is seated, facilitate a quick student led discussion to review what we have learned about the tumbler.

Ask students to look at and discuss the question on their clipboard. "What do all of these materials have in common?" Facilitate another quick discussion—each table can share out their ideas or you can allow students to call on each other. All ideas should be accepted, then restate ideas that are key to today's lesson—all of these materials come from nature, they were once living, they can be broken down, they will decompose over time. Introduce the terms organic matter and biodegradable. Push for a connection to the compost tumbler.

Next flip the hand out over to see pictures of organisms—allow for thinking or table talk time, then ask "What do all of these organisms have in common?" Allow for all ideas and restate key ideas—they break things down, they need other living things to survive, etc. Introduce the term decomposer—all of these organisms are decomposers they break down organic and biodegradable materials. They help the earth by breaking these materials down and creating healthy compost.

Explain: Today we will set up another composting system, this one will use red wiggler worms because they are excellent decomposers. To do this, we will need to make the worms a special home.

Explore

Root Around:
Worm bin set up: Show students the empty bin, point out that it is opaque, and that their are holes drilled along the top. Ask them why both of these features are important.

Show students bedding materials and demonstrate how to prepare them by tearing, dipping, and wringing out bedding.

Show students food and garden scraps and ask—how do you think the worms will break this down—(by eating and creating nutrient rich waste called castings that become part of the soil and feed the plants.) If possible, show students a bag of store-bought castings and quickly explain or ask students how it is used in the garden. Then ask—do you think large pieces or small pieces of food will be easier for the worms to break down? Demonstrate making the pieces as small as possible, allow student to leave a few large pieces available to observe what happens over time.

Explain **Grow Understanding:**

Allow students time to prepare the bedding and food for the bins, then pass the bin and instruct students to add materials in layers. Clean up tables and stations before adding the worms. They can be placed on top because they will dig their way down. Once students have had time to observe them, close and collect bins and wash hands.

Elaborate **Observe The Fruits:**

Distribute the worm bin basics handout (linked below). Ask students to name foods that worms can decompose easily. Check for understanding by asking if we need to buy fresh fruit just for the worms (no use leftover scraps). Ask—how will the worms turn this into compost? What will we do with that compost? Ask students to name something we should not put into the bins.

Evaluate **Reflect:**

- What did you enjoy about today's class, what was your favorite part?
- Did anything about our class surprise you? Did you learn any new information or skills in class today? What could you teach someone based on what we did today?
- What connections can you make between what we did today and the kitchen?
- How did you or a classmate show a school value or honor our garden agreements?

ADAPTING FOR INDOORS

Take it all inside on a cart. Bring tablecloths and allow extra time to get to a handwashing station.

CONNECTIONS TO KITCHEN LESSONS

Add food scraps from the kitchen into the worm bin. Create a sorting station for food scraps in the kitchen based on the infographic of what worms can and cannot breakdown.

POSSIBLE EXTENSIONS

Create a system for collecting compost scraps from the cafeteria.

ADDITIONAL RESOURCES

This lesson has been adapted from the following extensive composting curriculum:

- DO THE ROT THING Compost Critters worksheet located on page 14 of the handout.
- What Can Red Wigglers Eat? Magnet used for Class Discussion Available for Purchase at this link and on Amazon

INSECT STRUCTURES
ESTRUCTURAS DE LOS INSECTOS

Garden

ADAPTED GRADE 4 | SCHOOL PARTNER LESSON PLAN

Grade 4 • 30 mins • Fall • Outdoors or Indoors

ESSENTIAL QUESTIONS
How do the different parts of insects help plants survive?

MATERIALS
- Matching cards
- Clipboards
- Paper
- Colored pencils
- Pencils

VOCABULARY
- Head
- Thorax
- Abdomen

ASSESSMENT
Matching game

PREPARATION (15 MINUTES)
Arrange materials and check for where the insects are hanging out (i.e. milkweed, spider flowers, vines, under leaves, etc)

NOTE:
- Adapted from **Grade 2 Garden Lesson #17: Insect Structures**, pg 433.
- This lesson was designed to go along with DC Bilingual's Science Scope and Sequence. Science is taught in Spanish at DC Bilingual. The school views these lessons as a way to reinforce science standards in the garden.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2021

TEACHER BACKGROUND

Most of what we call "bugs" are insects in the garden. An insect generally has 3 body parts and 6 legs. Know that roly polies, centipedes, millipedes, spiders, and worms are not insects. Know which insects are poisonous or harmful (i.e. wasps). Identify common insects in the garden such as honey bees, milkweed beetles, aphids, ladybugs, butterflies, moths, crickets, harlequin beetles, etc). Different plants require different insects for pollination. Looking at the forms of a variety of flowers, we can see that some are flat, others have long structures with nectar in the bottom, others have multiple flowers on one stalk. Get familiar with the flowers in the garden including: zinnias, sunflowers, spiderflowers, peas/bean flowers, verbena, bee balm, aster, and hibiscus.

LESSON DESCRIPTION

Students will review their knowledge of insect parts to identify differences in species. Students will play a matching game to match insects to the flowers that they pollinate

LEARNING OBJECTIVES

Content Learning Objectives

Garden and Food Systems

GFS.2.2 Describe structure and function of insect parts

ACADEMIC STANDARD CONNECTIONS

NGSS Crosscutting Concept: Structure and Function

The shape and stability of natural and designed objects are related to their function(s).

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Why do insects have different body parts?

Explore **Root Around (10 mins):**
Students will pair up to look for insects on flowers. Using clipboards and pencils, they will draw the flower and the insects that they see present. Encourage students to look carefully and determine—what makes this flower different from others? Is it one flower or a cluster of flowers? What shape is the flower? Where is the nectar? Direct students to sit calmly and quietly near a flower for a while in order to create an environment where the insects will remain.

Explain **Grow Understanding (5 mins):**
In the seating circle, students will share out which flowers they found and the insects that were visitng them to partners.

Elaborate **Observe the Fruits (10 mins):**
In groups of 4, pass out pollinator matching cards and instruct students to make matches and prepare to explain to the class why these matches make sense.

Evaluate **Reflect:**
Students will volunteer to show the class the matches they made and explain why these matches make sense.

ADAPTATIONS

Matching game can be done indoors.

POSSIBLE EXTENSIONS

Let's talk about how varieties of insects help to keep a garden healthy. What are some varieties that we notice in each other, and how does that keep our community healthy?

ADDITIONAL RESOURCES

Pollinator Matching Activity

SAVING BEAN SEEDS

GUARDANDO SEMILLAS

Garden

ADAPTED GRADE 5 | SCHOOL PARTNER LESSON PLAN

Grade 5 • 30 mins • Fall/Winter • Outdoors or Indoors

ESSENTIAL QUESTIONS

Why do we save seeds?

MATERIALS

- Drying plants with seeds i.e. beans, marigolds, sunflowers
- Paper
- Seed envelopes
- Pencils
- Colored pencils

VOCABULARY

- Seed sovereignty—the farmer's rights to save, breed and exchange seeds, to have access to diverse open source seeds which can be saved

ASSESSMENT

Student journals

TEACHER BACKGROUND

Familiarize oneself with the plants that are ready to harvest seeds from for the following year. Also learn about different reasons that people have saved seeds—for food (spreading energy), for genetics, and as an act of resistance and survival (i.e. enslaved peoples braiding seeds into hair; Indigenous people protesting for seed sovereignty)

LESSON DESCRIPTION

Students will learn about the seeds we can harvest at the end of the growing season, and why we choose to save seeds.

LEARNING OBJECTIVES

Content Learning Objectives

Plants

P.5.1 Understand how to identify and cultivate genetic traits in plants.

NOTE:

- Adapted from **Grade 5 Garden Lesson #3: Saving Bean Seeds**, pg 455.
- This lesson was designed to go along with DC Bilingual's Science Scope and Sequence. Science is taught in Spanish at DC Bilingual. The school views these lessons as a way to reinforce science standards in the garden.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2021

Life Skills Learning Objectives

Community Life Skills

CLS.3 Students understand and apply principles of fairness, equity, and democracy in the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELA-LITERACY.W.5.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Social Studies: Citizenship, Cultural Traditions.

Lesson Sequence

Engage **Cultivate Curiosity (5 mins):**
Where do we get seeds from each year to grow food? How do we get them?

Explore **Root Around (5–10 mins):**
Either have students collect seeds from a variety of plants in the garden OR present students with a variety of cut plants and instruct them to find and collect the seeds. Are all seeds the same? How do we know which seeds are "good"?

Explain **Grow Understanding (5 mins):**
In groups, list the reasons why people would want to save seeds each year. Share out to whole group.

Elaborate **Observe the Fruits (10 mins):**
Students will collect some of the seeds to design their own seed packs for the following season. Students will write the story of the seeds and why we are saving them on the backs of the seed packets. Are they good quality or not? What will people harvest? Why is it worth it?

Evaluate **Reflect:**
Students volunteer to share the stories they have written on their seed packets.

ADAPTATIONS

Plants can be brought indoors.

CONNECTIONS TO KITCHEN LESSONS

Bean seeds can be saved and cooked.

POSSIBLE EXTENSIONS

How does seed saving connect to food access and food justice?

ADDITIONAL RESOURCES

Six Simple Reasons To Introduce Kids to Seed Saving

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2021

A GARDEN OF CELLS

Garden

NEW! GRADE 6 | SCHOOL PARTNER LESSON PLAN

ACADEMIC STANDARD CONNECTIONS

NGSS.6-MS-LS1-1

Conduct an investigation to provide evidence that living things are made of cells, either one or many different numbers and types.

LESSON PREPARATION

Two weeks prior, have students go down to the garden to create mini-ponds: In groups of four they put 1 tablespoon of soil and a handful of grass into a deli container. The remainder of the container is filled until ¾ full with creek water. (Teacher should collect creek water with a pitcher). These ponds are sealed, labeled and stored in the back of the classroom for two weeks.

BACKGROUND KNOWLEDGE

Students should know how to operate microscopes.

LESSON DESCRIPTION

This lesson serves as an introductory phenomenon for the 6th grade unit on cells. It gives more than 5 options for possible cells students can look at with a microscope so it is not necessary for the teacher to use all five.

MATERIALS

- Microscopes
- Microscope Slides
- Cover Slips
- Droppers
- Bulbs from Garden
- Toothpicks
- Scotch Tape
- Elodea Leaves
- (optional): Amoeba, paramecium, euglena cultures ordered online
- Iodine or Methylene Blue
- Colored pencils

CREATED BY
Belle Chasse Academy in 2021

LESSON ACTIVITY

1. Bellwork: What are the traits common to all living things?
2. Students will go down to the garden and collect a bulb (onion or garlic).
3. Students are divided up into the minipond groups from two weeks prior. There should be few enough groups that each can be accommodated with a microscope.
4. Following along with the handout, students will look at five samples under microscopes. More rows can be added to the table in the document if the groups are going to look at more than five specimens. The teacher should not tell the students they are looking for cells. They will use colored pencils to diagram the phenomena and notate observations, inferences, and patterns on the handout included above.
    a. Skin collected from the elbow with a piece of scotch tape. Students will press a piece of scotch tape to their elbow and place the piece of tape between two glass sides.
    b. Cheek swab collected with a toothpick. Students will gently rub the inside of their cheek with tooth pick and rub the residue onto a glass slide. They will then cover it with a plastic cover slip.
    c. Elodea leaf collected from a fish tank (cheaply ordered online). A single leaf will be sandwiched between two glass slides.
    d. Stained bulb cuttings: Peel Your Onion or garlic and take a super thin cutting of the bulb. Put One Drop or Two of Iodine—onto the top of the onion cell. If you are using Methylene blue, you'll need to apply the stain next to the cover slip after it is down. Go light because too much will mean you can't see the cell well.
    e. Minipond water with droppers. These miniponds will smell and should be immediately disposed of after use. A drop of the slimy layer of pond water from the surface of the miniponds will be wet mounted. It can be difficult to locate the microbes so students may have to try multiple times.
    f. Additionally, Euglena, Amoeba, and Paramecium samples can be ordered online and used. A single drop of the liquid cultures can be wet mounted on the slides.
5. Each student is given two sticky notes. Using their observations and inferences from their packet they will write one "I notice" and one "I wonder" statement. They will then place the notes in two designated spaces at the front of the room.
6. Teacher leads oral discussion of "I wonder" questions and "I notice" statements organizing them for similar themes.
7. Individual groups develop a model of what they have seen at the end of the packet.
8. Class comes together to develop a consensus model of these phenomena on the front board.
9. Students watch TedED Video on the Cell Theory

Name: _____
Date: _____

WHAT ARE WE LOOKING AT?

	Drawing	Observations and Inferences
1		
2		
3		
4		
5		

Work with your group to create a model of the phenomena you have been looking at in the space below. You can use diagrams as well as written explanations.

FOOD SYSTEMS PROCESSING

Garden

ADAPTED GRADE 6 | SCHOOL PARTNER LESSON PLAN

Grade 6 • 45 mins

ESSENTIAL QUESTIONS

- What is a food system? Why are food systems important?
- What are the main stages of a food system? What does each stage look like?
- Can we connect what we do in the garden to the food system?

MATERIALS

- Photos for each stage of the food system
- Handouts for student led discussion
- Scissors, salad spinner, ziploc bags
- Seeds, soil, pots, watering cans
- Hibiscus or another crop for processing: harvesting, washing, packing, storing

VOCABULARY

- Food system
- Processing
- Production
- Distribution
- Consumption

ASSESSMENT

Tool Safety Checklist

- Hands and tools are clean.
- Student walks with closed scissors pointed down, arm not swinging
- When sharing scissors, student hands others the handle not the blade or places tool down in front of partner
- Student focuses and looks at hands while using scissors and ensures they are cutting far from their own hands or fingers
- Students space themselves appropriately or take turns while harvesting

HARVESTING

- The produce harvested is placed in an appropriate container
- Harvest is washed and packed safely
- Pre and post test for unit

TEACHER BACKGROUND

How to properly harvest, wash, and store hibiscus. Food system basics

NOTE:
Adapted from **Grade 6 Garden Lesson #2: Producers and Consumers**, pg 202.

Dr. John Ochsner Discovery Health Sciences Academy

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

LESSON DESCRIPTION

Students will use text and photos to gain an understanding of each step of a Food System, then work hands on in the garden and relate the work they are doing back to the Food System.

LEARNING OBJECTIVES

Content Learning Objectives

Plants

P.6.3 Understand best harvest practices for food grown in the garden.

Garden Tools and Equipment

GTE.6.1-4 Garden Tools and Equipment

ACADEMIC STANDARD CONNECTIONS

CCSS.ELALITERACY.SL.6.5 Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 8: Students will demonstrate the ability to advocate for personal, family, and community health.

Lesson Sequence

Engage **Cultivate Curiosity:**
Food related would you rather. Then connect our preferences to the food system. Would you rather get fast food to go, or eat in the restaurant? Would you rather grow food or prepare food? Would you rather be a delivery driver or work in a restaurant?

Explore **Root Around:**
Pass photos of what that stage of the food system looks like, then have a student led discussion. Key questions: What resources are needed? What jobs are part of this stage? What questions do you have?

Explain **Grow Understanding:**
Allow students to choose a job in Production: (planting seeds, turning compost, watering plants) *or* Processing (Harvesting Hibiscus, washing and spinning leaves in the salad spinner, packing leaves f or each student, storing in the refrigerator)

Elaborate **Observe the Fruits:**
Students work in the garden, self-directed.

Evaluate **Reflect (10 mins):**
Reflection question (student led-discussion, timed pair share, or mix pair share): Think of a job someone might do to process one of your favorite foods and share it with your partner. HEART Tenet Class Shout Outs, student led.

ADAPTING FOR INDOORS

Bring seeds and peat pots indoors for planting, bring hibiscus roselles inside and use the dehydrator for drying the calyx to dry make tea or bring salad spinners in cafeteria and have students wash and pack pre-harvested hibiscus leaves.

CONNECTIONS TO KITCHEN LESSONS

In the kitchen, discuss which step of the food system cooking is. Process food from the garden into a product-like a jam, tea bag, or herb mix.

POSSIBLE EXTENSIONS

Visit a local farm. Have students act as reporters and document the trip. Tour the areas used for harvesting, washing, storage and packing. Find out where the food will go next.

ADDITIONAL RESOURCES

- Content adapted from What Makes up a Food System? Breaking it Down into 4 Parts
- Food System Unit Handout
- Food Systems Objectives listed below

1. I can define a food system in my own words.

2. I can describe the four main steps of a food system.

3. I can relate our work in the kitchen and garden to a food system.

4. I can appreciate the many people who work within a food system.

5. I can appreciate the resources used to produce, process, and distribute the food I eat each day.

FOOD SYSTEMS UNIT REVIEW

Garden

NEW! GRADE 6 | SCHOOL PARTNER LESSON PLAN

Grade 6 • 45 mins

ESSENTIAL QUESTIONS

- What is a food system? Why are food systems important?
- What are the main stages of a food system? What does each stage look like?
- Can we connect what we do in the garden to the food system?

MATERIALS

- Google Slideshow if indoors
- Laminated Food Systems Flow Chart
- Dry Erase Markers
- Clipboards
- Tissues (to erase)
- Green Onions, Soil, 4" Planting Pots, Pop Sticks, Sharpies*** (optional lesson extension)

VOCABULARY

- Food system
- Processing
- Production
- Distribution
- Consumption
- Compost
- Food Waste

ASSESSMENT

Tool Safety Checklist

- Students are displaying their answers to each review question
- Students are generating questions for the review
- Students are using proper technique for planting
- Pre and post test for unit

TEACHER BACKGROUND

Review Food Systems Materials and Slide Show, Kagan Cooperative Learning Structures: Show down and mix pair share, possible spectrum questions

DR. JOHN OCHSNER DISCOVERY HEALTH SCIENCES ACADEMY

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

LESSON DESCRIPTION

Students will review their understanding of our food systems unit through Kagan structures. Students will propagate a plant by planting a green onion cutting and aromatic herb cutting.

LEARNING OBJECTIVES

Content Learning Objectives

Garden Planning and Maintenance

GPM.6.2 Demonstrate understanding of compost and/or vermi-culture system.

Garden and Food Systems

GFS.3.4 Define local food system

Food Systems Objectives listed below

1. I can define a food system in my own words.

2. I can describe the four main steps of a food system.

3. I can relate our work in the kitchen and garden to a food system.

4. I can appreciate the many people who work within a food system.

5. I can appreciate the resources used to produce, process, and distribute the food I eat each day.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELALITERACY.SL.6.1 Engage effectively in a range of collaborative discussions (one on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

Lesson Sequence

Engage

Cultivate Curiosity:
Open class with 3–5 minutes of garden exploration time, while walking, think of something we have done this semester that you really enjoyed. Mix Pair Share—Share the activity you have enjoyed most this semester. We can relate everything we've done this semester to a food system. Today we will review what we've learned! Take a clipboard, laminated sheet, tissue and dry erase marker to the table.

Explore **Root Around:**

I do/we do: Review Activity; Kagan Structure Showdown: Introduce question format first (circle the correct stage of the food system, practice question, then stand back to back with a partner and explain the showdown structure) Teacher gives examples of an activity related to the food system, students circle the stage it fits into on the flowchart, markers are held high when ready, teacher counts up to 3, then partners reveal answers to one another, teacher reviews the answer.

You do: Students generate the example food system activity, repeat the showdown, and discuss each answer, if any examples are unclear, consider using a spectrum question to discuss, like; Does milking a cow fit into the production or processing stage? (if indoors, use the slideshow for the first few questions) Flip laminated sheet on clip board.

Direct: Write down at least one idea to reduce food waste, one idea that will help us waste less food. Shift from showdown to mix pair share, then student led discussion.

Showdown Structure Direct: Draw the creature that helps us recycle food scraps into soil in our vermicomposting bin. Reveal and discuss.

Showdown Structure Ask: True or False: you can start a new plant without seeds. True, Put materials away and shift to demonstration circle space.

Explain **Grow Understanding:**

Demonstrate taking a cutting from an herb or green onion and planting it. Review steps, then allow students to plant their own cutting. If time allows, package in a brown bag with name to take home, students will pick up their plants at dismissal time. Ask; Which step of the food system is this? (Production)

Elaborate **Observe the Fruits:**

Review steps, then allow students to plant their own cutting. If time allows, package in a brown bag with name to take home, students will pick up their plants at dismissal time.

Evaluate **Reflect (10 mins):**

Student shout outs, student led.

ADAPTING FOR INDOORS

Use the slide show and bring planting materials inside.

CONNECTIONS TO KITCHEN LESSONS

In the kitchen, discuss which step of the food system cooking is. Process food from the garden into a product—like a jam, tea bag, or herb mix.

POSSIBLE EXTENSIONS

Develop and market a student made product, sell it at a special event or at a local Farmer's Market if regulations allow.

ADDITIONAL RESOURCES

- Content adapted from What Makes up a Food System? Breaking it Down into 4 Parts.
- Food System Unit—Google Docs

HOW FUNGI RECYCLE MATTER

Garden

NEW! GRADE 6 | SCHOOL PARTNER LESSON PLAN

Grade 6 • 140 mins
Fall, Winter, Spring, Summer • Indoor and Outdoor

SUBMITTED BY
Noah Welsh • nwelsh@bellechasseacademy.org

ESSENTIAL QUESTIONS
- How are fungi important to the environment?

MATERIALS
- Mushroom growing set up
- Mushroom medium
- Oyster mushroom spores
- Pizza ingredients

VOCABULARY
- Spores
- Decomposers
- Fungi/fungus

PREPARATION (ESTIMATED TIME VARIES)
Teacher should prepare indoor oyster mushroom gardens.

TEACHER BACKGROUND
Teacher should understand energy flow in food chains and food webs in addition to photosynthesis and cellular respiration.

LESSON DESCRIPTION
Students will learn about fungi and the energy and matter that flows through them, by exploring mycellium networks in the garden, growing and harvesting oyster mushrooms, and using those mushrooms to make pizza.

CREATED BY
Belle Chasse Academy in 2022

LEARNING OBJECTIVES

- I can develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
- I can work in teams.

Life Skills Learning Objectives

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC STANDARD CONNECTIONS

6-MS-LS2-3: Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

HEALTH STANDARD CONNECTIONS

4-M-3.1 Role-play appropriate ways to respond to feedback from others.

Lesson Sequence

Engage **Cultivate Curiosity (30 mins):**
Students will go into the garden and search the soil for fungal mycellium networks.

Explore **Root Around (20 mins):**
Students will harvest mushrooms from indoor oyster growing buckets. Teachers will have to prebuild and set up these systems.

Explain **Grow Understanding (20 mins):**
Students will draw and discuss diagrams of the energy flow in the system, including people, mushrooms, mushroom medium, pizza, etc.

Elaborate **Observe The Fruits (50 mins):**
Students will cook pizza using their harvested oyster mushrooms as the primary topping.

Evaluate **Reflect (20 mins):**
Students will write a paragraph using Claim-Evidence-Reasoning explaining how energy moved from the Sun to plants to various consumers and in turn to the mushroom and back into their pizza. Additionally, they should explain how the matter moved from the air and water into the plant and through a food web and onto their pizza. Their discussion should include discussion of the corresponding transformations of energy and matter.

CREATED BY
Belle Chasse Academy in 2022

ADAPTING FOR INDOORS

Students may look at internet pictures of mycellium if the day is rainy. They can then go explore for mycellium in the soil on a future date. All other lesson components can be completed indoors.

CONNECTIONS TO KITCHEN LESSONS

This lesson includes both garden and kitchen components. Mushrooms grown in the students indoor harvesting containers will be used as pizza topping for pizza cooked in the kitchen.

POSSIBLE EXTENSIONS

Students can now cook pizza for class/school events.

ADDITIONAL RESOURCES

Growing Mushrooms at Home

OTHER COMMENTS

This lesson will take two days.

HOW TO HARVEST (BASIL)

Garden

ADAPTED GRADE 6 | SCHOOL PARTNER LESSON PLAN

Grade 6 • 2–4 Days • 180 mins

ESSENTIAL QUESTIONS

- What types or varieties of basil are growing in the garden?
- How do we safely harvest basil to ensure the plant will continue to produce?
- What should we do post harvest to keep the basil fresh and safe for cooking?
- Can we preserve basil for use in the future?

MATERIALS

- Dry basil or italian seasoning jars to show at the beginning of class
- Basil ready to harvest
- Scissors
- Bowls or vases depending on when you will use/store the basil
- Dehydrator (optional)
- Salad Spinners (optional)
- Day 2 Part 2: Scripts for video
- Video camera or tablet for filming
- Sign templates for students creating signs
- Colored pencils, markers or computers for students creating signs or researching recipes

VOCABULARY

- Variety
- Harvest
- Dehydrator

ASSESSMENT

Tool Safety Checklist

- Hands and tools are clean. Student walks with closed scissors pointed down, arm not swinging.
- When sharing scissors, student hands others the handle not the blade or places tool down in front of partner.
- Student focuses and looks at hands while using scissors and ensures they are cutting far from their own hands or fingers.
- Students space themselves appropriately or take turns while harvesting.

Harvesting

- Students cut the stem of the basil above new growth (node) or pinch back tops of basil to prevent flowering
- The produce harvested is placed in an appropriate container

TEACHER BACKGROUND

How to properly harvest, wash, and store basil. Coordinate with chef educator when basil will be used.

NOTE:
Adapted from **Garden Lesson #3: How to Harvest**, pg 202.

Dr. John Ochsner Discovery Health Sciences Academy

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

LESSON DESCRIPTION

On Day 1, Students will learn how to harvest safely, on day 2 students create a video to demonstrate how to harvest basil. The procedures for Day 2 are listed in the REFLECT Section of this document.

LEARNING OBJECTIVES

Content Learning Objectives

Plants

P.6.3 Understand best harvest practices for food grown in the garden.

Garden Tools and Equipment

GTE.6.1-4 Garden Tools and Equipment

ACADEMIC STANDARD CONNECTIONS

CCSS.ELALITERACY.SL.6.5 Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 8: Students will demonstrate the ability to advocate for personal, family, and community health.

Lesson Sequence

Engage **Cultivate Curiosity:**
Show or pass around a spice jar of basil from the pantry. Allow students to look at the bottle and smell the contents. Ask: Has anyone used this herb in their kitchen at home? Based on the smell, what would you use it in? What steps do you think it took to get to us?

Explore **Root Around:**
Challenge table teams to each find the basil growing in the garden by giving each team a leaf to match. Then tour the types of basil and name them.

Explain **Grow Understanding:**
Review tool safety for scissors or snips. Demonstrate how to HARVEST and where to place harvested basil.

Elaborate **Observe the Fruits:**
Then ask students to wash or sanitize hands and each make one cut from the basil plant their team found and bring it back to the classroom circle. Demonstrate how to best wash and store the basil for use in the kitchen. If there is a surplus of fresh basil leaves, have students destem the basil and place leaves on the tray for the dehydrator. Discuss how the basil will change in the dehydrator and relate back to the jar at the start of class.

Evaluate

Reflect (10 mins):
Explain—next class I'd like us to create a video teaching others about the Basil in our garden. Let's fill in this info sheet so we know what we're trying to communicate in the video. You can also fill this in for your journal/binder. See handout at end of lesson.

DAY 2: Hand out worksheet completed in class one as a guide for the video production.

First 5 minutes: student led discussion: Ask class what we should include in our all about basil video. What should come first, etc.

15 minutes Break class into 2 teams, the cast and the crew. The cast will work together to assign roles, come up with a sequence and a script, and rehearse each part as if cameras are rolling. The crew will work with a partner to get familiar with the camera. One partner films, the other partner cues the cast using a thumbs up when the camera is rolling. The cast can also find places to set up the filming and organize the materials the cast will need.

20 minutes Filming: Crew takes turns filming each segment. Optional assignment: Ask a student to create slides for each part of the video such as scissor safety or harvesting.

ADAPTING FOR INDOORS

Keep the same hook but allow students to compare the different varieties of basil. If possible bring a potted basil in for the harvesting demonstration. Have students research ways to store basil and recipes that use basil. Have students work on a script describing the different varieties of basil, how to handle scissors/snips safely, and best post harvest practices.

CONNECTIONS TO KITCHEN LESSONS

Coordinate with the chef educator to supply basil for the 3rd grade Texture lesson, or prepare the recipe with the students who harvested the Basil. **Jillie's Pesto-Cheese Dip**, *There's a Chef in My Soup.*

POSSIBLE EXTENSIONS

Share the videos at the whole school morning meeting or host a screening with a pesto snack. Look in your refrigerator or pantry at home for Basil. Talk to a family member about how they use basil. Research or share recipes. Look at the ingredient list of a product you think might contain basil and see if you are right. Grow basil microgreens, then share how you used them. Compare microgreens to full grown basil.

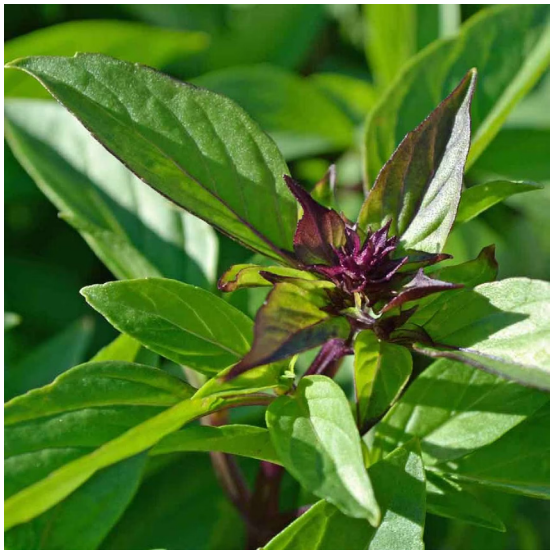
Name _____ Date _____

Label the 4 types of basil growing in our garden.

Purple Basil Thai Basil Italian Sweet Basil Lemon Basil

1.

2.



3.

4.

Scissor Safety Tips

_____

_____

_____

How do we store basil after harvesting it if we want to use it fresh?

_____

_____

_____

_____

_____

Rate your Basil harvesting skill level at this point.

____ Not quite sure how to do it

____ I think I've got it.

____ I could teach others how to do it.

Food for thought- Think about this for next time when we make our Basil video.

Would you like to be in the movie or help behind the scenes?

What bonus features could we include in our video?

_____

What information would you like to teach?

LEGUMES: NITROGEN FIXATION-COVER CROPPING

Garden

NEW! GRADE 6 | SCHOOL PARTNER LESSON PLAN

LESSON DESCRIPTION

This lesson introduces students to the concept of plants using soil nutrients and of interdependence of plants in companion planting pairs.

TOPICS

- The process of nitrogen fixation by legume crops.
- Cover cropping techniques to maintain microbial health of the soil, minimize weeds, and prevent evaporative water loss.
- Native American use of the 'Three (3) Sisters' planting technique (beans, corn, & squash) as a mutually beneficial codependence.

UNIT DAY/LESSON

Nitrogen Fixation/Cover Cropping for Soil and Plant Health

SUBJECT

Science: Soil, Elements, Ecosystems, Biodiversity

STATIONS

1. Discussion & Video: Biodiversity (plants, microorganisms)

2. Bean seed collection

3. Garden: clean bed, plant cover crop of legumes

4. PostQuiz/Assessment

ACADEMIC STANDARD CONNECTIONS

6th grade curriculum suitable for Louisiana Learning Standards:

6-MS-PS1-1 (Describe and model the atomic composition of simple molecules and extended structures)

6-MS-LS2-1 (Cause and effect relationships between resources and growth of individual organisms and the numbers of organisms in ecosystems)

6-MS-LS2-3 (Demonstrate how matter and energy is transferred between producers, consumers, and decomposers within an ecosystem)

CREATED BY
Belle Chasse Academy in 2023

PROCEDURE

1. Class begins with a discussion period at the beginning of class. Introduction to material, new vocabulary, use of video of resource (Understanding Our Soil: The Nitrogen Cycle, Fixers, and Fertilizer).
2. Next, class engages in group discussion to review garden rules and procedures. Outline activity expectations and instruction of garden activity.
   - preparation of planting holes at ½–1 inch depth according to seeds size
   - planting bean seeds in a sunny location
   - applying water to stimulate growth hormone
3. Garden experience: class will perform steps discussed in step #2. garden maintenance and nitrogen fixation with use of legume cover crop.
4. Return to classroom or discussion circle for wrap up Post Assessment and review of lesson/new vocabulary.

MATERIALS

- Garden planting space (raised, in ground, or pots)
- Bean Seeds
- Garden gloves (optional)
- Trowels (optional)
- Watering buckets

VOCABULARY

- Cover crops
- Nitrogen
- Nitrogen Fixation
- Companion planting

DISCUSSION MATERIAL

The nitrogen cycle (article) | Ecology | Khan Academy

INTRODUCTION

Nitrogen is everywhere! In fact, N2N gas makes up about 78% of Earth's atmosphere by volume, far surpassing the O2 we often think of as "air". But having nitrogen around and being able to make use of it are two different things. Your body, and the bodies of other plants and animals, have no good way to convert N2 into a usable form. We animals—and our plant compatriots—just don't have the right enzymes to capture, or fix, atmospheric nitrogen. Still, your DNA and proteins contain quite a bit of nitrogen. Where does that nitrogen come from? In the natural world, it comes from bacteria!

Bacteria play a key role in the nitrogen cycle. Nitrogen enters the living world by way of bacteria and other single-celled prokaryotes, which convert atmospheric nitrogen—N2—into biologically usable forms in a process called nitrogen fixation. Some species of nitrogen-fixing bacteria are free-living in soil or water, while others are beneficial symbionts that live inside of plants.

Nitrogen-fixing microorganisms capture atmospheric nitrogen by converting it to ammonia—NH3—which can be taken up by plants and used to make organic molecules. The nitrogen-containing molecules are passed to animals when the plants are eaten. They may be incorporated into the animal's body or broken down and excreted as waste, such as the urea found in urine.

Source credit: The nitrogen cycle (article) | Ecology | Khan Academy

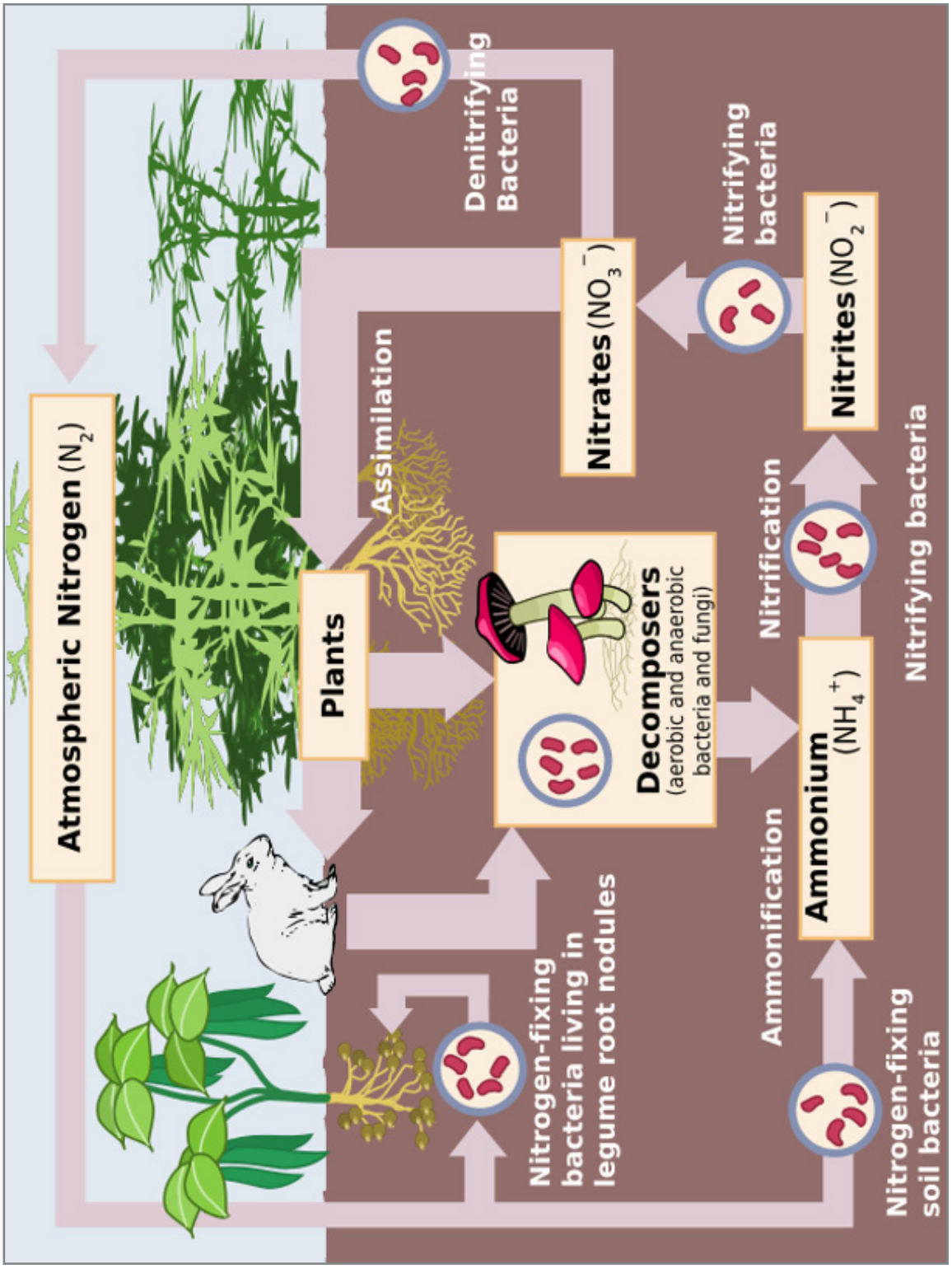


Image credit: from Nitrogen cycle by Johann Dréo (CC BY-SA 3.0)

WHAT SHOULD WE PLANT?

Garden

Grade 6 • 45 mins • Fall, Winter, Spring, Summer • Indoor and Outdoor

ADAPTED GRADE 6 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
Jane Madden • jane.madden@discoveryhsf.org

ESSENTIAL QUESTIONS

- When can we plant different crops in our garden? Why is it important to plant within the suggested window—what factors are involved (temperature, hours of daylight, days to maturity, etc)?
- How do we use a regional planting guide?
- What weather conditions might affect the success or failure of a plant/crop?
- How does our region's geographical location influence what we can plant?
- How are conditions different in other regions and why?

MATERIALS

- Seeds in labeled packets
- Trays, pots, or a designated garden location that is prepared for planting and measured to accommodate the number of plants/students
- LSU planting guide (1 per student) and/or laminated USDA map (color copy)
- Planting table
- Dry erase markers
- Eraser
- Measuring tools for proper planting
  - Rulers
  - Tape measure
  - Seed depth measurement tool
- Popsicle sticks
- Sharpie markers to label plants

VOCABULARY

- Region
- Direct Seed
- Sow
- Transplant
- Harvest/Maturity

NOTE:
Adapted from **Grade 6 Garden Lesson #5: Why Do We Have the Foods We Do?**, pg 204.

DR. JOHN OCHSNER DISCOVERY HEALTH SCIENCES ACADEMY

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

ASSESSMENT

Observational Checklist

- Students place fingers on the planting guide table in the correct columns and rows to obtain the information (given a crop students can locate: the planting date for our region, the plant spacing, the planting depth, and days to harvest)
- Students can determine if it is an appropriate date to plant seeds for a given crop using the guide
- Students use measurements for appropriate seed/plant spacing in the garden
- Students use tools to plant seeds to the correct depth in the garden and in containers or trays

PREPARATION (40 MINS)

Photocopy and laminate the USDA Region Map and Planting Table from the LSU planting guide. Organize all planting materials and designate a space for planting in the garden.

TEACHER BACKGROUND

The teacher should familiarize themselves with the LSU planting guide and have an understanding of the climate of their region.

LESSON DESCRIPTION

Students will use a regional planting guide to determine which seeds we can plant in our garden based on the date and our geographic location. Students will work together to find information in the guide, then use that information to plant and label crops in trays, containers, or directly in the garden.

LEARNING OBJECTIVES

Content Learning Objectives

Garden and Food Systems

GFS.6.2 Understand what foods grow best in your specific geographic location

GFS.6.5 Define local and seasonal eating

Life Skills Learning Objectives

Personal Life Skills

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.

PLS.6 Students actively seek creative and resourceful solutions.

Community Life Skills

CLS.4 Students appreciate and are respectful of differences and diversity in their communities

ACADEMIC STANDARD CONNECTIONS

NGSS.6.ESS2.D Weather and Climate—Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next.

CCSS.ELALITERACY.RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

Lesson Sequence

Engage

Cultivate Curiosity:

Timed Pair Share: If you could grow any 3 fruits or vegetables in your garden, what would you choose?
Whole group share: Call on students to answer the following:

- Name a fruit or vegetable you would like to grow. (Students can use the silent connection sign to agree.)
- What will (example crop such as broccoli) need to grow? (elaborate on types of soil, hours of sunlight, temperature, amount of rain etc)
- What time of year does broccoli grow and how long does it take?
- Can you think of something that would not grow here in Louisiana—why not?

Explore

Root Around:

- Distribute and discuss the USDA zone map and ask the following questions:
- What do you notice about the map? What do you think the map shows us? What do the colors on the map represent? Why would this be useful to gardeners and farmers? (We'll revisit this throughout the year) Can you find our state on the map? Can you find a state with a much colder climate on the map? Can you find an area with a similar climate? How would these temperature differences affect what and when a grower might plant?

Explain

Grow Understanding:

- Distribute and Discuss Planting Table: 10 minutes
- Allow students to look over and discuss the planting table. Review column headings together and define. How is the first column organized? (alphabetical by crop). Discuss direct seed vs. plants—what does this mean? (Direct Seed is a seed planted right into the garden, plant means we transplant a plant that was started a few weeks prior). Find the correct column (South La Planting Dates Fall) and Determine which crops we can plant in the garden/in a tray for later transplanting.

Elaborate

Observe The Fruits:

Give each group several packs of seeds, ask them to find the planting dates for our region to determine which crops we can plant today. Review the plant spacing, seed depth, and days to maturity/harvest. Students should also determine whether to plant in the ground or in a tray/container for later transplanting. Students can then plant the seeds and label them using a popsicle stick and marker.

Record what we planted today on a large calendar and its location on the garden map if applicable. Students record this information in their journals.

Dr. John Ochsner DISCOVERY HEALTH SCIENCES ACADEMY

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

Evaluate **Reflect:**

- What did you enjoy about today's class, what was your favorite part?
- Did anything about our class surprise you? Did you learn any new information or skills in class today? What could you teach someone based on what we did today?
- What connections can you make between what we did today and the kitchen?
- How did you or a classmate show a school value or honor our garden agreements?

ADAPTING FOR INDOORS

Plant seed in trays or containers for transplanting into the garden at a later date. Create a monthly planting calendar for our region. Assign each group a month of the year.

CONNECTIONS TO KITCHEN LESSONS

In the garden, discuss common meals in your state that include the top 3 crops. Contrast with common meals in a state with a very different climate.

POSSIBLE EXTENSIONS

Community: Take a look at local weather reports to discuss the weather and the climate (and the difference between the two). Invite local farmers in to discuss how the climate affects their decision making on the farm.

OTHER COMMENTS

It is sometimes challenging for students to convert the numeric date format used in the planting table to the month of the year. If time allows be sure to discuss the source of the planting guide—your local agricultural extension office and its connection to the university. Provide students with the printed guide to take home if they would like one and the link to the website for future reference.

APIACEAE PLANT FAMILY

Garden

NEW! GRADES 7–8 | SCHOOL PARTNER LESSON PLAN

UNIT DAY/LESSON

Apiaceae plant family (carrots, cilantro, celery, etc.)

SUBJECT

Science/Botany

STATIONS

1. Introduction to the Apiaceae Family of plants (carrots, celery, parsley, dill, cilantro). See handouts at end of lesson.
2. Discussion of Apiaceae plant shared characteristics & observation exercise to determine variations between species that have emerged due to evolutionary genetic adaptations Shared characteristics: 5 petals, 5 stamen, compound umbels with flat tops, hollow stems, alternating leaves along stem, dicots
3. Discussion of seed planting depth according to size of seed
4. Hypothesize texture of the soil needed for a root vegetable
5. Review of seed germination needs
6. Visit garden to plant carrots, observe cilantro & parsley. Refer to the *Carrots* publication for tips and trick for proper planting techniques.
7. Review of plant characteristics and formulation of hypothesis of yield or making a plan for care:

ACADEMIC STANDARD CONNECTIONS

8-MS-LS1-4 Reproduction of Living Things

7-MS-LS4-4 Natural Selection

L-MS-LS2-5 Maintaining Biodiversity

7-MS-LS2-5: Examples of ecosystem services

MATERIALS

- Garden planting space (raised, in ground, or pots)
- Seeds (carrots)
- Garden gloves (optional)
- Trowels (optional)
- Watering buckets

CREATED BY
Belle Chasse Academy in 2023

VOCABULARY

- Apiaceae Family
- Genetic variations
- Evolutionary adaptations
- Root vegetables

DISCUSSION MATERIAL

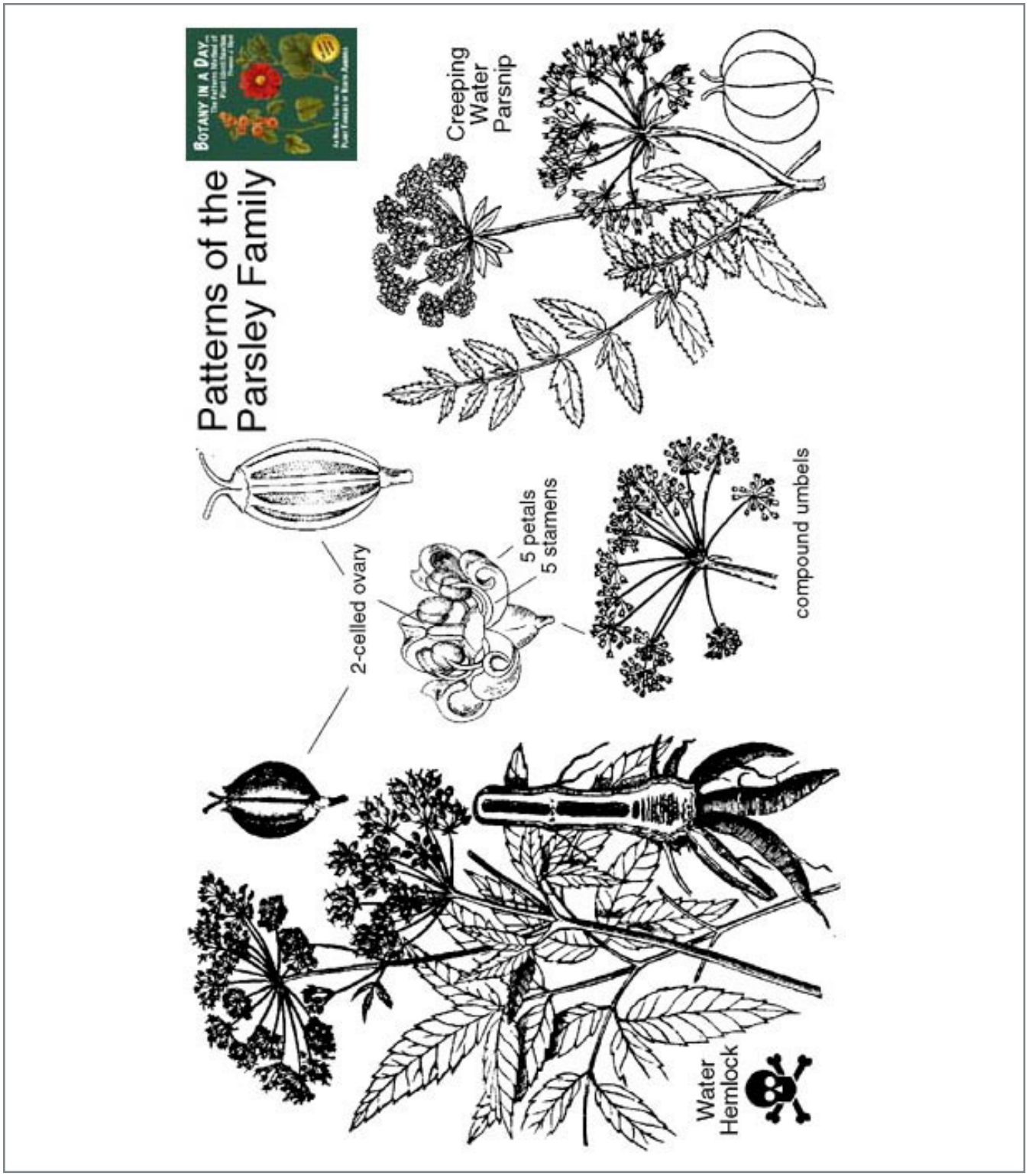
Hypothesis and garden observation worksheet:
Caring for Your Carrots Handout

Planting and fertilizing tips:
pub 3000 carrotspdf.pdf (lsuagcenter.com)

Identifying characteristics:
Five-minute families—Apiaceae—YouTube

Members of the Apiaceae Family,
Source United States Botanical Gardens, The Carrot Family_Apiaceae.jpeg

CREATED BY
Belle Chasse Academy in 2023



Shared Characteristics: Source Botany in a Day, Thomas J. Elpel. Apiaceae: Parsley or Carrot Family. Identify herbs, plants, and flowers. (wildflowers-and-weeds.com)

Your Name_____

Caring For Your Carrots!

1) Planting Date:_____

	Your Hypothesis….	Record your observations….
2) Seed germination date:		
3) Frequency of watering:		
4) Frequency of fertilization:		
5) Harvest date:		

CARROTS

James E. Boudreaux

Carrots are a popular vegetable in the home garden. Freshly harvested carrots have a sweeter flavor than carrots bought in the store. Carrots are cold hardy and able to withstand freezing temperatures, which makes them valuable as a fresh vegetable that gardeners can enjoy during the winter months. Carrots can stay in the field for a long time. One planting can easily provide carrots for eight to 10 weeks.

Both a fall and spring crop can be planted. Carrots can be planted from mid-August to early March. Plantings made in mid-August to early October are ready for harvest in late November to February/March, and plantings made in January and February can be harvested in April and May.

Use fresh carrot seeds. Fresh seeds germinate well, resulting in good stands. Store carrot seeds in the freezer. Do not seed carrots too thickly. Crowded stands result in small roots and delay growth. The use of a hand push planter helps obtain the desired spacing. Carrots should be thinned to one plant every 1-2 inches. A trick that gardeners can use to obtain a desired stand is to mix dead seed and live seed together. Carrot seeds are easily killed by baking the seeds in the oven at 400 F for 10-30 minutes. This mixture can then be used to plant the carrots in the garden either by hand or with a planter. Another trick to use to avoid planting carrots too thickly is to spread a mixture of 1 part carrot seeds with 3 or 4 parts soil or sand. Two drills of carrots (spaced 12 inches apart) can be planted on a single row.

Both hybrid and open-pollinated varieties are recommended. Hybrid carrot varieties generally are more uniform and have brighter color than open-pollinated varieties .

Recommended carrot varieties

Open-pollinated Varieties

Danvers 126

Hybrid Varieties

Apache
Choctaw
Enterprise
Maverick
Tasty Peel

For preplant fertilizer, use 4-5 pounds of 13-13-13 or 8-24-24 per 100-foot row. Side-dress carrots twice, three to four weeks after planting and again three to four weeks after the first with 1-2 pounds $AmNO_3$ or 2-4 pounds $CaNO_3$ per 100-foot row. Harvest carrots once the roots reach 4-6 inches.

Carrots are subject to compacted soils, which can cause deformed, stubby roots. Adding organic matter and breaking the ground deeply (18-24 inches) before planting will lessen the problem of deformed roots.

Source credit: Carrots

DESIGNING IMPROVED COMPOSTING SYSTEM

Garden

NEW! GRADE 8 | SCHOOL PARTNER LESSON PLAN

Grade 8 • 140 mins
Fall, Winter, Spring, Summer • Indoor and Outdoor

SUBMITTED BY
Noah Welsh • nwelsh@bellechasseacademy.org

ESSENTIAL QUESTIONS

- How can we better recycle organic waste?

MATERIALS

- Compost Project Packet (Do not print pages 5 & 7)
- 2 liter soda bottles (up to 2 per group)
- Food detritus for composting
- Tacks (air holes)
- Tape (clear packing tape)
- 1 item of choice (from home with teacher approval)
- Mesh wire
- Coffee filters
- Wire
- String

VOCABULARY

- Compost
- Decomposition
- Aerobic respiration
- Anaerobic respiration

ASSESSMENT

Observational Checklist and Student Design Plans

PREPARATION

Teacher needs to start collecting two liter bottles a few weeks in advance.

CREATED BY
Belle Chasse Academy in 2022

TEACHER BACKGROUND

Teacher should have understanding of the needs of composting systems, engineering design principles, and cellular respiration.

LESSON DESCRIPTION

Students will learn about composting and design, build, and test two-liter mini composting systems.

LEARNING OBJECTIVES

- I can apply scientific principles to design a method for monitoring and minimizing human impact on the environment.
- I can work in teams to compromise on solutions to problems.

Life Skills Learning Objectives

Community Life Skills

CLS. 1 Students demonstrate problem solving and resolve conflict as a team.

ACADEMIC STANDARD CONNECTIONS

8-MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.

HEALTH STANDARD CONNECTIONS

4-M-1.3 Describe effective strategies for dealing with difficult relationships with family members, peers and boyfriends or girlfriends.

Lesson Sequence

Engage **Cultivate Curiosity (10 mins):**
Students are brought downstairs and given a brief explanation and viewing of BCA's compost system.

Explore **Root Around (60 mins):**
Students will work in groups of 3–4 to design and build miniature composting systems. They should use their understanding of aerobic and anaerobic respiration to aid in this process.

Explain **Grow Understanding (40 mins):**
Students will answer a set of questions in their research packets about the fundamentals of design including Engineering Design, Composting, Aerobic Respiration, and Anaerobic Respiration.

Elaborate **Observe The Fruits (30 mins):**
Students will design an experiment to test the quality of their composting systems using food detritus from the school kitchen and cafeteria.

Evaluate **Reflect (10 mins):**
Students will observe the decomposition of their food detritus over the next few weeks and analyze the relative success of their design systems, reflecting on the design principles that led to their relative quality. This will take ten minutes per day on days following the placement of the composting systems.

ADAPTING FOR INDOORS

Most work can take place indoors except for the placement and observation of composting systems.

CONNECTIONS TO KITCHEN LESSONS

Food waste from all other kitchen lessons can be composted using these systems.

POSSIBLE EXTENSIONS

Any idea for improved composting can then be applied to the larger schoolwide composting system.

ADDITIONAL RESOURCES

Google search for composting system plans.

OTHER COMMENTS

This lesson will take two days.

2020–2023

Emeril's
CULINARY GARDEN & TEACHING KITCHEN

SCHOOL PARTNER LESSON PLANS

Kitchen

TABLE OF CONTENTS *Kitchen*

Emeril's CULINARY GARDEN & TEACHING KITCHEN

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KNIFE SKILLS

Kitchen

Grades Pre-K–K • 30 mins • Fall

ADAPTED GRADES PRE-K—K | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
Lola Bloom • lbloom@dcbilingual.org

VOCABULARY

- Claw and saw
- Low and slow
- Slice

ASSESSMENT

- **Observational Checklist**

MATERIALS

Materials for Introduction

- Certification check-list print outs
- Paring knives
- Cutting boards
- Lettuce knives
- A variety of other knives,
- Cucumbers
- Bus tubs per station
- Small paper plates for eating
- Vegan non-sesame dressing for dipping

Equipment

For each group of 10

- Paring knives
- Cutting board
- Lettuce knives
- A variety of other knives

Ingredients

- Cucumbers
- Vegan non-sesame dressing for dipping

Materials for Enjoying the Food

- Small paper plates

Materials for Cleaning Up

- Bus tubs

NOTE:
Adapted from **Grade 3 Kitchen Lesson #3: Getting Started with Paring Knives,** pg. 516.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2022

PREPARATION (5 MINS)

Gather materials and place in station bus tubs. Slice cucumbers lengthwise in half so that there is a flat side. While cooking can be a highly engaging and educational activity, it can also be dangerous. This is particularly true when using kitchen knives. Nonetheless, by effectively establishing procedures at the outset and sufficiently supervising students, students can safely use kitchen knives to participate in a wide variety of food preparation activities.

When students are using knives, particularly for the first time, we recommend having them work in groups of 10 or fewer with 1 or more adults. You can do this by running a cutting station while other students work independently on a separate project, or by inviting other adult volunteers to supervise small groups.

TEACHER BACKGROUND

It is a little scary to teach knife skills because kids get very excited and like to show off. Prepare a presentation of demonstrating correct and incorrect form. Prior to this lesson, review **Getting Started with Paring Knives** and make sure that there is more than one adult in the room to observe.

LESSON DESCRIPTION

The teacher will demonstrate knife safety and knife use skills to students and students will practice knife safety and cutting skills using various knives.

LEARNING OBJECTIVES

Life Skills Learning Objectives

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

Lesson Sequence

Prepare to Cook (5 mins):
Wash hands, put on aprons, tie hair back.

Recipe Introduction (5 mins):
Show the students a variety of knives/cutting tools and a cucumber. "Which one of these tools should I use today to slice a cucumber? Why?" Let the students offer their opinions.

Review Familiar Skills (5 mins):

- Reiterate to students that to use tools, it is important to understand how they work and how to use them safely, particularly if the tools are sharp and could be dangerous, like knives. Explain to students that using knives is a privilege, and if anyone is playing with them or not being safe, that privilege will be taken away in order to keep everyone safe.

- Let students know that practicing with knives safely will get themselves "certified" in the classroom for future knife use. If someone is deliberately not using the knives in a safe way, they will not be certified for the next class. The certification sheet is a checklist that the adults wil use as they observe students.

Demonstrate New Skills (10 mins):

- Make sure knives are out of reach of students while you introduce and discuss them. Demonstrate how to pick up and hold a knife properly, then return it to its "home base" (the cutting board). Model for students—does the knife go on the counter? on the floor? on your notebook? on a friend? on your lap? (No, only on the cutting board). The only other place it will go is in the bus tub when students are completely finished with their task.

- Also, demonstrate how their other hand will be holding their fruit or vegetable like a "claw" with their fingers tucked. Students can remember these 2 cues by the phrase "claw and saw." Another helpful phrase to encourage a safe motion with the knife is "low and slow." Students may have seen cooking shows where chefs use a fast chop but remind students that in our class we will be using a "claw and saw" and will be doing it "low and slow."

Divvy Up Tasks (5 mins):

- Request that one student per each group of 10 retrieve cutting boards for all of the students at their table. When everyone has returned to their seats, deliver a bus tub of knives to each table.

- Demonstrate for students how to slice their cucumber approximately every 1⁄2 inch. Introduce the vocabulary slice which is a specific way to cut something (can be used as either a verb or a noun to describe the result of this cut). On your cue, provide time for students to slice their cucumber and then carefully place their knives in the bus tub when they are finished.

Cook (10 mins):

On your cue, provide time for students to slice their cucumber and then carefully place their knives in the bus tub when they are finished. Walk around the classroom and observe students with the certification checklist.

Enjoy (10 mins):

While eating, students will each have cucumbers and a dressing to dip. While eating they can discuss.

Clean Up (10 mins):

Before eating, all knives must be "cleaned up" by placing them in the bus tub with the cutting boards. The cleaning helpers will bring the tubs to the dishwashing sink to soak. Students may dispose of trash when lining up.

Reflect (10 mins):

While eating they can discuss the questions "What was challenging? How can we help each other stay safe while using knives?"

MAKING APPLESAUCE

Kitchen

Grades Pre-K–K • 30 mins • Fall

ADAPTED GRADES PRE-K—K | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
Lola Bloom • lbloom@dcbilingual.org

ESSENTIAL QUESTIONS

• How do we use tools safely?

VOCABULARY

• Claw and saw

ASSESSMENT

• **Observational Checklist**

MATERIALS

Materials for Introduction

• Cutting boards
• Lettuce knives
• Pre-cored and sliced (into ⅛) apples
• Bus tubs
• Paper towels
• Bowls
• Large pot
• Cinnamon
• Sugar
• Lemon juice
• Paper
• Crayons

Equipment

For each group of 10

• Cutting Boards
• Lettuce knives
• Bus tubs
• Bowls
• Large pot
• Paper
• Crayons

Ingredients

• Pre-cored and sliced apples
• Cinnamon
• Sugar
• Lemon juice

Materials for Enjoying the Food

• Bowls
• Spoons

Materials for Cleaning Up

• Paper towels

NOTE:
Adapted from **Grade 2 Kitchen Lesson #3: Make-Yourself-Some Applesauce**, pg. 290.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2022

PREPARATION (30 MINS)

Gather ingredients and place cooking tools in 4 bus tubs (one per table). Prepare a visual on cutting apples. Hook up the document camera to the large screen to project.

TEACHER BACKGROUND

This is an introductory cutting class for little ones, which is why we will be using the lettuce knives (plastic zyliss) to teach knife techniques. Review a recipe on applesauce. Let teachers know that the applesauce will be served later in the day, since it will not completely cook during the class time

LESSON DESCRIPTION

Students will practice knife skills while preparing applesauce as a class.

LEARNING OBJECTIVES

Content Learning Objectives

Food Preparation

FP2.1: Demonstrate ability to properly handle, wash and prepare fruits and vegetables using tools and equipment.

Lesson Sequence

Prepare to Cook (5 mins):
Wash hands, put on aprons.

Recipe Introduction (5 mins):
What can you do with apples besides eat them raw? How can tools help us make delicious recipes?

Review Familiar Skills (5 mins):

- Reiterate to students that to use tools, it is important to understand how they work and how to use them safely, particularly if the tools are sharp and could be dangerous, like knives. Explain to students that using knives is a privilege, and if anyone is playing with them or not being safe, that privilege will be taken away in order to keep everyone safe.

- Let students know that practicing with knives safely will get themselves "certified" in the classroom for future knife use. If someone is deliberately not using the knives in a safe way, they will not be certified for the next class.

- The certification sheet is a checklist that the adults will use as they observe students.

- Wash hands.

Demonstrate New Skills (10 mins):
Demonstrate on document camera how to use the lettuce knives to safely cut apples.

Divvy Up Tasks (10 mins):
Pass out the lettuce knives and cutting boards (one per every 2–3 students, not everyone needs a knife at the same time) and instruct the students to pretend that they are cutting an imaginary apple. Observe and correct as needed.

Cook (10 mins):
Next pass around the apple slices and instruct students to each carefully cut the apple into smaller pieces. Each partner is responsible for helping to encourage and watch their partner as they use the tools safely. While they work, ask the students, "what other fruits or vegetables could we cut in the same way? How do we correctly hold the knives? How did you get better at cutting today?"

Once all of the apples are cut, the students may add them to a large bowl at each table. Once all of the apples are in bowls, the teachers will dump the apples and other ingredients into a stock pot to slowly cook into applesauce.

Enjoy (10 mins):
The students will be told that the applesauce takes time to cook and they will receive it for afternoon snack that day. While the applesauce gets cooked in class, pass out paper and crayons to draw themselves cutting apples.

Clean Up (5 mins):
Student groups will return knives and cutting boards to bus tub.

Reflect (5 mins):
While they work, ask the students, "what other fruits or vegetables could we cut in the same way? How do we correctly hold the knives? How did you get better at cutting today?"

NEW!

GRADE K

Lesson	Topic	Content Learning Objective(s)	Lesson Activity	Life Skills Learning Objective(s)	Academic Standard Connections	Health Standards
Blue Corn Pancakes with Blueberries and Honey	Food Preparation (FP)	**FP.K.1** Demonstrate the ability to properly handle, wash and prepare fruits and vegetables. **RC.K.2** Recognize how families share and maintain food and cultural traditions. Demonstrate how the Native Americans utilize every part of an ear of corn and prepare a Native dish using corn	Engage students by asking them to state some facts they have previously learned about Native Americans. Next, have students explore an ear of corn. Once each student has done so, read *Corn* by Gail Gibbons to further explain the history and significance of corn in the Americas. Have students elaborate on the lesson by preparing the pancake using blue cornmeal. Once each student has tried the pancake, evaluate the lesson by asking questions about something new they have learned about corn.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities.	**CCSS.ELA-LITERACY.SL.K.6** Speak audibly and express thoughts, feelings, and ideas clearly. **CCSS.ELA-LITERACY.SL.K.4** Describe familiar people, places, things, and events and, with prompting and support, provide additional detail. **Social Studies** Culture.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

CREATED BY
Belle Chasse Academy in 2020

BLUE CORN PANCAKES WITH BLUEBERRY HONEY

Kitchen

NEW! GRADE K | SCHOOL PARTNER LESSON PLAN

Yield: 12—4 inch pancakes

Prep Time: 10 minutes
Cook Time: 5 minutes

INGREDIENTS

- 1 ½ cups all purpose flour
- 1 cup blue cornmeal
- ⅓ cup sugar
- 1 ½ teaspoons baking soda
- ¾ teaspoon baking powder
- 3 eggs
- 1 ½ cups buttermilk*
- 2 tablespoons butter, melted
- 1 ½ cups fresh or frozen blueberries

DIRECTIONS

1. In a bowl, mix the first 5 ingredients—flour through baking powder together.
2. In a separate bowl, beat the eggs with the buttermilk * until well blended.
3. Pour egg mixture over flour mixture and stir until just mixed (small lumps are OK, and for tender cakes, it's better to under mix than over mix).
4. Stir in melted butter and blueberries. The batter will be very thick.
5. Heat a griddle or nonstick skillet over medium heat. Brush with butter or spray with nonstick spray.
6. Ladle ¼ cup of batter for each pancake onto hot surface. Cook until edges start to dry and bubbles burst on surface, about 2 to 3 minutes.
7. Flip and cook on the other side until brown, about another minute or so. Keep warm in a 200°F oven until all the cakes are cooked. Serve with honey.

*For dairy-free sub buttermilk and butter for dairy-free milk or water

CREATED BY
Belle Chasse Academy in 2020

DISCOVERING FOOD GROUPS

Kitchen

ADAPTED GRADES K–1 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Discovering Food Groups		
Grade: K-1	**Lesson Number:** 7	
Estimated Time: 45 mins.	**Season:** ❄ Winter	**Type:** 👨‍🍳 Cooking Concept

👩‍🏫 **Teacher Background and Lesson Description:**
To help people make smart food choices, the U.S. Department of Agriculture (USDA) designed an easy-to-follow symbol: *MyPlate*. The plate graphic, with its different food groups, is a reminder of what — and how much — we should put on our plates to eat healthy. In this lesson, students will be introduced to the major food groups. Students will work in small groups to sort foods into the major food groups, make a snack using all of the food groups, and describe their favorite meal in terms of the group(s) represented.

⭐ **Lesson Objectives:**
HC.K.3 Name a food group.
HC.K.4 Identify a food group in the garden.
CLS.4 Students appreciate and are respectful of differences and diversity in their communities.

📚 **Academic Standard Connections:**
CCSS.ELA-LITERACY.L.K.5.A Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.
CCSS.MATH.CONTENT.K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

🩺 **Health Standard Connections:**
National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.

❓ **Essential Questions:**
What are the major food groups?
What food items belong in each group?
What food groups are represented in my favorite meal?

NOTE:
Adapted from **Grade K Kitchen Lesson #9: Discovering Food Groups**, pg. 262.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

CREATED BY
Cunningham Elementary School in 2023

🔤 **Vocabulary:** food group(s), fruit(s), vegetable(s), grain(s), protein(s), dairy, represented

🍴 **Materials:**

Lesson Introduction:
- MyPlate graphic
- Food groups poster
- Recipe: Food Group Friend

Equipment:

For whole class:
(if choosing to show optional video)
- TV/Screen
- Computer
- MyPlate template (1 per student)
- MyPlate pledge (1 per student)

For each group:
- Food picture cards (set can be split between two groups)
- Chart or butcher paper (divided into 5 sections)

Ingredients:
- Plain rice cakes
- Sliced bananas
- Blueberries
- Red apple slices
- Red bell pepper slices
- Sliced cucumbers
- Almonds
- String or shredded cheese

Materials for Enjoying Food:
- Plates

Materials for Cleaning Up:
- Trash, recycling, and compost bins
- Sponge (for counters)
- Broom and dustpan

✅ **Assessment:**
Observations, food sorting activity, MyPlate activity

⏰ **Teacher Prep:**
- Gather books and other materials.
- Print and laminate MyPlate and food groups poster for display.
- Print and cut food picture cards.
- Divide the chart or butcher paper into five sections. Label each section with one of the food groups (fruits, vegetables, grains, protein, dairy).
- Prepare/pre-cut foods with enough for each student to make a "food group friend."

➕ **Additional Resources:**
For more information, games, tips, and resources for kids, see:
- MyPlate-U.S. Department Of Agriculture
- *Your Healthy Plate*…book series by Katie Marsico

🔥 **Engage:** *Ignite Interest*

- Prompt students to think of things that can be sorted or times when they have sorted things. Take a few responses.
- Let students know that today the class will learn about a way that foods can be sorted.
- Introduce the five major food groups (fruits, vegetables, grains, protein, dairy) using a visual (ENG/SPA). Discuss some of the items in each group. Why should we eat foods from each of the five groups? Are some of the food groups better than others?
- Explain MyPlate graphic.
    - MyPlate has sections for vegetables, fruits, grains, and protein foods, as well as a "cup" on the side for dairy. Color-coded sections — green for veggies, red for fruits, orange for grains, purple for protein, and blue for dairy — show at a glance how much of these foods to eat.
    - MyPlate reminds us to:
        - Choose variety: The best meals have a balance of items from different food groups.
        - Make half of your plate vegetables and fruits.
        - Make at least half of your grain serving whole grains.
        - Drink fat-free or low-fat (1%) milk and water instead of soda, sports drinks, and other sugary drinks.
        - Avoid large portions.
- Optional: Watch SciShow Kids: The 5 Fabulous Food Groups

🔪 **Explore:** *Stir Discoveries*

- Pass out a piece of chart or butcher paper and a set of food picture cards to each small group.
- In their group, students will sort the picture cards provided into the five food groups.
- Complete a gallery walk and discuss with students.
    - Are you familiar with all of the foods in your set of cards?
    - Were any of the foods tricky to sort?
    - Are there any foods in your set of cards that you've never tried, but would like to?
    - Can any of the foods in your set be found in our school garden?

🤯 **Explain:** *Clarify New Ideas*

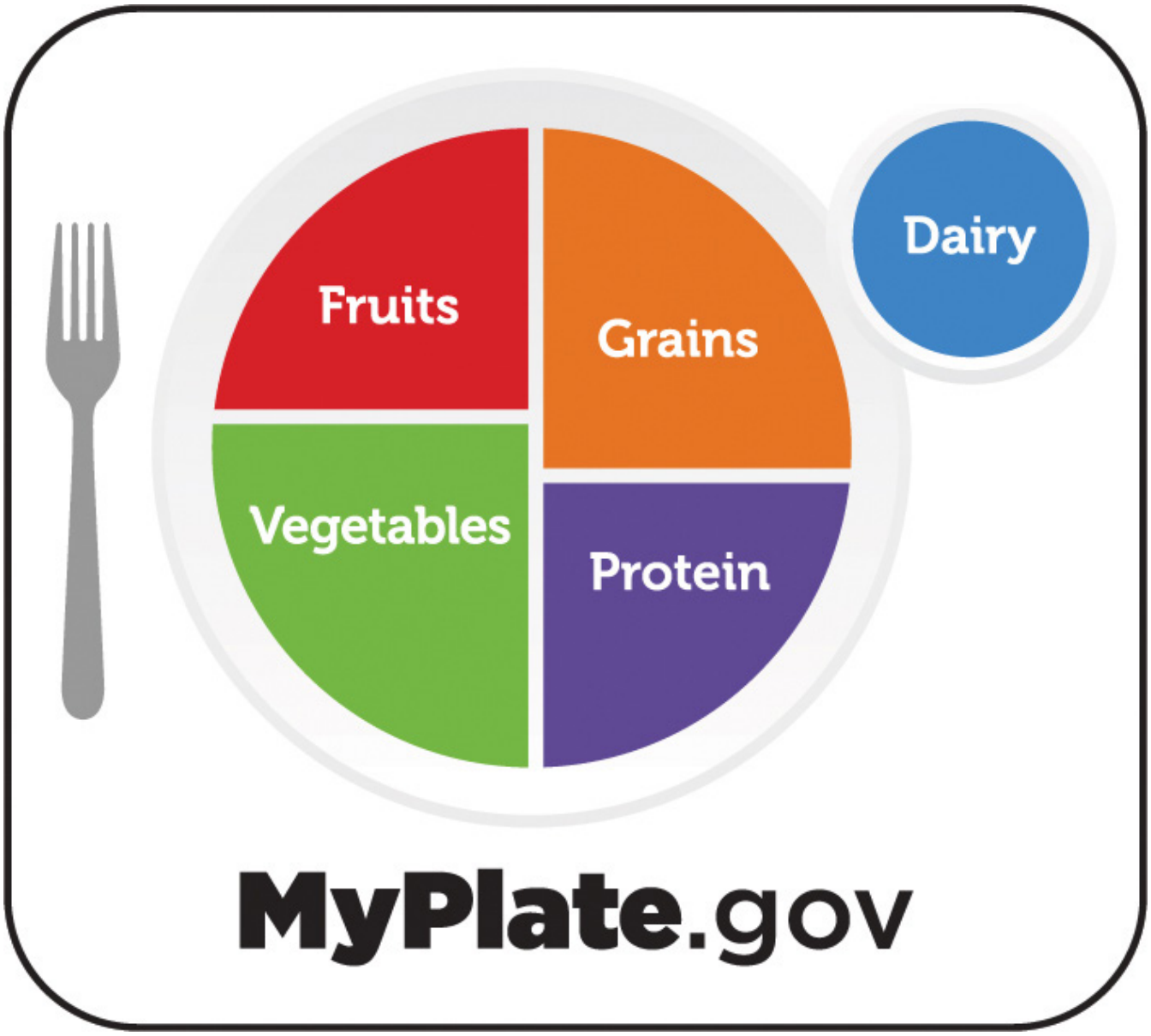
- Ask students about their favorite meal. Take a few responses.
    - What food groups are represented in your meal?'
- Individually students will complete the MyPlate template for their favorite meal.

📈 **Elaborate:** *Watch It Rise*

- While students work on creating their ideal meal/plate, call one small group at a time to make their "food group friend."
- Once their snack is made, students can return to enjoy it at their table and continue working.

Evaluate: *Reflect* • Complete MyPlate pledge. • Recognize students' behaviors that aligned with the enduring understandings that they developed together with the goal of being the best for themselves, their communities, and their environment. • Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together. • Dispose of waste in the appropriate bins and have a few students help to wipe down counters/tables and sweep any trash.

Connections to Garden Lessons:	**Possible Extensions:**
Look for food groups growing in the garden.	Identify the food groups in a school lunch.



Source credit: My Plate

Source credit: USDA Food and Nutrition Service

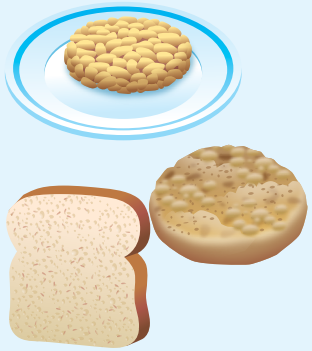
Source credit: USDA Food and Nutrition Service

Source credit: USDA Food and Nutrition Service

USDA Food and Nutrition Service
U.S. DEPARTMENT OF AGRICULTURE

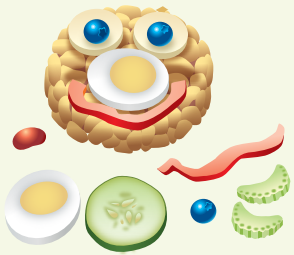
Food Group Friend

1 Get a Head



Put a grain on your plate.

2 Make a Face



Pick fruits, vegetables, and a protein food to make eyes, nose, and a mouth. Have fun and be colorful!

3 Hair or Hat?

Choose a dairy food and cover the head.

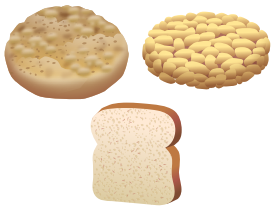
4 Name Your Friend

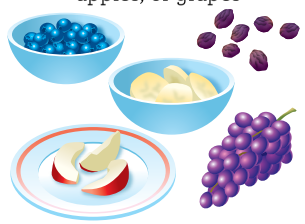
Have you used a food from each food group? If so, enjoy!

Ingredients

Choose your favorite ingredients from every group

Grains	Protein Foods	Vegetables	Dairy	Fruits
English muffin, brown rice cake, or bread	beans or egg	carrots, celery, broccoli, tomatoes, peas, cucumber, or bell pepper	low-fat cheese	blueberries, bananas, raisins, apples, or grapes





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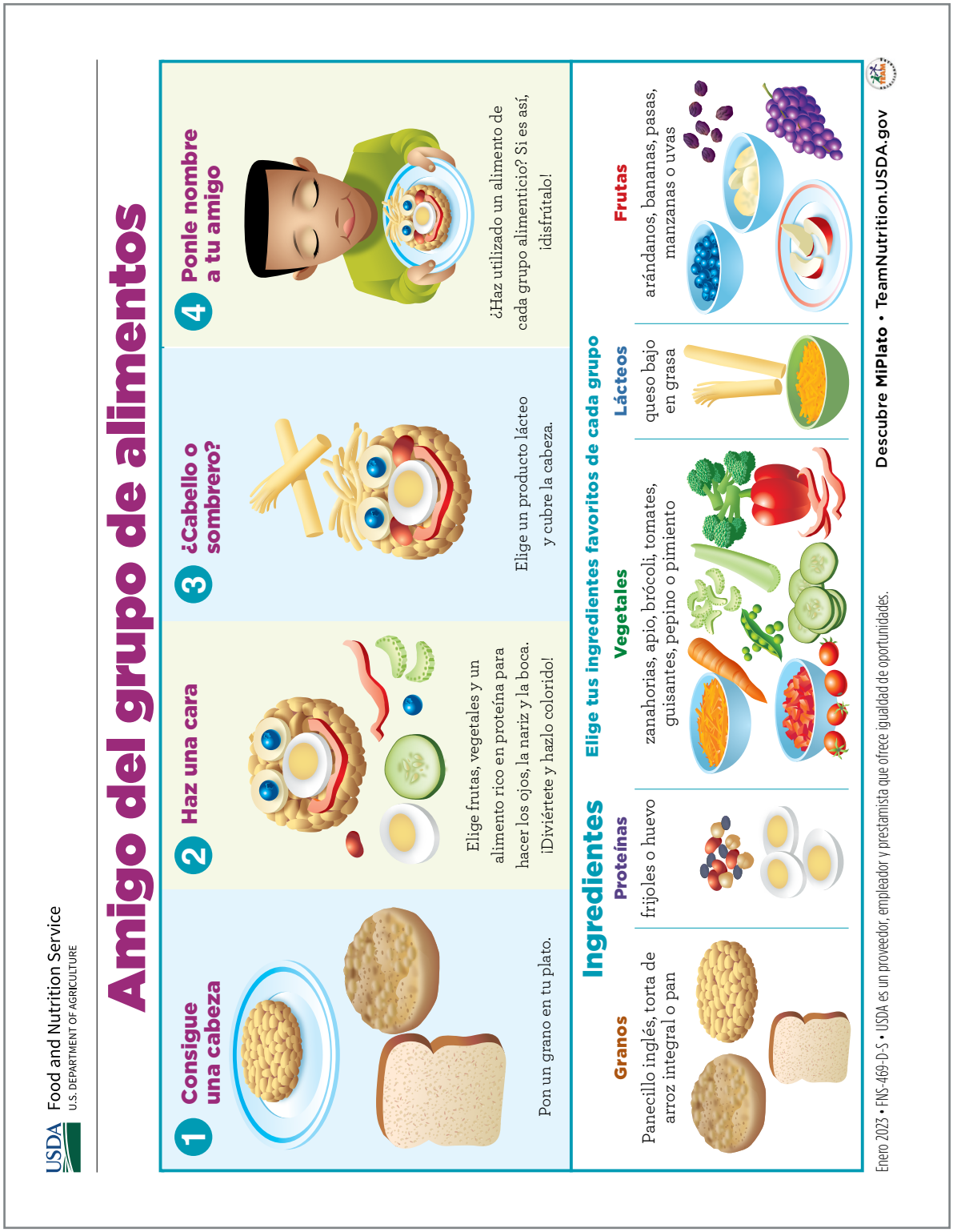

Source credit: USDA Food and Nutrition Service

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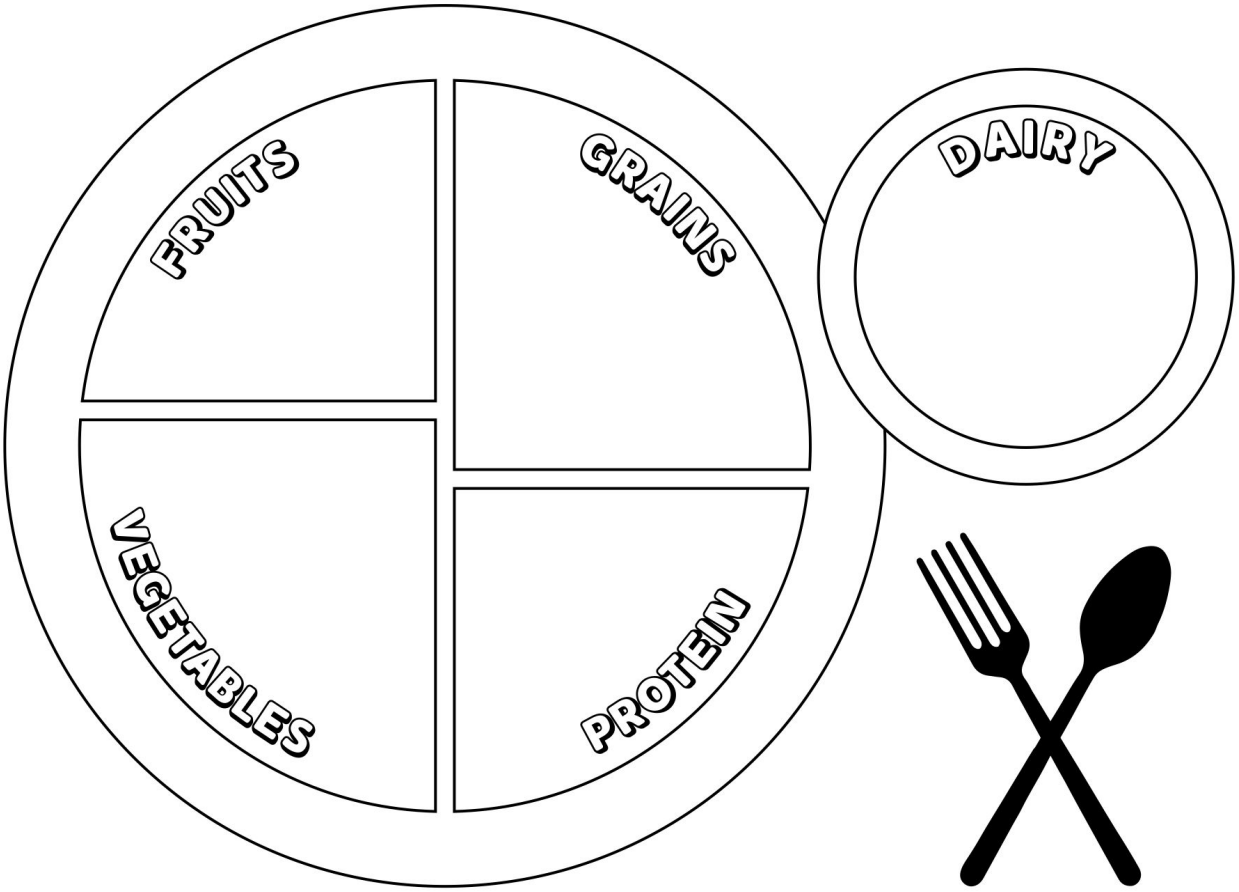
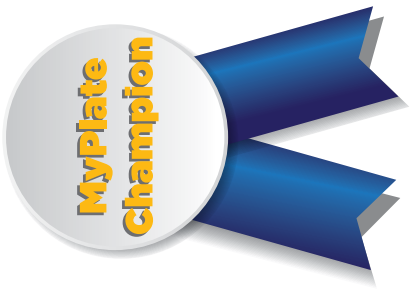


My Healthy Plate

Source credit: My Healthy Plate

MyPlate Pledge for

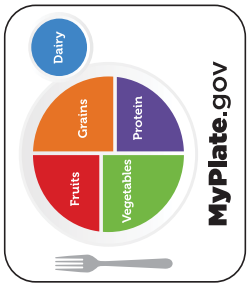


I pledge to be a MyPlate Champion. I will choose healthy foods from the five food groups at school and at home (or elsewhere) to keep my body and mind healthy. I pledge to find fun ways to be active everyday. I will also encourage my friends and family to make smart food choices and be active.

I pledge MyPlate!

Everyday I will:

- ☐ Eat more fruits & veggies.
- ☐ Try whole grains.
- ☐ Re-think my drink.
- ☐ Focus on lean protein.
- ☐ Slow down on sweets.
- ☐ Be active my way.

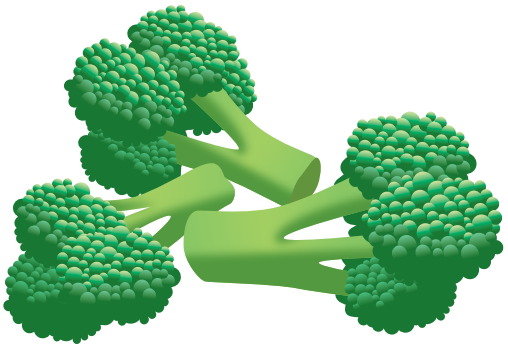


Source credit: My Plate

milk

raisins

tuna fish

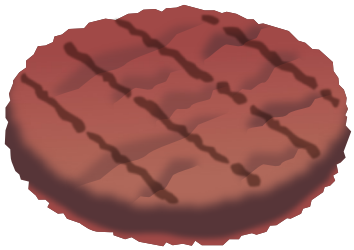


broccoli

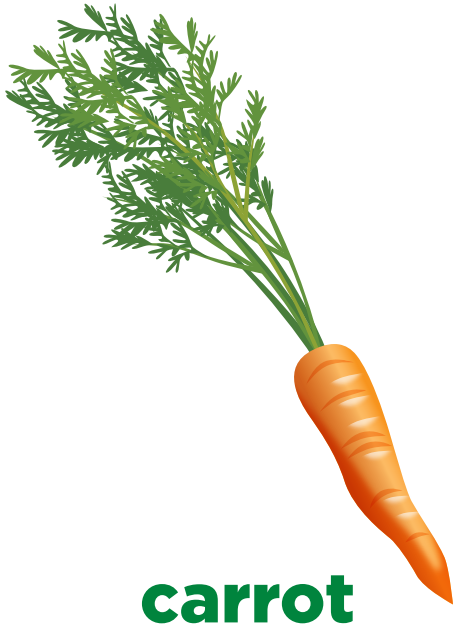
Source credit: USDA Food and Nutrition Service

cereal

salad



hamburger



carrot

Source credit: USDA Food and Nutrition Service

Source credit: USDA Food and Nutrition Service

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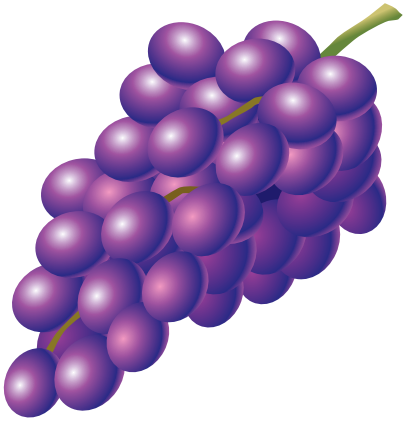
cottage cheese



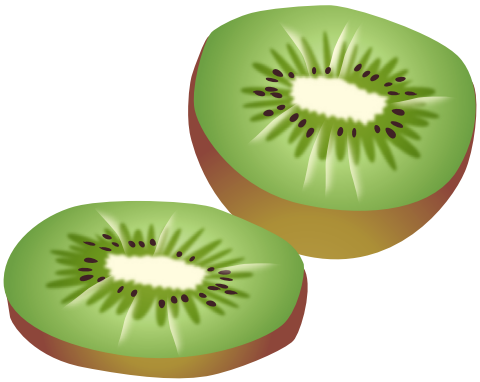
grapes

chicken

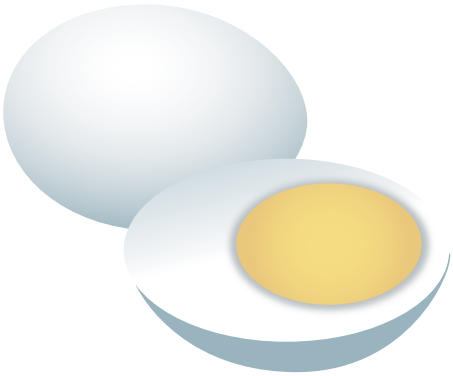
beans

Source credit: USDA Food and Nutrition Service

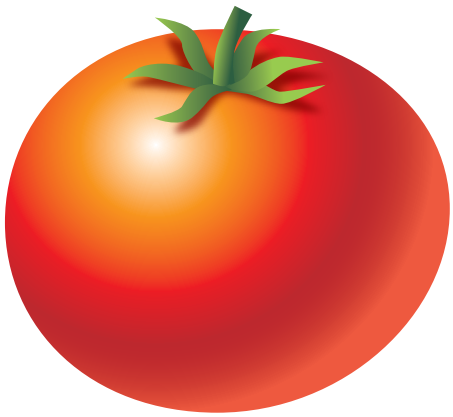
crackers



kiwi

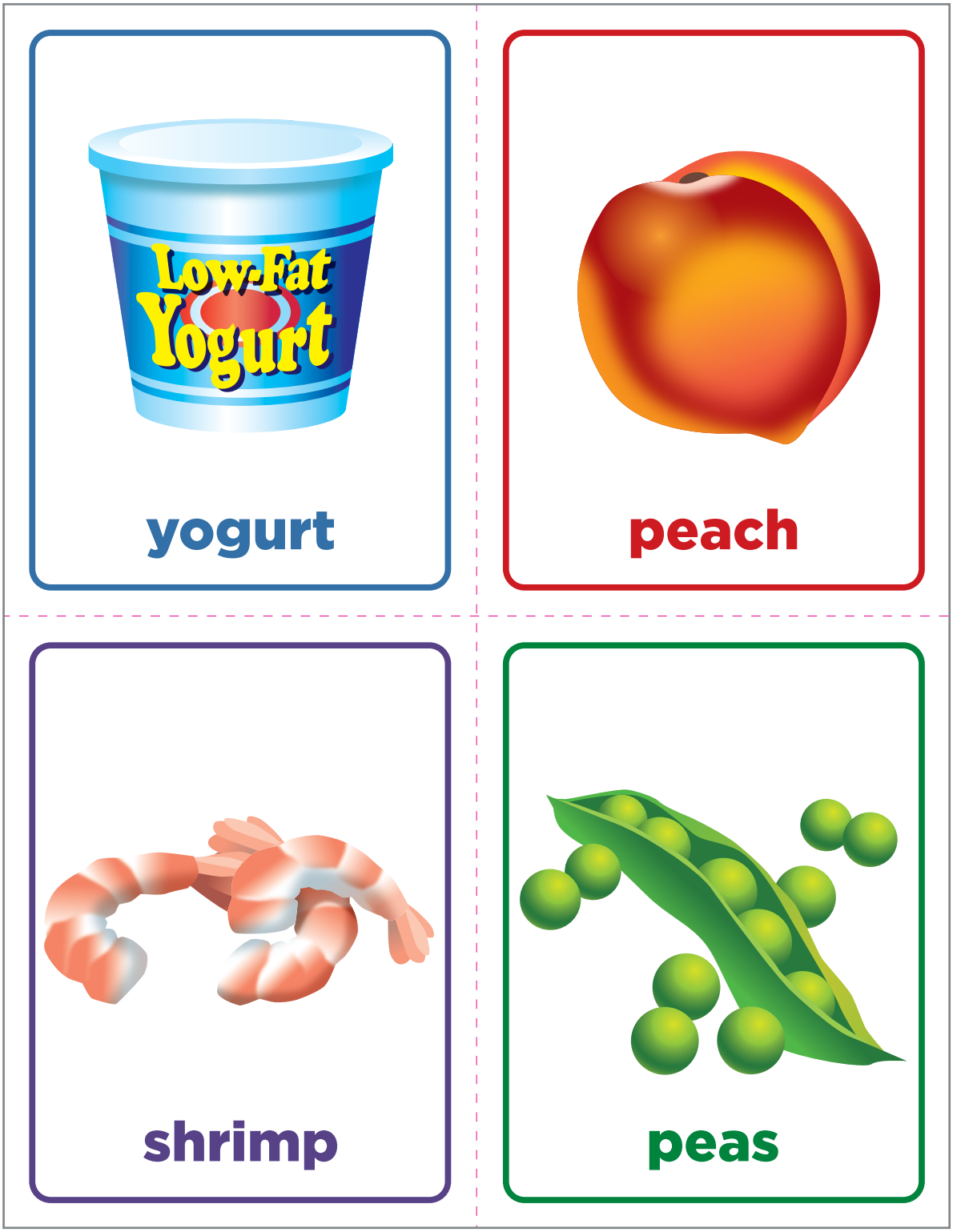


eggs



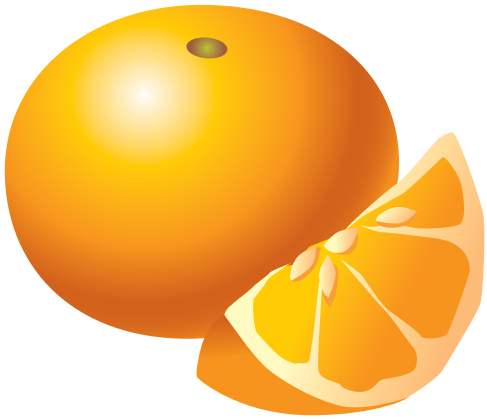
tomato

Source credit: USDA Food and Nutrition Service



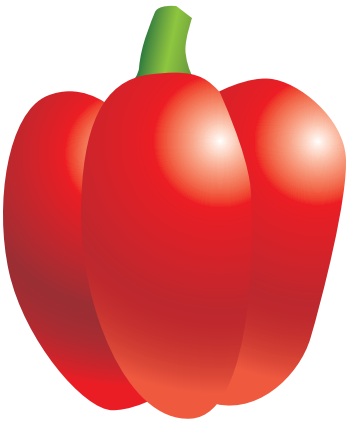
Source credit: USDA Food and Nutrition Service

pasta



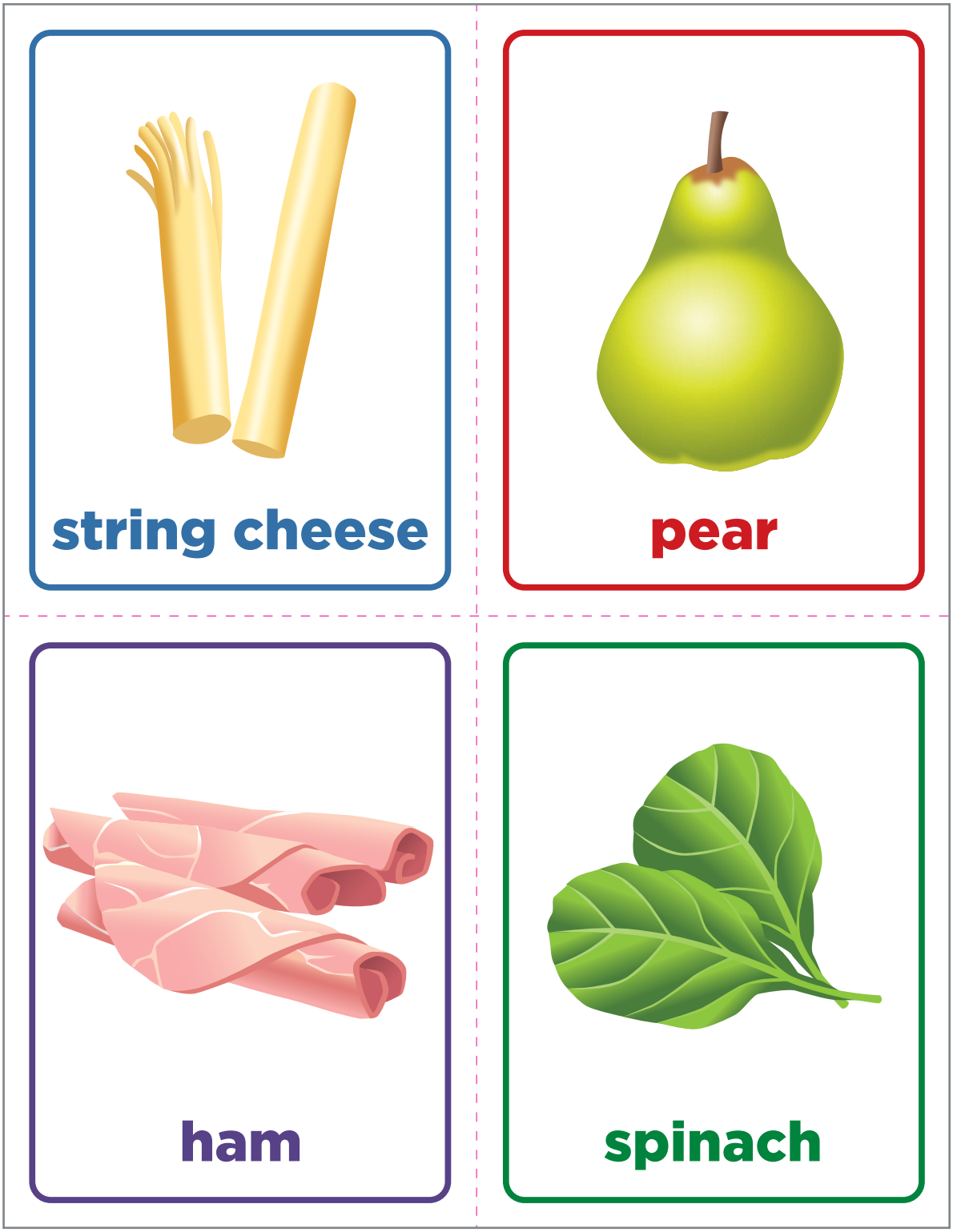
orange

peanut butter



pepper

Source credit: USDA Food and Nutrition Service



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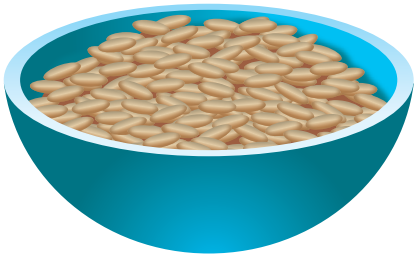
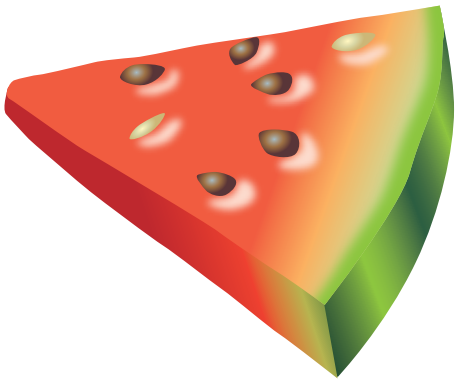


brown rice

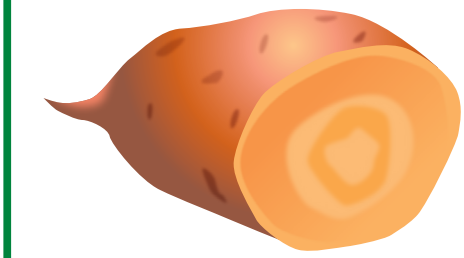
strawberries



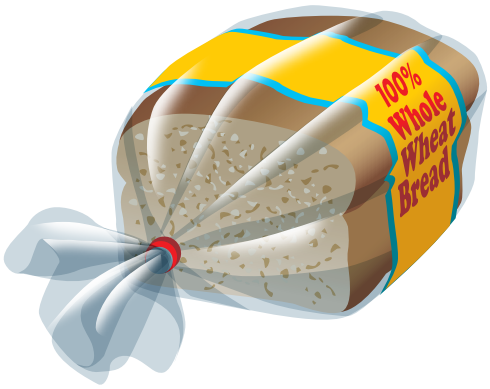
watermelon

cheese

Source credit: USDA Food and Nutrition Service

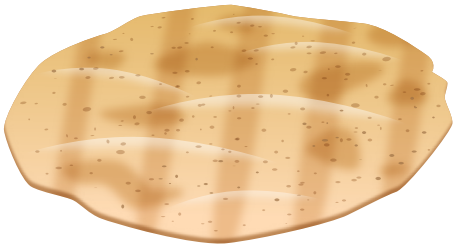


sweet potato



bread

popcorn

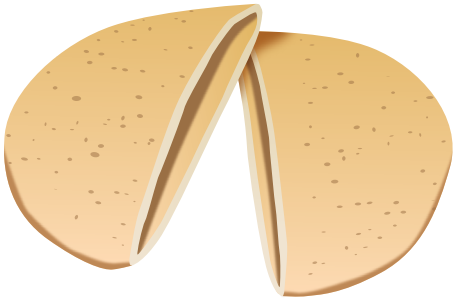


tortilla

Source credit: USDA Food and Nutrition Service

black-eyed peas

pumpkin



pita bread

cabbage

Source credit: USDA Food and Nutrition Service

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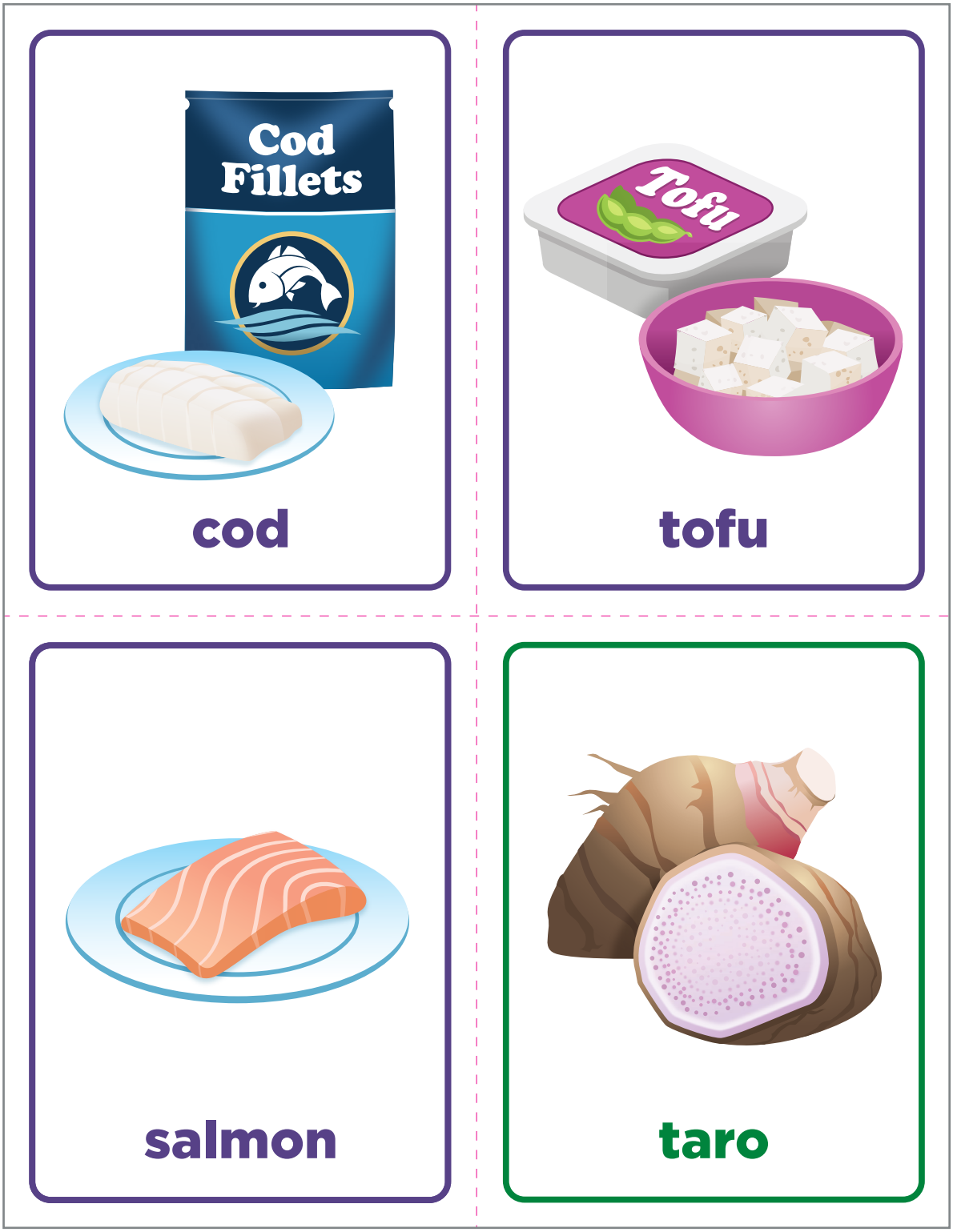
pineapple

veggie burger

chickpeas
(garbanzo beans)

collard greens

Source credit: USDA Food and Nutrition Service



Source credit: USDA Food and Nutrition Service

EAT A RAINBOW

Kitchen

ADAPTED GRADES K–1 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Eat a Rainbow		
Grade: K-1	**Lesson Number: 2**	
Estimated Time: 45 mins.	**Season:** Fall	**Type:** Cooking Concept

Teacher Background and Lesson Description:
Health guidelines recommend half of each meal be made up of fruits and vegetables. In addition, eating a variety of fruits and vegetables ensures consumption of a variety of vitamins and minerals. One strategy is to eat a rainbow of fruits and vegetables. In this lesson, students will review the variety of fruits and vegetables they explored in Lesson #1: Welcome to the Kitchen. They will draw and sort them by color to begin a collaborative art project. Students will kinesthetically model what part of the body is nourished by fruits and vegetables of each color. Then, students will echo read a poem about colors, go on a scavenger hunt, and explore books and magazines about food to find more foods of each color to add to their collaborative art project depicting a rainbow of different fruits and vegetables.

Lesson Objectives:
HC.K.2 Explain what Eat a Rainbow means.
CLS.2 Students cooperate and communicate well with each other.

Academic Standard Connections: CCSS.ELA-LITERACY.L.K.5.A Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent CCSS.MATH.CONTENT.K.MD.B.3 Classify objects into given categories; count the number of objects in each category and sort the categories by count.	**Health Standard Connections:** National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.

Essential Questions:
What does it mean to "Eat a Rainbow"?
Why is it important to eat a variety of colors of fruits and vegetables?

Vocabulary: fruit(s), vegetable(s), vitamins, nutrients, nourish

NOTE:
Adapted from **Grade K Kitchen Lesson #2: Eat A Rainbow**, pg. 481.

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🍴 **Materials:**

Lesson Introduction:
- *Eating the Alphabet* by Lois Elhert
- *I Eat a Rainbow/Me Como un Arco Iris* by Bobbie Kalman

Equipment:

For whole class:
- Chart paper
- Markers
- 1 poster board (cut into 6 pieces)
- Color poems

For each group:
- Crayons (2 boxes per table/group)
- Post-it notes
- Shop for a Rainbow handout (1 per student)

Ingredients:
- Pre-cut carrot sticks
- Pre-cut apple slices

(or other seasonal finger-food snack)

Materials for Enjoying Food:
- *Plates or cups for snack*

Materials for Cleaning Up:
- Trash, recycling, and compost bins

✅ **Assessment:**

Observations and completion of the Shop for a Rainbow handout

⏰ **Teacher Prep:**
- Gather books and other materials.
- Print and laminate color poems for display.
- Cut the poster board into 6 equal rectangles. On each rectangle, write the name of a color (red, orange, yellow, green, blue, and purple). Use a marker of that color to write the word (i.e., write "red" in red ink).
- Prepare/pre-cut finger-food snacks with enough for each student--divided into plates or cups. Store snacks as necessary.

➕ **Additional Resources:**
- Whole Kids Foundation, Eat a Rainbow
- American Heart Association, Eating A Rainbow

🔥 **Engage:** *Ignite Interest*

- Remind students that, as discussed in Lesson #1: Welcome to the Kitchen, they each have something special to contribute to the class, and we welcome those unique qualities to our community. In the same way, each fruit and vegetable has special or unique qualities, to contribute to our experience of food or to the nourishment of our bodies. State that just as we need every student and their unique qualities to be our best community, we need a variety of fruits and vegetables and their unique qualities—vitamins and nutrients—to be our best selves.
- Review student names and the fruits and vegetables they chose in Lesson #1: Welcome to the Kitchen (that begin with the same letter as their name). Go around the class in a circle, working together as a group to remember the students' names and the fruits or vegetables they chose. If the class is stumped on the fruit or vegetable, the student can provide clues such as color, shape, size, taste, etc.

🥄 **Explore:** *Stir Discoveries*

- Provide each student with a post-it note and each table with 2 boxes of crayons. Instruct students to first select the crayon that matches the color of the fruit or vegetable they chose (that goes along with their name). Instruct students to draw their fruit or vegetable on the post-it note.
- Distribute each of the small posters labeled with each color, placing 2 on each table. Instruct students to stand from their seats, move around the classroom, and stick their post-it note to the poster labeled with the matching color before returning to their table.
- When all students have returned to their table, invite them to explore/look at the color poster that's in front of them at their table with their small group. Have them name the fruits and vegetables they recognize and count the total number on their poster.

🤯 **Explain:** *Clarify New Ideas*

- Explain to students that each group of fruits and vegetables are similar in color and may also have similar unique qualities that nourish our bodies. Group by group, explain how each color group may nourish our bodies and model a hand motion for students to remember it by:
  - Red fruits and veggies: help keep your heart strong (hands over heart)
  - Orange fruits and veggies: help keep your eyes healthy (point to eyes)
  - Yellow fruits and veggies: help keep you from getting sick (point to everything)
  - Green fruits and veggies: help make your bones and teeth strong (point to teeth)
  - Blue and purple fruits and veggies: help your memory (point to brain)
- In conclusion, explain that if students eat a variety of fruits and vegetables ("Eat a Rainbow"), they'll eat a variety of colors, and a variety of their body parts will be nourished from their heart, to eyes, to muscles, to teeth, to brain, and everything in between.

Elaborate: *Watch It Rise*

- Echo read the color poems with students and challenge students to point to the body part that is likely nourished by that color food.
- Provide each group with more post-it notes and challenge them to draw one more fruit or vegetable that matches the color poster in front of them (including those they heard in the poem).
- Read to students the following prompt to complete on their Shop for a Rainbow handout:

  "In your shopping bag, draw a fruit or vegetable of each color that you would want to buy from the grocery store or a farmers market to eat a rainbow."
- While students work, hang the posters together in rainbow order on a wall in the kitchen for students to view. New fruits and vegetables can be added throughout the year as they are introduced.

Evaluate: *Reflect*

- Review with students:
  - What does it mean to "Eat a Rainbow"?
  - Why is it important to eat a variety of colors of fruits and vegetables?
- Review appropriate hand washing. Posters should already be displayed from the previous lesson.
- Instruct each student to gently and carefully grab a snack (reminding students to **"touch one, take one"**).
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.
- Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

Connections to Garden Lessons:
Students can look through the garden for fruits and vegetables of every color.

Possible Extensions:
In the cafeteria, students can go on a rainbow scavenger hunt in the lunchroom or at the salad bar, finding fruits and vegetables of every color.

American Heart Association. life is why

Healthy For Good™

SEASONS OF EATING

Your heart-healthy recipes will taste even better with seasonal produce.

SPRING

artichokes, asparagus, carrots, chives, fava beans, green onions, leeks, lettuce, parsnips, peas, radishes, rhubarb and Swiss chard

SUMMER

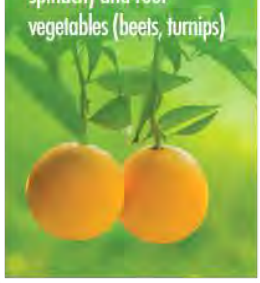
berries, corn, cucumbers, eggplant, figs, garlic, grapes, green beans, melons, peppers (sweet and hot), stone fruit (apricots, cherries, nectarines, peaches, plums), summer squash, tomatoes and zucchini

FALL

apples, brussels sprouts, dates, hard squash (acorn, butternut, spaghetti), pears, pumpkins and sweet potatoes

WINTER

bok choy, broccoli, cauliflower, celery, citrus fruit (clementines, grapefruit, lemons, limes, oranges, tangerines), collard greens, endive, leafy greens (collards, kale, mustard greens, spinach) and root vegetables (beets, turnips)



KEEP THESE TIPS IN MIND WHEN USING AND SHOPPING FOR SEASONAL PRODUCE:

1. Fresh foods are often less expensive during their harvest season. You may even save money by buying in bulk.
2. Shop the farmers' market to learn more about produce and get ideas on how to prepare foods in season.
3. Gardening gives you fresh seasonal produce and a little exercise, too. The sense of accomplishment you'll feel will make that produce taste even better!
4. Frozen, canned and dried fruits and vegetables also can be healthy choices. Compare food labels and choose items with the lowest amounts of sodium and added sugars.
5. Choose canned fruit packed in water, its own juice or light syrup (avoid heavy syrup).
6. Choose canned and frozen vegetables without sauces that can be high in sodium and saturated fat.
7. Freeze fresh produce at the peak of its season, so you can add it to smoothies, soups and breads and enjoy it throughout the year.

EAT SMART ADD COLOR MOVE MORE BE WELL

#HEALTHYFORGOOD

LEARN MORE AT HEART.ORG/HEALTHYFORGOOD

Source credit: American Heart Association, Eating A Rainbow

Source credit: American Heart Association, Eating A Rainbow

Source credit: American Heart Association, Eating A Rainbow

Source credit: Washing Poster

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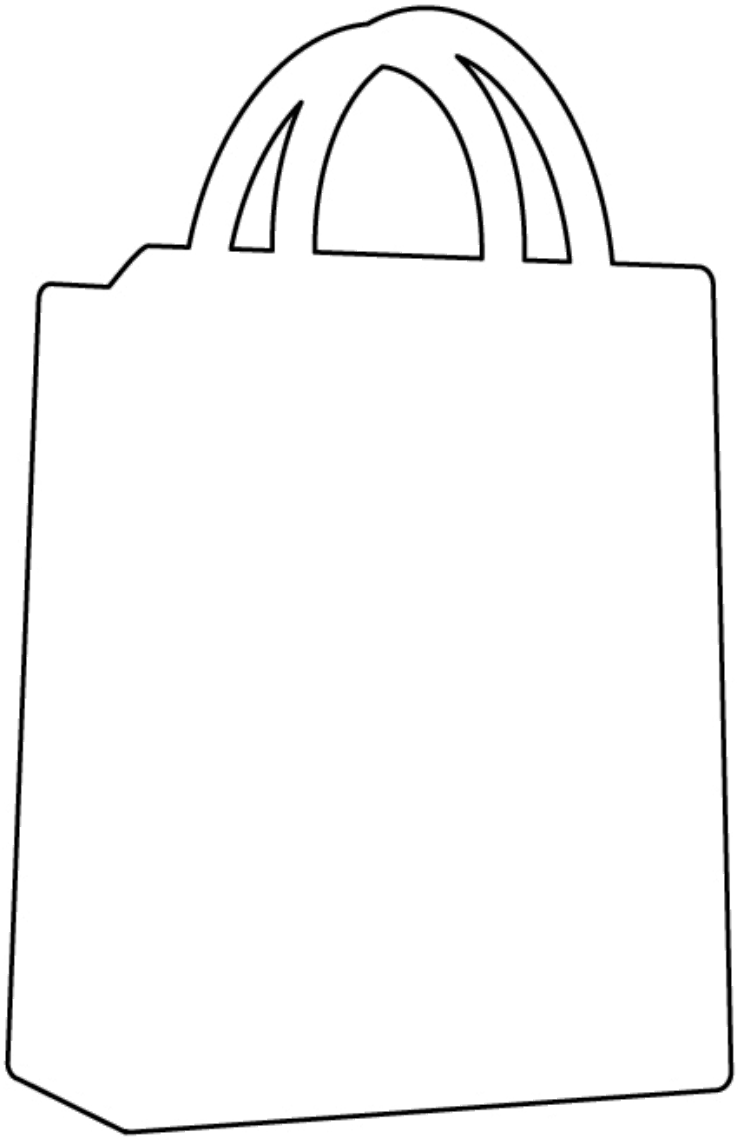
Name: _____ **Date:** _____

Shop for a Rainbow

Draw a fruit or vegetable of each color that you would want to buy from your local grocery store or farmers market to "eat a rainbow."



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WHOLE KIDS FOUNDATION

EAT A RAINBOW!

Why are there so many songs about rainbows? Because they're amazing and beautiful—not just in the sky, but also on the dining table! "Eating a rainbow" helps your body get a complete range of nutrients.

WHAT DOES IT MEAN TO EAT A RAINBOW?

- Choosing a variety of different-colored **whole foods** throughout the day and week.
- The more **naturally occurring colors** on your plate at each meal or snack, the better.
- It *does not* mean making a rainbow with artificially colored foods (gummy snacks, soda, popsicles, etc.)

WHAT'S UNDER THE RAINBOW?

Color	*Foods*	*Possible Nutrients*	*Supports*
Red	apples, red cabbage, red onion, red peppers, strawberries, tomatoes, cherries, watermelon	flavonoids, lycopene, vitamin C, folate	heart health, memory
Orange/ Yellow	cantaloupe, carrots, butternut squash, lemons, mango, oranges, papaya, peaches, pineapples, pumpkin, sweet potatoes, yellow peppers	beta-carotene, vitamin A, vitamin C	healthy eyes, heart health, immune function
Green	asparagus, bok choy, broccoli, cabbage, collards, cucumbers, grapes, green beans, green peppers, honeydew, kale, peas, spinach	chlorophyll, vitamin K, carotenoids, isothiocyanates, omega-3 fatty acids	healthy bones, teeth and eyes
Blue/ Purple	dark beans, eggplant, beets, blueberries, blackberries, figs	anthocyanin	memory and healthy aging
White	ginger, jicama, onions, mushrooms	flavonoids	heart health and good cholesterol levels

THE NUTRITION RAINBOW CONNECTION

Fruits and vegetables get their color from naturally occurring micronutrients—such as vitamins and phytonutrients—which are essential for good health. One key function of these nutrients is **antioxidants**, which include beta-carotene, lutein, lycopene, and vitamins A, C and E. (Not all antioxidants impart color, but eating a colorful range of foods helps you get them all.)

THE RAINBOW DINNER GAME

Step 1
Before dinner, draw a rainbow on a sheet of paper. Bring your drawing, a pencil and some scratch paper to the dining table.

Step 2
Look for a food on the table to match each color on your rainbow. Write down which colors are missing.

Step 3
Make a list of foods that would fill in the missing colors. Then add these to the weekly shopping list.

Bonus
Take your rainbow to school and play this game at lunch with at least 3 friends!

Source credit: Whole Kids Foundation, Eating A Rainbow

NEXT STEPS:

The Other Side of the Rainbow

Keep food rainbows in the forecast and sustain the kid excitement with these activities:

- **Gradually transition to filling at least half your plate** with colorful veggies at each meal.
- **Pick a color theme of the week.** Get as many fruits and veggies of that color as you can find, then let the whole family taste them all. Add favorites to your regular shopping list.
- **Keep a rainbow diary or calendar.** Let kids write down which colors they eat each day over a period of a week or month and then look back and talk about favorites. Use stickers to make it fun or download the "Today I Tried" Chart at www.todayiatearainbow.com/resources/free-downloads/.
- **Plant colorful vegetables in the yard** so kids can see the rainbow grow from seeds.

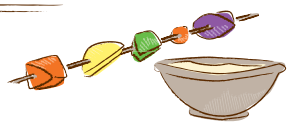
TIPS FOR PARENTS

Bring more rainbows to your table with these colorful ideas:

- Put at least **one produce item of each color on the shopping list** every week.
- **Buy what's in season** to enjoy peak flavor and lower prices.
- **Serve produce at peak ripeness.** Some kids reject foods that are under or over ripe. Learn how to pick 'em with the Whole Foods Market® online fruit and vegetable guides www.wholefoodsmarket.com/recipes/food-guides.
- **Rinse fresh fruits and veggies as soon as you get home** so they're ready for kids to grab and eat. Store them within kid reach.
- **Serve up food pictures or sculptures.** Arrange raw fruit and veggie rainbows on plates, thread them onto skewers, or use toothpicks to stick chunks together and create pyramids, faces or funny characters.
- **Let kids play with their food (just a little).** Allowing them to build their own food rainbows and sculptures may inspire children to eat them.
- **Serve a weekly rainbow dinner** with every color represented at one meal.
- **Put a rainbow of foods in their lunch box.** They'll love showing it off and may encourage classmates to eat more colors, too!
- **Serve fresh fruit as dessert.** If your child is used to a lot of sweets, sprinkle on some granola, a drizzle of honey or vanilla yogurt, then over a few weeks transition to just fruit.

QUICK & EASY RECIPES

Let kids help with the simple steps in **bold**!



BREAKFAST

Rainbow Fruit Skewers with Yogurt Dip

1. Choose your favorite fruits (berries, pineapple, kiwi, apples, oranges, etc.) and cut them into equal-size chunks. **2. Thread them onto wooden skewers. 3. Dip 'em into nonfat vanilla yogurt or a mix of ½ cup nonfat plain yogurt with 1 teaspoon honey.**

LUNCH/SNACK

Eggplant Chips

1 medium eggplant, washed and sliced into ⅛" thick rounds
sea salt
spices (optional)
olive oil

1. Preheat oven to 400 degrees. **2. Arrange eggplant rounds in a single layer on a large metal baking sheet. 3. Brush both sides of the eggplant lightly with olive oil. 4. Sprinkle with salt and any other spices you like.** 5. Bake for 15 minutes, then check for doneness. When eggplant starts to brown on the top, flip it over and brown the other side for another 10–15 minutes. Chips should be crisp and very brown when done. **Tip:** Try them with hummus dip!

DINNER

Rainbow Chili

1 zucchini, sliced
1 yellow squash, sliced
1 red bell pepper, diced
1 jalapeño pepper, minced (optional)
1 onion, diced
4 garlic cloves, minced
1 can crushed tomatoes with liquid
1 can tomato paste
1 can black beans
1 can chili beans
1 can whole kernel corn
1 tablespoon olive oil
1 tablespoon chili powder
½ teaspoon dried oregano
¼ teaspoon cayenne pepper
½ teaspoon ground black pepper

1. Heat oil in a large pot over medium-high heat. Stir in zucchini, yellow squash, bell pepper, jalapeño, onions and garlic. Sauté until tender (about 5 minutes). **2. Add canned ingredients and reduce heat to a simmer. 3. Stir in spices and simmer 45–60 minutes, stirring occasionally, until chili reaches desired consistency.**
Source: www.todayiatearainbow.com

CONNECT WITH US!
WholeKidsFoundation.org facebook.com/wholekidsfoundation @wholekidsfnd http://pinterest.com/wholekids/

WHOLE KIDS FOUNDATION

Source credit: Whole Kids Foundation, Eating A Rainbow

FIVE SENSES TASTING

Kitchen

ADAPTED GRADES K–1 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Five Senses Tasting		
Grade: K-1	**Lesson Number:** 4	
Estimated Time: 45 mins.	**Season:** Fall	**Type:** Cooking Concept

Teacher Background and Lesson Description:
The five senses are seeing, hearing, tasting, touching and smelling. Senses help living things survive in their environment. They help us to understand what's happening around us. Our senses send messages through receptor cells to our brain, using our nervous system to deliver that message. There are four kinds of taste receptors on the tongue–bitter, sweet, salt and sour. Some parts of the skin are more sensitive than others–this is because they have more receptor cells. We taste food using both our sense of taste and smell. We need our sense of smell in order for our sense of taste to work properly–if you hold your nose shut while you eat, the taste won't be as strong. It's why food sometimes tastes plain when we have a cold and our nose is blocked up. In this lesson, students will be guided by the teacher on a sensory exploration of produce (that is in abundance in the garden) and record their thoughts. In small groups, students will write simple sensory poems of the food.

Lesson Objectives:
CFT.K.1 Name the five senses.
CFT.K.2 Identify a variety of tastes and textures.
CLS.4 Students appreciate and are respectful of differences and diversity in their communities.

Academic Standard Connections:	**Health Standard Connections:**
CCSS.ELA-LITERACY.SL.K.6 Speak audibly and express thoughts, feelings, and ideas clearly. CCSS.ELA-LITERACY.L.K.5.C Identify real-life connections between words and their use (e.g., note places at school that are colorful).	N/A

Essential Questions:
What are the five senses?
How can I use my senses to describe different foods?
What words (adjectives) can I use to describe different foods?

Vocabulary: five senses (sight, smell, taste, hearing, touch), adjective(s), descriptive language, texture, appearance, scent, sound

NOTE: Adapted from **Grade K Kitchen Lesson #4: 5 Senses Tasting**, pg. 257.

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🍴 **Materials:**

Lesson Introduction:	**Equipment:**	**Ingredients:**
• *Our Five Senses* by Christian Lopetz • 5 Senses Posters	***For whole class:*** • Chart paper • Markers • 5 Senses Tasting recording sheet ***For each group:*** • Sensory poem template	• 4 different foods harvested from the garden (if not much is available, a variety of things such apples, berries, cucumbers, tomatoes or herbs will work)

Materials for Enjoying Food:	**Materials for Cleaning Up:**
• Plates	• Trash, recycling, and compost bins • Sponge (for counters) • Broom and dustpan

✅ **Assessment:**
Observations, recordings, sensory poems

⏰ **Teacher Prep:**
- Gather books and other materials.
- Print and laminate color poems for display.
- Prepare/pre-cut foods with enough for each student--divided into plates. Store snacks as necessary.

➕ **Additional Resources:**
- *Your Sensational Sense of*…book series by Julia Vogel

🔥 **Engage:** *Ignite Interest*
- Read aloud *Our Five Senses*.
- Go over the five senses and which body part we use for each sense as you display the posters.
- Explain to students that today they will be conducting a sensory exploration. They will be using their senses to describe different foods. Some of these foods they might be familiar with and love, and others may be new and "**not their taste**" and that is okay. The goal is for students to participate in the activity using all of their senses, but once it comes down to tasting the food, they can choose to not taste something.

🔪 **Explore:** *Stir Discoveries*

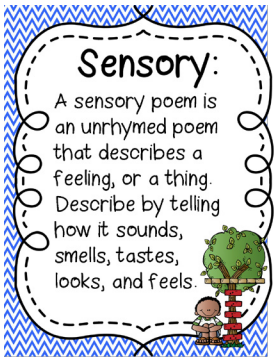
- Prepare to record on 5 Senses recording sheet or chart paper.
- Starting with their eyes closed, have them feel the food and describe its texture. Next, smell and describe its scent. Then have them open their eyes to look at the food and describe its appearance. Next, have them take a bite and listen to the sound it makes. Finally, have them taste the food and describe the taste. Record the adjectives after each sense as students share them out.
- Repeat for all three foods. Save one item for students to explore in their small group and complete the sensory poem.

🤯 **Explain:** *Clarify New Ideas*

- Discuss findings.
  - Were students surprised by any of their discoveries?
  - Did any of the foods they sampled have similar features (texture, smell, taste, etc.) to some of their favorite foods?

📈 **Elaborate:** *Watch It Rise*

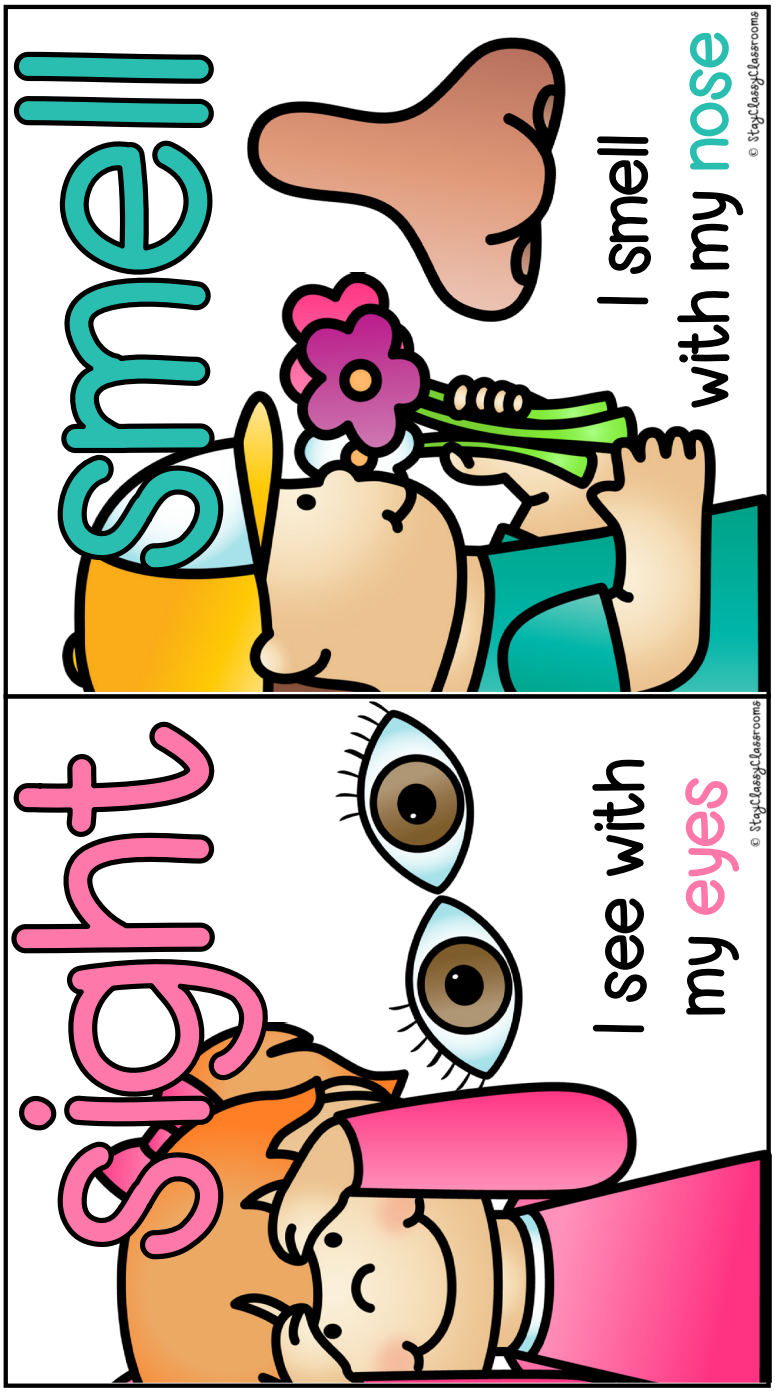
- Explain sensory poems.
- In small groups, students will use their senses to explore their last food item and complete their sensory poem using the template provided.
  - If students are not writing, they can opt to draw their responses or you may opt to complete as a class.
- Leave time for a couple of groups to share their writing.



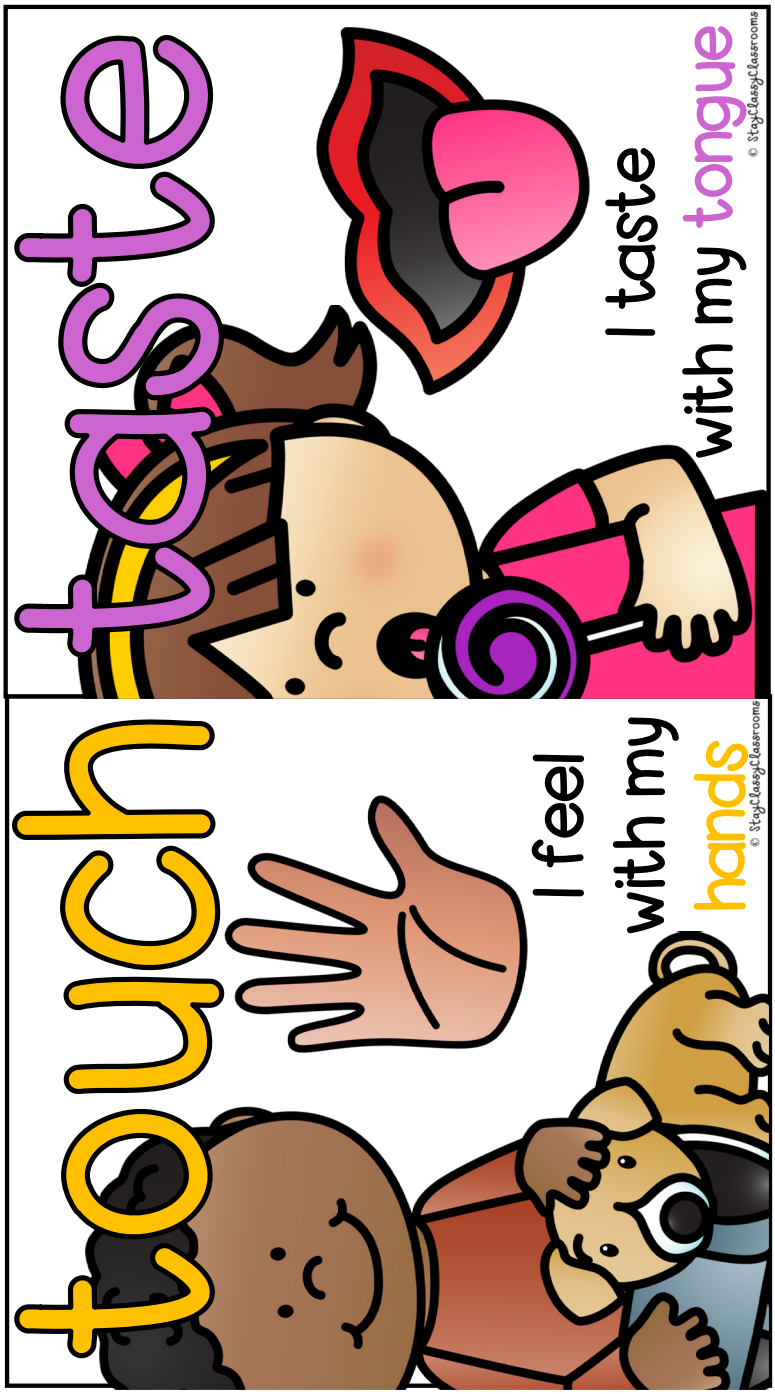
📝 **Evaluate:** *Reflect*

- Recognize students' behaviors that aligned with the enduring understandings that they developed together with the goal of being the best for themselves, their communities, and their environment.
- Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.
- Dispose of waste in the appropriate bins and have a few students help to wipe down counters/tables and sweep any trash.

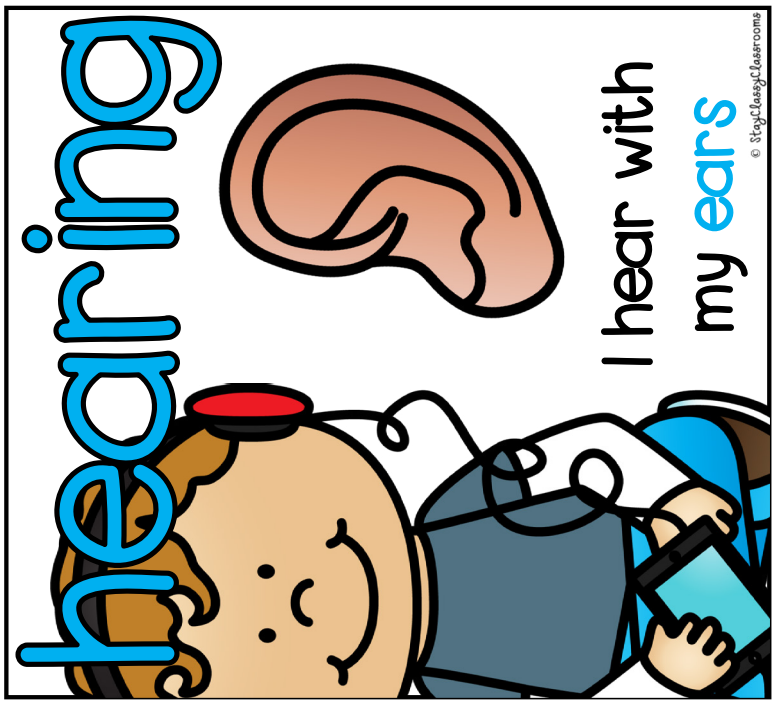
🧑‍🌾 **Connections to Garden Lessons:**	⛓️ **Possible Extensions:**
Use produce from the garden. As students enjoy, trace ingredients back to their source. Bring compost out to the garden.	As a class, count the number of adjectives students used to describe the food.



Source: Stay Classy Classrooms



Source: Stay Classy Classrooms



Source: Stay Classy Classrooms

Name: _____ **Date:** _____

5 Senses Tasting

Use your five senses to explore each food item. Write down adjectives to describe each and share your findings.

Sense	Food #1 _____	Food #2 _____	Food #3 _____
			
			
			
			
			

Name: _____ **Date:** _____

Use descriptive language to write about your food.

Title:

_____

It looks like _____.

It feels like _____.

It smells like _____.

It sounds like _____.

It tastes like _____.

HERBED MEDITERRANEAN YOGURT CHEESE SPREAD *Kitchen*

ADAPTED GRADES K–1 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Herbed Mediterranean Yogurt Cheese Spread		
Grade: K-1	**Lesson Number:** 9	
Estimated Time: 45 mins.	**Season:** Winter	**Type:** Cooking

Teacher Background and Lesson Description:
Labneh is a simple Middle Eastern fresh cheese. Labneh is a spreadable, and typically saltier cousin to the less strained, usually thicker Greek yogurt. In this lesson, students will learn the purpose of a strainer and cheesecloth. They will review using a cutting board and knife and try a variety of food items with the dip they help create.

Lesson Objectives:
HC.K.4 Identify a food group in the garden.
FP.K.1 Demonstrate ability to properly handle, wash and prepare fruits and vegetables.
KTE.K.1-4 Kitchen Tools and Equipment
CLS.2 Students cooperate and communicate well with each other.

Academic Standard Connections:
CCSS.ELA-LITERACY.L.K.5.A Sort common objects into categories (e.g. shapes, foods) to gain a sense of the concepts the categories represent.
CCSS.MATH.CONTENT.K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Health Standard Connections:
National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.

Essential Questions:
What happens when you strain the liquid out of yogurt?
What is labneh?
What items in the kitchen are sharp and need to be handled with care?

Vocabulary: yogurt, strainer, cheesecloth, pita, dip/spread, labneh

NOTE:
Adapted from **Grade K Kitchen Lesson #10: Herbed Mediterranean Yogurt Cheese Spread,** pg. 263.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

CREATED BY
Cunningham Elementary School in 2023

Materials:

Lesson Introduction:

- Recipe: Herbed Mediterranean Yogurt Cheese Spread

Equipment:

For whole class:

- Measuring cups
- Spoons
- Cutting board
- Chef's knife
- Serving plate

For each group:
(of 4-5 students)

- Colander or wire-mesh strainer
- Medium mixing bowl
- Cheesecloth
- Plastic wrap
- Cutting board
- Kid-safe knife
- Scissors
- Glue sticks
- Kitchen Safety Sort (1 per student)

Ingredients:
(serves 10-12)

- 3 cups plain yogurt
- 1½ teaspoons kosher or other coarse-grain salt
- Freshly ground black pepper
- ¾ teaspoon chopped fresh thyme
- ¾ teaspoon chopped fresh oregano
- 1½ teaspoons chopped fresh parsley
- 2 tablespoons extra-virgin olive oil, plus more if desired
- Pita
- Carrot sticks
- Celery sticks
- Cucumbers
- Kalamata olives

Materials for Enjoying Food:

- Plates

Materials for Cleaning Up:

- Dish soap
- Scrubber (for dishes)
- Drying rack
- Kitchen towels
- Trash, recycling, and compost bins
- Sponge (for counters)
- Broom and dustpan

✅ Assessment:
Observations, completion of handout

⏰ **Teacher Prep:**

- Gather materials, equipment, and ingredients listed above.
- Pre-cut pita and veggies for dipping.
- Prep one batch of dip ahead of time so it'll be ready for students.

➕ **Additional Resources:**

- *Yogurt and Cheeses and Ice Cream that Pleases: What Is in the Milk Group?* by Brian P. Cleary

🧼 **Prep to Cook:**

- Have students tie hair back, wash hands (review steps if necessary), put on aprons (if relevant) and find their cooking station (these may be pre-assigned).

 **Recipe Introduction:**

- Explain why people prepare dips (to make fruits and vegetables even more delicious and to add another food group to a fruit or vegetable snack).

✨ **Review Familiar Skills:**

- Review how to use a mixing bowl and mixing spoon.
- Review safely using a kid-safe knife and cutting board.

🔪 **Demonstrate New Tools and Skills:**

- Explain/demonstrate the use of a strainer and a cheesecloth.
  - A strainer is a device having holes punched in it or made of crossed wires for separating solid matter from a liquid.
  - Cheesecloth is a lightweight, cotton gauze fabric with an open texture, and it is primarily used for food preparation. As its name suggests, cheesecloth was originally used to drain and wrap curds during the cheese-making process. Over time, it has grown to be used for a variety of food preparation tasks such as straining water, bundling herbs and spices, and dusting baked goods.

➗ **Divvy Up Tasks:**

- Have students take turns cutting the pita into wedges and slicing the cucumbers.
- The remaining students will help prep the yogurt to put in the fridge.
- While students are waiting they can complete the Kitchen Safety Sort.

Cook:

([Recipe]: Herbed Mediterranean Yogurt Cheese Spread)

- Place a colander or wire-mesh strainer over a medium mixing bowl. (Make sure that there is enough room between the bottom of the colander or strainer and the bowl for about an inch of liquid to drain off the yogurt.)
- Fold a large piece of cheesecloth in half and place inside the colander, draping the edges over the sides.
- Pour the yogurt into the cheesecloth, and cover the entire bowl with plastic wrap.
- Place the yogurt in the refrigerator and chill overnight. (The longer the yogurt sits in the colander, the thicker the cheese will be!)

Enjoy:

- Remove the yogurt from the cheesecloth and place on a serving plate. Season with salt and freshly ground black pepper. Sprinkle the thyme, oregano, and parsley over the top of the cheese and drizzle with olive oil.
- Serve the yogurt cheese with pita bread wedges, veggies, and Kalamata olives.
- Instruct each student to gently and carefully take a plate (reminding students to **"touch one, take one"**).
- As you enjoy together, reflect on food groups represented by the pita, vegetables, and dip, and which ones came from the garden.

* The yogurt cheese will keep, covered, in the refrigerator for 3 to 4 days.

Clean Up:

- Have a couple of students pick up any dirty utensils/equipment and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

Evaluate/Reflect:

- Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

Connections to Garden Lessons:

Harvest vegetables from the garden and taste with the dip. Incorporate other garden herbs. Bring compost out to the garden.

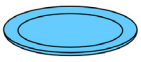
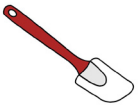
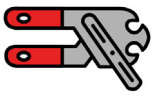
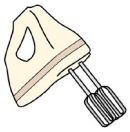
Possible Extensions:

Prepare Yogurt Cheese Spread at home and enjoy with your favorite vegetable.

Cooking Safety

Directions: cut out pieces & sort the cooking supplies into the correct category

Sharp	Not Sharp

 knife	 measuring cup	 scissors	 blender	 plate	 spatula
 can opener	 spoon	 cup	 rolling pin	 mixer	 pizza cutter

Source credit: Kitchen Safety Sort

SHRIMP AND VEGGIE SUMMER ROLLS

Kitchen

ADAPTED GRADES K–1 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Shrimp and Veggie Summer Rolls		
Grade: K-1	**Lesson Number:** 14	
Estimated Time: 45 mins.	**Season:** Spring	**Type:** Cooking
Teacher Background and Lesson Description: This Vietnamese specialty is a cousin of a Chinese favorite, the egg roll, except it isn't fried. Don't let these rolls intimidate you! The secret is to have all the ingredients set out and ready, assembly line-style, so that they're easier to pull together. In this lesson, students will discuss different food items of Vietnam and learn how to roll a spring roll.		
Lesson Objectives: RC.K.2 Recognize how families share and maintain food and cultural traditions. FP.K.1 Demonstrate ability to properly handle, wash and prepare fruits and vegetables. KTE.K.1-4 Kitchen Tools and Equipment CLS.4. Students appreciate and are respectful of differences and diversity in their communities		
Academic Standard Connections: Social Studies: Diversity and Culture. Social Studies: Geography.	**Health Standard Connections:** National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.	
Essential Questions: What is a spring roll? What does a spring roll contain? How is a spring roll different from an egg roll? How do you properly roll a spring roll?		
Vocabulary: shellfish, cellophane noodles, ginger, rice paper (wrapper)		

NOTE:

- Contains shellfish—Modify for individuals with shellfish allergies. Leave out shrimp for a vegetarian option.
- Adapted from **Grade K Kitchen Lesson #18: Shrimp and Veggie Summer Rolls**, pg. 270.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

CREATED BY
Cunningham Elementary School in 2023

Materials:

Lesson Introduction:

- Recipe: Shrimp and Veggie Summer Rolls
- Meals in Vietnam by R J Bailey

Equipment:

For whole class:

- measuring cups and spoons
- cutting board
- chef's knife
- paring knife
- box grater
- vegetable peeler
- large mixing bowl
- medium saucepan
- slotted spoon
- small mixing bowl
- fine-mesh strainer
- 9-inch shallow dish
- clean, dry kitchen towel
- oven mitts or pot holders
- damp towels (optional)

For each group:

- paper towels
- large plate

Ingredients:

(yields 10 rolls)

- 1 (3 ¾-ounce) package cellophane noodles
- 4 cups water
- 1 (2-inch) piece of ginger, peeled and thinly sliced
- 1 lemon, halved
- ¼ cup soy sauce
- ¼ cup sugar
- 4 bay leaves
- 1 tablespoon chopped green onion (green and white part)
- 1 teaspoon chopped garlic (about 2 small cloves)
- 1 teaspoon salt
- 1 teaspoon freshly ground black pepper
- ½ teaspoon cayenne
- 20 large shrimp, peeled and deveined
- 10 (8½-inch) round rice paper wrappers
- 40 small fresh mint leaves
- 40 small fresh cilantro leaves
- 3 romaine lettuce leaves, rinsed, patted dry, ribs removed, and torn into bite-size pieces
- 1 large carrot, peeled and shredded

NOTE:

Contains shellfish—Modify for individuals with shellfish allergies. Leave out shrimp for a vegetarian option.

Materials for Enjoying Food:	Materials for Cleaning Up:
• Plates	• Dish soap • Scrubber (for dishes) • Drying rack • Kitchen towels • Trash, recycling, and compost bins • Sponge (for counters) • Broom and dustpan

✅ **Assessment:**
Observations

⏰ **Teacher Prep:**
- Gather materials, equipment, and ingredients listed above.
- Pre-soak, cook, and chop all ingredients ahead of time.

➕ **Additional Resources:**
- All Around the World: Vietnam by Kristine Spanier

🧼 **Prep to Cook:**
- Have students tie hair back, wash hands (review steps if necessary), put on aprons (if relevant) and find their cooking station (these may be pre-assigned).

📃 **Recipe Introduction:**
- Read aloud Meals in Vietnam by R J Bailey.
- Discuss the different foods, ones students have tried, and ones they would like to try.

✨ **Review Familiar Skills:**
- Review safe behaviors in the kitchen.

🔪 **Demonstrate New Tools and Skills:**
- Demonstrate how to fill a summer roll.

➗ **Divvy Up Tasks:**
- Have students fill and wrap their own summer roll.

NOTE:
Contains shellfish—Modify for individuals with shellfish allergies. Leave out shrimp for a vegetarian option.

Cook:

([Recipe]: Shrimp and Veggie Summer Rolls)

- In a medium saucepan, combine 4 cups water, the ginger, lemon halves, soy sauce, sugar, bay leaves, green onion, garlic, salt, black pepper, and cayenne. Bring the mixture to a boil over high heat.
- Carefully add the shrimp to the boiling soy sauce mixture and boil for 2 minutes. Remove the pan from the heat and allow the shrimp to stand in the hot mixture for 2 more minutes, until cooked through.
- Using a slotted spoon, remove the shrimp from the cooking liquid and place in a small mixing bowl. When the shrimp are cool enough to handle, slice in half lengthwise.

Enjoy:

- Serve immediately with the dipping sauce, or refrigerate, covered with damp towels, for up to 1 hour before serving.

Clean Up:

- Have a couple of students pick up any dirty utensils/equipment and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

Evaluate/Reflect:

- Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

Connections to Garden Lessons:

Use produce from the garden, if possible. Garnish with cilantro, lemongrass or other Asian herbs growing in your garden. Bring compost out to the garden.

Possible Extensions:

Invite families and community members to enjoy this dish.

NOTE:

Contains shellfish—Modify for individuals with shellfish allergies. Leave out shrimp for a vegetarian option.

WELCOME TO THE KITCHEN

Kitchen

ADAPTED GRADES K–5 | SCHOOL PARTNER LESSON PLAN

TIME AND LENGTH
45 min

LOCATION
Kitchen Classroom

ESSENTIAL QUESTIONS
What is the kitchen classroom? What will we accomplish here together? What are our kitchen expectations? How do we properly wash our hands? How do we handle knives safely?

MATERIALS
- Conventional peaches (total # of students/4 or 5)
- Organic peaches (total # of students/4 or 5)
- Small plates or regular paper plates cut into fourths or small dixie cups
- Toothpicks or something to scoop peach into mouth (not necessary if using dixie cups)
- Prep board for Peachy Poetry
- Handouts of Peach Pie poem (enough for two students)

VOCABULARY
- Farmer's Market
- Organic
- Adjective
- Five Senses

TEACHER BACKGROUND
Article: Mindful eating: Trait and state mindfulness predict healthier eating behavior

LESSON DESCRIPTION
Students are introduced to the kitchen classroom by setting expectations, learning hand washing, and practicing a mindful eating exercise.

NOTE:
Adapted from **Grade K Kitchen Lesson #1: Welcome to the Kitchen**, pg. 475.

CUNNINGHAM ELEMENTARY SCHOOL AUSTIN Independent School District
PEAS PARTNERS FOR EDUCATION, AGRICULTURE & SUSTAINABILITY

CREATED BY
Cunningham Elementary School and Partners for Education in 2020

LEARNING OBJECTIVE

- Students are introduced to the new kitchen space and learn what safety expectations we have in place for the kitchen classroom.
- Students learn to eat food using their 5 senses.

Content Learning Objectives

Culinary Flavors and Textures

CFT.K.1 Name the five senses.

CFT.1.2 Name and describe taste sensations.

CFT.3.1 Demonstrate an understanding of taste sensations.

CFT.3.2 Describe foods and their flavor attributes.

Food Preparation

FP.K.1 Demonstrate ability to properly handle, wash and prepare fruits and vegetables

FP.K.1, FP.1.1, FP.2.1
Demonstrate ability to properly handle, wash and prepare fruits and vegetables.

Kitchen Behaviors

KB.1 K-8 Recognize where the kitchen is located, how to move in it respectfully and safely, and understand the kitchen is a learning environment.

KB.2 K-8 Understand and practice proper safety and sanitation practices in the kitchen. Students wash hands and pull hair back. Gloves are used when applicable. Clothing is tucked in, tied, clean and covered with aprons.

KB.3 K-8 Students handle, wash, and prepare foods safely.

KB.4 K-8 Students clean up the kitchen after they use it, and know that the kitchen is a shared space to be left as it was found.

KB.5 K-8 Students use healthy practices and know how to avoid spreading bacteria and viruses.

Life Skills Learning Objectives

Personal Life Skills

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.

PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.

PLS.5 Students develop the ability to make informed and responsible decisions.

PLS.6 Students actively seek creative and resourceful solutions.

Community Life Skills

CLS.5 Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

1.1 Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and uses environmentally appropriate and responsible practices. The student is expected to:

(A) identify, discuss, and demonstrate safe and healthy practices as outlined in Texas Education agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately

2.5 Matter and energy. The student knows that matter has physical properties and those properties determine how it is described, classified, changed, and used. The student is expected to:

(A) classify matter by physical properties, including relative temperature, texture, flexibility, and whether material is a solid or liquid

(B) compare changes in materials caused by heating and cooling

(C) demonstrate that things can be done to materials such as cutting, folding, sanding, and melting to change their physical properties

4.1 Scientific investigation and reasoning. The student conducts classroom and outdoor investigations, following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:

(A) demonstrate safe practices and the use of safety equipment as described in Texas Education Agency—approved safety standards during classroom and outdoor investigations using safety equipment, including safety goggles or chemical splash goggles, as appropriate, and gloves, as appropriate

Texas Essential Knowledge and Skills (TEKS) for English Language Arts and Reading, Elementary, Revised 2022

1.12 Composition: listening, speaking, reading, writing, and thinking using multiple texts—genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:

(A) dictate or compose literary texts, including personal narratives and poetry

3.3 Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking—vocabulary. The student uses newly acquired vocabulary expressively. The student is expected to:

(A) use print or digital resources to determine meaning, syllabication, and pronunciation

(B) use context within and beyond a sentence to determine the meaning of unfamiliar words and multiple-meaning words

4.12 Composition: listening, speaking, reading, writing, and thinking using multiple texts—genres. The student uses genre characteristics and craft to compose multiple texts that are meaningful. The student is expected to:

(A) compose literary texts such as personal narratives and poetry using genre characteristics and craft

Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Adopted 2012

1.1 Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

(A) apply mathematics to problems arising in everyday life, society, and the workplace

(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution

(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate

4.8 Geometry and measurement. The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement. The student is expected to:

(A) identify relative sizes of measurement units within the customary and metric systems

(B) convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table

5.7 Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement. The student is expected to solve problems by calculating conversions within a measurement system, customary or metric

Lesson Sequence

Engage **Ignite Interest (5 mins):**
Welcome students to the kitchen, introduce instructor and space, set expectations/chef's contract, learn proper hand washing techniques

Explore **Stir Discoveries (6 mins):**
Practice hand washing. Practice knife safety. Mindful eating/tasting

Explain **Clarify New Ideas (7 mins):**
Knife Safety, Hand washing, different spaces in the classroom, prepare peaches and talk about the difference between Farmer's Market and store bought

Elaborate **Watch It Rise (20 mins):**
Mindful tasting activity.
- Using the 5 senses to experience our snack

Evaluate **Reflect (7 mins):**
What did you think? (Turn-and-talk)
- How would you describe the peaches?
- Peach poetry using adjectives

ADAPTATIONS

Use local produce based on what's available at the Farmer's Market

CONNECTIONS TO THE GARDEN/KITCHEN LESSONS

Certain foods are grown locally: students will eat peaches during this lesson since they grow in Texas. In future lessons students will try food from the garden.

POSSIBLE EXTENSIONS

Poetry reflection: use student created adjectives that describe food to write a poem

ADDITIONAL RESOURCES

- How to hold a knife

Peach Pie

Peach pie caught my eye
Grabbed a fork,
Oh my!
Chewed and swallowed -
Huge sigh!
Peach pie,
bye-bye.

by Penny Parker Klostermann

Peach Pie

Peach pie caught my eye
Grabbed a fork,
Oh my!
Chewed and swallowed -
Huge sigh!
Peach pie,
bye-bye.

by Penny Parker Klostermann

Source: https://pennyklostermann.com/tag/poetry/page/3/

WHO GROWS AND PREPARES OUR FOOD?

Kitchen

ADAPTED GRADES K–1 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Who Grows and Prepares Our Food?		
Grade: K-1	**Lesson Number:** 10	
Estimated Time: 45 mins.	**Season:** ❄️ Winter	**Type:** 👨‍🍳 Cooking Concept
👩‍🏫 **Teacher Background and Lesson Description:** In this lesson, students will learn about producers and consumers. They will create their own pizza and trace back the ingredients they use back to their sources.		
⭐ **Lesson Objectives:** HE.K.1 Understand and describe a variety of food related professions. PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.		
📚 **Academic Standard Connections:** CCSS.ELA LITERACY.SL.K.4 Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.	🩺 **Health Standard Connections:** N/A	
❓ **Essential Questions:** Where does our food come from? What is our role in the food system?		
🔤 **Vocabulary:** food system/food chain, consumer, producer, ingredients		

NOTE:
Adapted from **Grade K Kitchen Lesson #11: Who Grows and Prepares our Food?,** pg. 264.

🍴 Materials:

Lesson Introduction:
- *Before We Eat: From Farm to Table* by Pat Brisson

Equipment:

For whole class:
- TV/Screen
- Computer
- Chart paper
- Markers
- Oven

For each group:
- Baking Sheet or Pizza Pan
- Scissors
- Glue sticks
- Where Does Our Food Come From? Sort (1 per student)
- My Pizza handout (1 per student)

Ingredients:
- Pre-made pizza crusts (cut so each student can get a slice)
- Pizza sauce/tomato sauce
- Mozzarella cheese
- Pepperoni
- Different colored bell peppers
- Ham
- Pineapples
- Olives

Materials for Enjoying Food:
- Plates

Materials for Cleaning Up:
- Dish soap
- Scrubber (for dishes)
- Drying rack
- Kitchen towels
- Trash, recycling, and compost bins
- Sponge (for counters)
- Broom and dustpan

✅ Assessment:
Observations

⏰ Teacher Prep:
- *Set up for the lesson introduction*
- *Set up for cooking, including specific steps for preparing different stations when relevant*
- *Set up for enjoying the food*
- *Set up for clean-up*

+ Additional Resources:
- Where Does Our Food Come From? by Bobbie Kalman
- Where Does Food Come From? by Alan Walker

🔥 **Engage:** *Ignite Interest*

- Read *Before We Eat: From Farm to Table* by Pat Brisson.
  - Tell students to put their hands on their head every time they hear about a new food profession.
  - As you read, stop every time a new food profession is mentioned to have students discuss and explain what those people do to help us get our food.
  - Ask students if they know anyone who does any of the things mentioned.
  - When the book is finished, discuss our role in the food system, as consumers.

🔪 **Explore:** *Stir Discoveries*

- Watch one of the following videos and discuss food systems/food chains:
  - The Food Chain for Kids - Learn Bright
  - What is a Food Chain? - Peekaboo Kidz
- Create a food chain together ending with "us" as the consumer.

🤯 **Explain:** *Clarify New Ideas*

- Complete Where Does Our Food Come From? Sort

📈 **Elaborate:** *Watch It Rise*

- Allow each student to make their own pizza slice with toppings of choice.
  - At minimum, students should put sauce and cheese on their slice of pizza.
- While their pizzas bake, have each student complete the handout tracing back their ingredients.

📝 **Evaluate:** *Reflect*

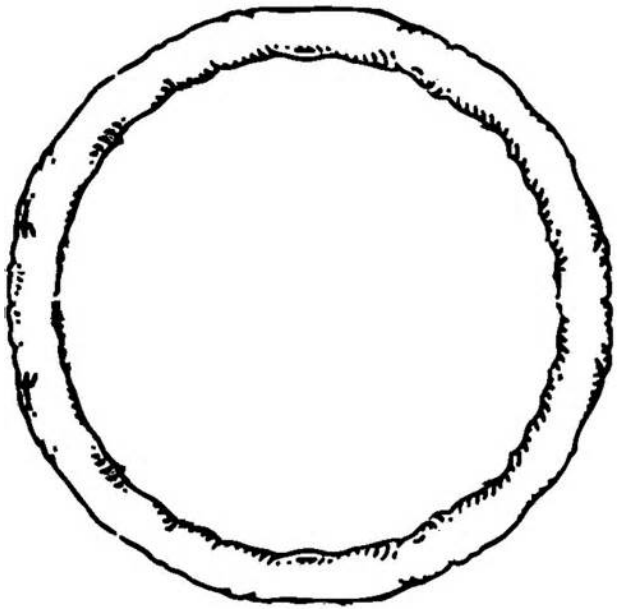
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.
- Share appreciation for each of their individual contributions to the kitchen and to the community, and for their respect for the kitchen. Express excitement for your next time together.

🧑‍🌾 **Connections to Garden Lessons:**	⛓️ **Possible Extensions:**
As you harvest and/or prepare food together, discuss with your students: "How are we being farmers, bakers, chefs, etc., right now?"	Send student drawings and letters to local farmers, chefs and the like.

Name: _____ **Date:** _____

Where Did this Come From?

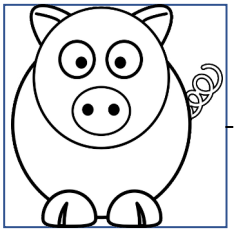
Draw and color the pizza you created. Write down the ingredients you used and where they came from.

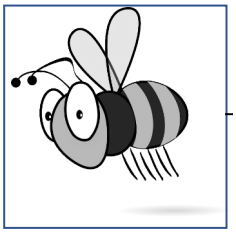


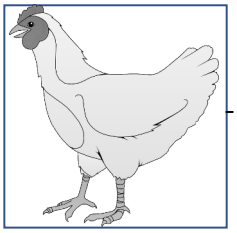
My pizza has…	It came from…

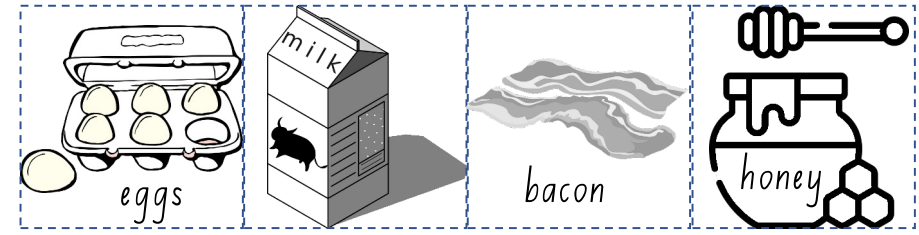
Where does our food come from?

Match the animals with the food they give us.









Source credit: Where does our food come from?

MELON & FRUIT KABOBS

Kitchen

NEW! GRADE 1 | SCHOOL PARTNER LESSON PLAN

Grade 1 • 40 mins • Fall, Winter, Spring, Summer

ESSENTIAL QUESTIONS

• How do we work together to complete recipes?

MATERIALS

• Pre-cut fruit: Watermelon
• Cantaloupe
• Strawberries
• Bananas
• Grapes
• Wooden skewers
• Bowls for different fruits
• Cutting board
• Paper plates
• Paper towels
• Honey or yogurt for dipping

ASSESSMENT

• Observation, Finished product

PREPARATION (30 MINS)

Set up stations with pre-cut fruits, skewers, cutting boards and bowls

LESSON DESCRIPTION

This is a good beginning lesson to help students learn how to work together and share materials. They will practice basic kitchen skills and work with team members to finish beautiful kabobs together.

LEARNING OBJECTIVES

• By the end of the lesson, students will be able to work as a team to create fruit kabobs using various fruits, and understand the importance of collaboration and cooperation.

Content Learning Objectives

Culinary Flavors and Textures

CFT.1.2 Name and describe taste sensations.

Life Skills Learning Objectives

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

DC Bilingual Public Charter School

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DC Bilingual in 2023

HEALTH STANDARD CONNECTIONS

K-2.5.7.14 Recognize a nutritious meal or snack.

Lesson Sequence

Engage **Ignite Interest:**
Show students the ingredients of the day and ask them to use their senses to describe the colors, shapes, tastes and smells. Ask the students which fruits are their favorites and if they have ever tried fruit kabobs before. Discuss how working as a team can help accomplish tasks more efficiently and promote cooperation and friendship.

Explore **Stir Discoveries:**
Instruct students to work in teams to create beautiful kabobs and arrange them in a way that is appealing. Demonstrate how to create the kabobs safely (there is a pointy end) and how to create patterns.

Explain **Clarify New Ideas:**
Provide each team with wooden skewers. Instruct the students to work together to create their fruit kabobs by selecting fruits and threading them onto the skewers. Encourage them to think creatively and consider color patterns or alternating fruit types to make their kabobs visually appealing.

Elaborate **Watch It Rise:**
Instruct each team to place their completed fruit kabobs on plates or trays. Have each team present their kabobs to the class, allowing them to describe the fruits they used and their design choices. Discuss the different combinations and ask the students to share what they like about their fruit kabobs.

Evaluate **Reflect:**
Eat the completed kabobs together! Talk about whether or not the presentation makes the fruit taste better.

COMPOST CRACKER STACKS

Kitchen

ADAPTED GRADE 2 | SCHOOL PARTNER LESSON PLAN

TIME AND LENGTH
45 min

LOCATION
Kitchen Classroom

ESSENTIAL QUESTIONS
How and why do we compost?

MATERIALS
- Reusable Plates
- Butter knives
- Compost anchor chart
- Box of whole grain crackers
- Hummus
- Snap peas
- Broccoli (or other green material/food from the garden)

VOCABULARY
- Compost
- Green Matter & Brown Matter
- Fungi
- Bacteria
- Insects
- Nitrogen
- Carbon

TEACHER BACKGROUND
Composting: 10 Things You Didn't Know

LESSON DESCRIPTION
Students visit the garden and are introduced to the compost pile. Students return to the kitchen to make compost cracker stacks, which represent the layering of green and brown matter in compost.

NOTE:
Adapted from **Grade K Garden Lesson #6: Mini Compost Piles,** pg. 99 and **Grade K Kitchen Lesson #5: Edible Compost Piles**, pg. 258.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

PEAS
PARTNERS FOR EDUCATION, AGRICULTURE & SUSTAINABILITY

CREATED BY
Cunningham Elementary School and Partners for Education in 2020

LEARNING OBJECTIVES

- Students learn the basic structure of a compost pile and how to layer between green and brown matter
- Students learn how to classify different things as green or brown matter.

Life Skills Learning Objectives

Personal Like Skills

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.

PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.

PLS.5 Students develop the ability to make informed and responsible decisions.

PLS.6 Students actively seek creative and resourceful solutions.

Community Life Skills

CLS.5 Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Adopted 2017

2.1 Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures. The student is expected to:

(B) identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal.

2.5 Matter and energy. The student knows that matter has physical properties and those properties determine how it is described, classified, changed, and used. The student is expected to:

(A) classify matter by physical properties, including relative temperature, texture, flexibility, and whether material is a solid or liquid

(B) compare changes in materials caused by heating and cooling

(C) demonstrate that things can be done to materials such as cutting, folding, sanding, and melting to change their physical properties

Lesson Sequence

Engage **Ignite Interest (5 mins):**
Visit compost piles in garden

Explore **Stir Discoveries (20 mins):**
Look at compost and put food scraps and leaves/sticks in it—learn how to pile brown matter/green matter/brown matter/green matter

Explain **Clarify New Ideas (5 mins):**
Anchor chart for compost pile and alternating between brown and green matter

Elaborate **Watch It Rise (5 mins):**
Make compost cracker stacks that represent the pattern of brown/green/brown/green

Evaluate **Reflect (10 mins):**
Compost material identification sheet. Reflection on experience.

ADAPTATIONS

Indoor or outdoor activity

CONNECTIONS TO THE GARDEN/KITCHEN LESSONS

- Composting in the garden
- FBI acronym for fungus, bacteria and invertebrates (the Garden "FBI")
- What and why do we compost?
- **Grade 2 Garden Lesson #3: Building Compost,** pg. 133

POSSIBLE EXTENSIONS

Have students take leftover food out to garden compost and add it to the pile, layer green matter/brown matter/green matter/brown matter or have students start collecting compost in their classrooms.

ADDITIONAL RESOURCES

- Composting 101
- Compost Chemistry

GUACAMOLE

Kitchen

ADAPTED GRADE 2 | SCHOOL PARTNER LESSON PLAN

TIME AND LENGTH
45 min

LOCATION
Kitchen Classroom

ESSENTIAL QUESTIONS
What are healthy and unhealthy fats? What foods are examples of each?

MATERIALS
- Lettuce knives
- Mixing bowls
- Cutting boards
- Juicer
- Plastic serving plates
- Chips
- Recipe ingredients
- Garlic Press
- Olive Oil

VOCABULARY
- Fat (saturated and unsaturated)
- Cilantro
- Guacamole
- Cuisine
- Culinary Arts
- Avocados

TEACHER BACKGROUND
Food Origins

NOTE:
Adapted from **Grade 5 Kitchen Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole**, pg. 532.

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LESSON DESCRIPTION

Students will make and eat guacamole using produce from the garden. Students will also learn about healthy and unhealthy fats.

LEARNING OBJECTIVES

- Students will be able to identify foods that there are sources of healthy and unhealthy fats.
- Students will talk and learn about the origins and cultural influence on cuisines.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Social Studies, Elementary, Adopted 2018

2.12 Culture. The student understands ethnic and/or cultural celebrations. The student is expected to:

(A) identify the significance of various ethnic and/or cultural celebrations

(B) compare ethnic and/or cultural celebrations

Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Adopted 2012

2.1 Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

(A) apply mathematics to problems arising in everyday life, society, and the workplace

2.3 Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole. The student is expected to:

(A) partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words

(C) use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole

HEALTH STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Health Education, Elementary, Adopted 2020

1.6 Healthy eating and physical activity—food and beverage daily recommendations. The student identifies and explains healthy eating strategies for enhancing and maintaining personal health throughout the lifespan. The student is expected to:

(A) explain that fruits, proteins, vegetables, and dairy provide essential vitamins and minerals

(B) identify recommended portion sizes by comparing portions to familiar objects such as a golf ball for a cookie or a frisbee for a dinner plate

(C) identify the food groups and classify examples of foods into each group

(D) identify ingredients that make foods and drinks unhealthy such as added sugar and other sweeteners

2.6 Healthy eating and physical activity—food and beverage daily recommendations. The student identifies and explains healthy eating strategies for enhancing and maintaining personal health throughout the lifespan. The student is expected to:

(A) identify types of nutrients

(B) use familiar objects to identify healthy food portions from different food groups

(C) identify healthy and unhealthy choices within the food groups

Lesson Sequence

Engage **Ignite Interest (10 mins):**
Welcome students to the classroom, harvest cilantro in the garden before entering the kitchen, talk about how there are healthy and unhealthy fats. One source of healthy fats are avocados! Different cultures have different cuisines. One way we can honor and celebrate different cultures is by trying new foods.

Explore **Stir Discoveries (20 mins):**
Watch short video about different types of fats, wash hands, prepare guacamole together as a class and eat it. How to read and follow a recipe

Explain **Clarify New Ideas (5 mins):**
"The Kitchen Times"—kid friendly newspaper article that explains the different types of fats and what different foods have healthy and unhealthy fats

Elaborate **Watch It Rise (5 mins):**

Explain saturated v. unsaturated fats—Be sure to say that it's OK to eat foods that contain unhealthy fats once in a while. We just want to make sure that we are eating more healthy fats more often than unhealthy fats.

Healthy fats help our bodies stay strong and have plenty of energy so that we can stay active. They also help our brains think faster! Unhealthy fats can make us feel tired and foggy-brained. They also can clog our arteries over time causing health problems when we are older. We want to stay healthy so we can live for a long time and be able to enjoy doing all of the things outside that we love to do—like hiking, swimming, sports, gardening.

Evaluate **Reflect (5 mins):**

Explore experience—
Ask students what they think of their creation.
i. "What do you think?"
ii. "What flavors are you experiencing?"
iii. "Would you add anything to it to make it even tastier?"
iv. "Who would you like to share this with?"

Gratitude—Take a deep breath and think about different cultures and different dishes we enjoy from them. Think about all of the different cuisines in our world and how thankful we are for our different cultures. Take a moment to be thankful for how your food got to you today. Say, "Can we agree that we are grateful for different cultures and their different foods?"

ADAPTATIONS

This lesson can be adapted for different types of healthy fat foods.

ADDITIONAL RESOURCES

- Healthy and unhealthy fats

THREE SISTERS NACHOS

Kitchen

NEW! GRADE 2 | SCHOOL PARTNER LESSON PLAN

Grade 2 • 40 mins • Spring

ESSENTIAL QUESTIONS

• What does it mean to "get along" as a plant or food?

MATERIALS

• Tortilla chips
• Cooked black beans (canned or cooked from dried beans)
• Diced butternut squash (frozen and thawed)
• Shredded cheese (cheddar or Mexican blend)
• Salsa or guacamole (optional)
• Plates
• Spoons for serving
• Baking sheets

ASSESSMENT

• Observation and finished product

PREPARATION (20 MINS)

Set up per station with pre-portioned ingredients

TEACHER BACKGROUND

• Review the three sisters legend and planting techniques.
• Review the recipe Three Sisters Nachos

LESSON DESCRIPTION

This is a delicious way to explore the mythology and indigenous planting technique of the Three Sisters. Students will learn about the story of the three sisters and make nachos using corn (chips), beans, and squash.

LEARNING OBJECTIVES

• Students will be able to understand the concept of the "Three Sisters" agricultural technique used by Indigenous peoples and make a delicious and nutritious snack called "Three Sisters Nachos" using corn, beans, and squash.

Content Learning Objectives

Recipe Concepts

RC.2.1 Describe how traditional foods and recipes function in social contexts of families and communities, and cultural traditions and celebrations.

Life Skills Learning Objectives

Personal Life Skills

PLS.2 Students are able to express empathy and caring for themselves, others and the environment.

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

HEALTH STANDARD CONNECTIONS

3-5.5.7.12 Plan or prepare a nutritious snack and justify its nutritional value.

Lesson Sequence

Engage **Ignite Interest:**
Begin by discussing the concept of the "Three Sisters" agricultural technique used by Native American tribes, which involves planting corn, beans, and squash together to support each other's growth. Show pictures or diagrams of the Three Sisters planting technique to help the students visualize it. Talk about the benefits of the Three Sisters technique, such as how corn provides support for the beans to climb, beans add nitrogen to the soil, and the large leaves of squash act as a natural mulch, preventing weed growth and keeping the soil moist.

Explore **Stir Discoveries:**
Provide each group with tortilla chips, black beans, squash, and shredded cheese. Instruct the students to work together to layer the tortilla chips on their baking sheets, creating a base for the nachos.

Explain **Clarify New Ideas:**
Instruct the students to sprinkle the black beans, and cooked or canned squash evenly over the tortilla chips. Encourage the students to work together and distribute the toppings evenly, just like the Three Sisters support and complement each other in the garden. Add cheese. Students will bring their trays to the oven area and the teacher will bake the nachos at 350 for 10 minutes. Serve warm.

Elaborate **Watch It Rise:**
While the nachos are cooking in the oven, discuss the importance of sharing and working together as a team, just like the Three Sisters work together in the garden.

Evaluate **Reflect:**
Serve and eat the nachos.

POSSIBLE EXTENSIONS

Create a Three Sisters poster or display showcasing the planting technique and the benefits of growing corn, beans, and squash together. Explore other Native American traditions and cultural practices related to food and agriculture. Plant a 3 sisters garden in the school garden.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2023

WATERMELON & PEACH END OF SUMMER SALAD *Kitchen*

NEW! GRADE 2 | SCHOOL PARTNER LESSON PLAN

TIME AND LENGTH
45 min

LOCATION
Kitchen Classroom

ESSENTIAL QUESTIONS
What does it mean to eat locally and with the seasons? Why should we do it?

MATERIALS
- Lettuce knives
- Melon balls
- Mixing bowls
- Cutting boards
- Juicer
- Paper cups x 450
- Eating utensils
- Recipe ingredients

VOCABULARY
- Seasons
- Eating locally
- Produce
- Recipe

TEACHER BACKGROUND
Seasonal Food Guide

LESSON DESCRIPTION
Students will make and eat a fruit salad using seasonally available produce.

LEARNING OBJECTIVES
- Students will be able to identify seasonal produce for the summer months.
- Students will identify seasons and community helpers (i.e. farmers) and their roles in working with the seasons.

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ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

2.8 Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:

(B) identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation

Texas Essential Knowledge and Skills (TEKS) for Social Studies, Elementary, Revised 2022

2.7 Economics. The student understands the roles of producers and consumers in the production of goods and services. The student is expected to:

(C) trace the development of a product from a natural resource to a finished product.

Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Revised 2022

2.1 Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

(A) apply mathematics to problems arising in everyday life, society, and the workplace

2.3 Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole. The student is expected to:

(A) partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words

(B) identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation

(C) use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole

Texas Essential Knowledge and Skills (TEKS) for Social Studies, Elementary, Revised 2022

2.7 Economics. The student understands the roles of producers and consumers in the production of goods and services. The student is expected to:

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Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Revised 2022

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The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

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(C) use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole

HEALTH STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Health Education, Elementary, Adopted 2020

2.6 Healthy eating and physical activity—food and beverage daily recommendations. The student identifies and explains healthy eating strategies for enhancing and maintaining personal health throughout the lifespan. The student is expected to:

(A) identify types of nutrients

(B) use familiar objects to identify healthy food portions from different food groups

(C) identify healthy and unhealthy choices within the food groups

(D) identify the benefits of making healthy beverage choices, including water and milk, and limiting sweetened beverages such as soda and sports drink

Lesson Sequence

Engage **Ignite Interest (5 mins):**
Tell students that different foods need different climates to grow. Different foods grow during the different seasons. Some foods need lots of rain, some need cold temperatures, and others need tropical climates. That's why some foods only grow at certain times of the year. Ask students if they can recall the four seasons What season are we currently in? Summer! But it is almost Fall, so we need to hurry up and eat the leftover summer produce before it goes bad.

Explore **Stir Discoveries (20 mins):**
Use knives and melon ballers to prepare fruit salad. Use seasonal ingredients. Student Recipe Prepare and eat watermelon and peach end of summer salad. How to read and follow a recipe.

Explain **Clarify New Ideas (5 mins):**
Explain that farmers grow different produce in different seasons and why. How do the seasons affect the plants? Why is it important to eat produce that is in season?

Elaborate **Watch It Rise (5 mins):**
Certain foods need hot or cold weather or more rain to grow. That's why you find different foods at the Farmer's Market throughout the year. Explain that grocery stores are different? They can get food from far away regions (even across the world) and store them for long periods in cold warehouses throughout the year, so you may see oranges in August even though the best time to harvest them is in December and January. Explain that it is not always possible to get to the Farmer's Market. Eating fruits and vegetables is important no matter where they are purchased.

Evaluate

Reflect (10 mins):

Reflect on experience—
Ask students what they think of their creation.
i. "What do you think?"
ii. "What flavors are you experiencing?"
iii. "Would you add anything to it to make it even tastier?"
iv. "Who would you like to share this with?"

Gratitude—Take a deep breath and think about the farmers/growers who grow our food. Think about all of the weather conditions and issues they face while working to provide for us. Take a moment to be thankful for how your food got to you today. Say, "Can we agree that we are grateful for the farmers who grow our food and all of the people who help get it to our tables."

ADAPTATIONS

This lesson can be adapted for every season.

CONNECTIONS TO THE GARDEN/KITCHEN LESSONS

Check to see what is growing in the garden and try to bring that into the dish. Have students taste it in the garden before making it in the kitchen classroom. For this lesson, we used mint and students had the chance to try this out on the farm during their first garden lesson.

POSSIBLE EXTENSIONS

Meet the farmer video

ADDITIONAL RESOURCES

- https://www.thefreshmarket.com/inspiration/recipe-and-ideas/watermelon-and-peach-summertime-salad

Watermelon & Peach Summertime Salad

Ingredients:

- 1 tbsp of honey
- 2 c watermelon: cut into 1 in cubes
- 1 c fresh mint, *chopped*
- 1 lime: *zested* and *juiced*
- 2 peaches: *peeled*, *pitted*, and *cut* into ½ in cubes
- Salt to taste

Directions:

In a large bowl, *whisk* together honey, lime zest and juice and salt. Add the watermelon, peaches, and mint and gently *toss* everything to combine.

Watermelon & Peach Summertime Salad

Ingredients:

- 1 tbsp of honey
- 2 c watermelon: cut into 1 in cubes
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- Salt to taste

Directions:

In a large bowl, *whisk* together honey, lime zest and juice and salt. Add the watermelon, peaches, and mint and gently *toss* everything to combine.

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ADAPTED

GRADE 2

Lesson	Topic	Content Learning Objective(s)	Lesson Activity	Life Skills Learning Objective(s)	Academic Standard Connections	Health Standards
Welcome to the Kitchen! Hand Washing	Personal and Community Life Skills **(CLS and PLS)** Food Preparation **(FP)**	**FP.2.1** Demonstrate ability to properly handle, wash and prepare fruits and vegetables.	Engage students by asking them"how clean are your hands?" Have students go to corners of the room that describe how clean their hands are. Then, have students rub their hands with Glow Germ. Place students in groups and have them wash their hands for 10 seconds, 30 seconds and then 1 minute. Have students observe their hands for differences after each washing. Then, have each group discuss the importance of washing hands when in the kitchen and in daily life.	**CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.	**CCSS.ELA-LITERACY.SL.2.1** Participate in collaborative conversations with diverse partners about *grade 2 topics and texts* with peers and adults in small and larger groups.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Note: This lesson was adapted from **Grade 2 Kitchen Lesson #1: Welcome to the Kitchen!**, pg. 288.

CREATED BY
Belle Chasse Academy in 2020

WELCOME TO THE KITCHEN

HAND WASHING EXPERIMENT

Kitchen

ADAPTED GRADE 2 | SCHOOL PARTNER LESSON PLAN

MATERIALS

- Black light or ultraviolet light
- Sink
- Pen/crayons
- Towels
- Powder or gel that simulates the presence of germs on students' hands.

These products are commercially available:

- Glo Germ
- Germ Juice
- GlitterBug (Brevis)

PROCEDURE

1. Have students develop a chart that will help them score how clean their hands are. Divide a piece of paper into four sections. Trace the outline of a hand in each section. Now have students use pens or crayons to shade their idea of completely dirty, very dirty, dirty, and slightly dirty. Label the completely dirty hand as ++++, the very dirty hand as +++, and so on. Use a minus sign (–) to represent "completely clean." For consistency, choose one or two students to act as the judge. Other students can act as recorders.

2. Have students construct a data table to record their results.

Washer	**Washing Time in Seconds**				
	0	5	10	15	20
Student 1					
Student 2					
Student 3					
Student 4					
Average					

3. Spread some of the germ-simulating powder or gel on a student's hands. Spread it evenly over both hands, including the backs of the hands and the skin next to and under the fingernails. Allow hands to dry completely (this should take a minute or two). Then place the student's hands under the black or UV light.

CREATED BY
Belle Chasse Academy in 2020

4. Under the light, the "germs" will show up. Have students use the chart to determine the cleanliness of the washer's hands. Enter it on their data table. Label this "0 seconds."
5. Have the student wash hands for five seconds. Stop and check the cleanliness of the hands under the black or UV light. Record this as "5 seconds."
6. Have the student wash hands for five additional seconds. Stop and check under the black or UV light. Record this as "10 seconds."
7. Repeat the procedure twice more, for 15 and 20 seconds. Each time, have students record the level of cleanliness.
8. Change roles and repeat the activity until everyone (including the judges) has had a turn being the hand washer.
9. Have students graph their results. Put the time on a horizontal line going across the page. Mark every number between 0 and 20 seconds. Put the average cleanliness scores on the vertical line.

Washer	**Washing Time in Seconds**				
	0	5	10	15	20
Maria	++++	+++	++	+	–
LaToya	++++	+++	++	+	–
James	++++	++++	+++	++	+
Jacob	++++	+++	++	+	–
Average	++++	+++	++	+	–

COOKING WITH WHAT'S IN ABUNDANCE

Kitchen

ADAPTED GRADE 3 | SCHOOL PARTNER LESSON PLAN

TIME AND LENGTH
45 min

LOCATION
Kitchen Classroom

ESSENTIAL QUESTIONS
Why is it important to eat foods that are in season? What's the point?

MATERIALS
- Mixing bowl
- Measuring spoons
- Food processor
- Book about pumpkins

Hummus Ingredients
- 1–2 cloves roasted garlic (prep ahead of time)
- 2 tablespoons of olive oil
- 2 tablespoons of water
- 1 can of chickpeas, drained and rinsed
- 2–3 cups of pumpkin puree
- 1 tablespoon of maple syrup or honey
- ½ teaspoon of rosemary (from the garden!)
- Salt to taste
- Serve with pita bread and carrots

VOCABULARY
- Hummus
- Seasonal
- Measuring spoons
- Food processor

NOTE:
Adapted from **Grade 3 Kitchen Lesson #16: Cooking with What's in Abundance**, pg. 303.

CUNNINGHAM ELEMENTARY SCHOOL AUSTIN Independent School District
PEAS PARTNERS FOR EDUCATION, AGRICULTURE & SUSTAINABILITY

CREATED BY
Cunningham Elementary School and Partners for Education in 2020

TEACHER BACKGROUND

Pumpkins
7 Things You Didn't Know About Hummus

LESSON DESCRIPTION

Students will learn about the origins of hummus as well as prepare a seasonal dish—Pumpkin Hummus. This lesson fits well close to Halloween when many students are carving jack o'lanterns at home.

LEARNING OBJECTIVES

- Students learn the basic structure of a compost pile and how to layer between green and brown matter
- Students learn how to classify different things as green or brown matter.

Content Learning Objectives

Health Concepts

HC.3.2 Demonstrate an understanding of local and seasonal foods.

HE.3.3 Describe abundance and the causes of abundance in the garden

Life Skills Learning Objectives

Personal Life Skills

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

PLS.2 Students are able to express empathy and caring for themselves, others, and the environment.

PLS.3 Students cultivate honest and responsible behaviors that contribute to the learning of the community.

PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.

PLS.5 Students develop the ability to make informed and responsible decisions.

PLS.6 Students actively seek creative and resourceful solutions.

Community Life Skills

CLS.5 Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.

ACADEMIC STANDARD CONNECTIONS

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Adopted 2017

3.9 Organisms and environments. The student knows and can describe patterns, cycles, systems, and relationships within the environments. The student is expected to:
(C) describe environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations

Texas Essential Knowledge and Skills (TEKS) for Social Studies, Elementary, Adopted 2018

3.6 Economics. The student understands the concept of the free enterprise system and how businesses operate in the U.S. free enterprise system. The student is expected to:

(A) explain how supply and demand affect the price of a good or service

(B) define and identify examples of scarcity

(C) explain how the cost of production and selling price affect profits

Lesson Sequence

Engage **Ignite Interest (10 mins):**
Walk with students out to the garden to harvest and wash rosemary. Talk about how we try to cook with what's in abundance in the garden and what that means.

Explore **Stir Discoveries (25 mins):**
Prepare and eat hummus

Explain **Clarify New Ideas (5 mins):**
Use pumpkin puree since pumpkins are what's in season and thus what is considered to be in abundance.

Elaborate **Watch It Rise (5 mins):**
Seasonality of food

Evaluate **Reflect (5 mins):**
Ask students to reflect on their experience Gratitude Practice.

ADAPTATIONS

This lesson can be adapted to use whatever is currently growing in your garden. It can be used throughout the year.

CONNECTIONS TO THE GARDEN/KITCHEN LESSONS

What's growing in our garden?

POSSIBLE EXTENSIONS

Students plant certain foods/herbs that they would like to try next time you make hummus together.

EDNA LEWIS' APPLE CRISP

Kitchen

NEW! GRADE 3 | SCHOOL PARTNER LESSON PLAN

Grade 3 • 40 mins • Fall

ESSENTIAL QUESTIONS

• What are the different ways that seeds can spread and be planted?

MATERIALS

• Large apples (enough for each student to have ½)
• Butter
• Flour
• Rolled oats
• Brown sugar
• Cinnamon
• Nutmeg
• Baking dish
• Mixing bowls
• Measuring cups and spoons
• Mixing spoons
• Knives (ensure appropriate safety measures)
• Cutting Board

VOCABULARY

• Compost

ASSESSMENT

• Observation and finished product

PREPARATION (40 MINS)

Pre-peel and core apples (students will slice and chop), premeasure the dry ingredients into small containers.

TEACHER BACKGROUND

• Read *Bring Me Some Apples and I'll Make You a Pie*
• Watch Cuisine Corner Jr.: Edna Lewis' Apple Crisp

LESSON DESCRIPTION

After reading *Bring Me Some Apples and I'll Make You a Pie*, students will work in teams to prepare Edna Lewis' Apple Crisp recipe. This lesson will focus on practicing knife skills and following the steps of a recipe, and will not spend as much time practicing measuring.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2023

LEARNING OBJECTIVES

- Students will practice their knife skills to prepare a recipe from the book *Bring Me Some Apples and I'll Make You a Pie*.

Content Learning Objectives

Kitchen Tools and Equipment

KTE.3.1 Use tools introduced in previous grades independently.

KTE.3.2 Name, identify, locate and safely use new tools.

KTE.3.3 Explain form and function of new tools/equipment.

KTE.3.4 Select the correct tool to perform and complete a task with minimal instructor input.

Lesson Sequence

Engage **Ignite Interest:**
Start the class by asking "What were some foods that Edna Lewis would harvest with her family" How did she prepare them?" "Today we will prepare one of Edna Lewis' special recipes—an apple crisp. To make this recipe, we will need to practice careful knife skills" Have a student volunteer come and show the safe way to chop the apples.

Explore **Stir Discoveries:**
Provide each student with 1/2 a peeled, cored apple and a knife. Instruct the students to slice them into thin slices. If needed, demonstrate the safe way to handle the knife and slice the apples. After slicing, chop the slices into smaller, even pieces. Students will place chopped apples into one baking dish per table, and toss with cinnamon and sugar.

Explain **Clarify New Ideas:**
Instruct the students to gather mixing bowls and pre-measured ingredients: flour, rolled oats, brown sugar, cinnamon, nutmeg, and softened butter. Explain that they need to mix the ingredients together with a fork until it forms a crumbly texture. Sprinkle topping mixture atop the apples. The students will bring the dishes to the ovens to bake at 375 for 30 minutes.

Elaborate **Watch It Rise:**
Explain to the students that there will not be time in class to bake AND eat the crisp, but they will be able to get portions later (arrange with the classroom teacher). After cleaning up the tables, students will write the recipe down in their Food Lab Journals and illustrate.

Evaluate **Reflect:**
Talk as a class—how did the recipe go? What was easy? What was difficult? Encourage students to give "olé"s to their peers who showed good teamwork.

FLAVORS

Kitchen

ADAPTED GRADE 3 | SCHOOL PARTNER LESSON PLAN

Grade 3 • 45 mins • Fall

Submitted by
Jane Madden • jane.madden@discoveryhsf.org

ESSENTIAL QUESTIONS

- How do we taste foods?
- What part(s) of our bodies deliver information about the taste of foods to our brains?
- What words can we use to describe taste?
- What are some examples of foods that have the following tastes: sweet, bitter, salty, sour?

VOCABULARY

- Senses/Sensory/Sensation
- Taste buds
- Receptors

ASSESSMENT

- Student Journals
- **Class Life Skills Observational Checklist**

MATERIALS

Materials for Introduction

- Student Journals
- Dry erase board or chart paper with Sweet, Salty, Sour, Bitter, and Umami written on left and Lime, Pineapple, Tortilla Chip, and Arugula written on the right.
- Picture of tongue with taste buds evident. This can be hand drawn or projected onto wall or smart board from internet.

Equipment

For Each Group of 10

- 4 Large bowls and spoons or tongs. One for each sample.
- 10 Plates
- 10 Forks

For Whole Class

- 12 Large bowls and spoons or tongs. One for each sample.
- 30 Plates
- 30 Forks

Ingredients

- ⅛ lime per student
- 2 chunks pineapple per student
- 2 tortilla chips per student
- 2–3 pieces arugula per student (arugula can be found in garden, or can be substituted for other bitter greens in garden such as mustard.)

Materials for Enjoying the Food

- Forks

Materials for Cleaning Up

- 1 spray bottle of cleaner per table
- 2 cloth towels per table
- Sink with available sponges and dish soap for cleaning dishes
- Dish towels for drying.

NOTE:
Adapted from **Grade 3 Kitchen Lesson #2: Flavors**, pg. 307.

DR. JOHN OCHSNER DISCOVERY HEALTH SCIENCES ACADEMY

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

PREPARATION

- Draw picture of tongue on dry erase board or find suitable visual to project onto board or smartboard.
- Write foods to sample and first 4 major tastes onto dry erase board or chart paper.
- Cut limes into eighths, and pineapple into small chunks (canned pineapple can be used) and place these into bowls for seving. Divide bagged tortilla chips into bowls for serving. Harvest arugula if available or purchase arugula and place into bowls for serving.

TEACHER BACKGROUND

Taste is a sensation that begins when food enters our mouths. On the surface of our tongue are small bumps called papillae. Each of these papilla holds as many as 10,000 taste buds, and each of these taste buds contain 50–150 receptor cells. As we eat, saliva in our mouths break down chemicals in foods. The chemicals enter holes in your taste buds and interact with the receptor cells. Signals are sent to the brain by the receptor cells and these signals are combined with other information on the food that is derived from your sense of smell. The combination of this information results in the experience of flavor. There are four tastes that we generally recognize: Sweet, Salty, Bitter, and Sour. Foods that contain glutamate (msg) cause us to experience a fifth flavor known as umami (and sometimes refered to as savory.) In addition to being a receptor for taste our tongue can perceive pressure, temperature and pain. This allows us to experience other aspects of food beyond taste and to be able to identify foods as hot,cold, spicy or as having a particular texture. Some people have more taste buds than others and can be highly sensitive to certain tastes. As we age our taste buds decrease and change and this can explain why we may grow to like foods that we once found distasteful.

LESSON DESCRIPTION

Students will learn how taste receptor cells on the tongue send information to our brains that allow us to interpret the taste of foods. Students will sample 4 foods relative to the first 4 major tastes and report what flavors they associate them with.

LEARNING OBJECTIVES

Content Learning Objectives

Culinary Flavors and Textures

CFT.3.1 Demonstrate an understanding of taste sensations.

CFT.3.2 Describe foods and their flavor attributes.

Life Skills Learning Objectives

Personal Life Skills

PLS.4 Students are active and engaged learners who show up on time prepared to learn and manage their time wisely.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELALITERACY.W.3.2.C Use linking words and phrases (e.g.,also, another, and, more, but) to connect ideas within categories of information.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 4: Students will demonstrate the ability to use interpersonal communication skills to (**CFT.3.2.**) describe foods and their flavor attributes enhance health and avoid or reduce health risks.

Lesson Sequence

Preparation to Cook (3 mins)
Prior to beginning their taste tests students will need to thoroughly wash their hands and then return to their seats.

Recipe Introduction:
Teacher will ask students if they think that everyone's tongue has exactly the same number of tastebuds. When students answer "no", teacher will ask students if they think that the same food might taste different to them as it does to another person. If all people perceive the taste of food differently then will something that tastes "good" or "great" necessarily taste that way to someone else?

Students will be asked to recollect on a dish that they ate recently. Students should visualize the food in their mind and see if they remember how it tastes.

Students will be asked to challenge themselves to describe the food to a classmate without the use of non-specific adjectives such as good, great, or bad. Instead, students should be able to describe the food based on their sensory elements. What did the food look like? What did it feel like in their mouth (i.e. soft, chewy, crunchy. etc.)? What did it smell like? Most importantly, what did it taste like? What adjectives would you use to describe the taste?

Teacher will call on a few students to share their descriptions of food and ask follow up questions based on their description.

Review Familiar Skills (3 mins):
- Students should wash hands for a minimum of 20 seconds with soap and by rubbing both hands together under the water.
- When serving food samples from bowl, students should use the provided spoon or tongs and not pick up or touch any food that might be eaten by another student.
- When participating in the taste test, students should close their eyes and try to focus solely on the food atop their tongue.

Demonstrate New Skills (4 mins):
Demonstrate how to properly use tongs to pick up food from a bowl and place it onto a plate.

- *Five Major Senses:* touch, taste, smell, sight, feel
- *Sensory:* the collection of information from your senses that the brain uses to perceive the world around us.
- *Taste Buds:* nerve endings on the tongue that provide the sense of taste.
- *Receptors:* an organ or cell able to respond to light, heat, or other external stimulus and transmit a signal to a sensory nerve.

Divvy Up Tasks (3 mins):
Assign separate students within each table group to hand out plates, forks, napkins, and to bring the bowls of sample foods to the table.

Explain that students should take a sample of predetermined size (i.e. on piece lime, two tortilla chips) and pass the bowl to the next student. Multiple bowls can make their way around the table in the interest of time.

Cook (15 mins):
Students should sample the four foods (lime, pineapple, tortilla chips, and arugula) in the order that the teacher announces them. Students should pause and reflect on each sample before moving on. Teacher may choose to ask questions about the foods after each tasting or to hold off on receiving student feedback until the end of the tasting.

After students have closed their eyes and focused on the sample food they are tasting students can place any remaining part of the sample on their plate. Students can record their thoughts about the sample in their journal or on a taste test sheet. Students should record which of the major tastes they thought were most prevalent within the food. Students should record whether this flavor profile was what they expected prior to trying the food.

Explain to students that it is okay if they felt that the food had more than one major flavor, such as sour and bitter.

If students finish this before the class is ready to move on, they can write any other observations of the food that are sensory based, such as the texture or mouth feel of the food, what the food smelled like, and what it looked like.

Enjoy (5 mins):
Students will be given time to speak with each other at their tables about how they felt the samples tasted. Students can brainstorm other foods that exhibit the 4 major flavors and think of prepared dishes that may taste like more than one of the major tastes (i.e. a chocolate snack that is sweet and salty, or a stir fry sauce that is sweet and sour.)

Clean Up (10 mins):
Students will be assigned to one of several jobs: Collect dishes and bring to the sink. Wash dishes and place in sanitizer. Remove dishes and dry with cloth. Place dishes on drying rack. Wipe down tables, chairs and other surfaces with towels and spray.

Reflect (10 mins):
Teacher will also ask for volunteers to share if they were suprised by the taste of one of the foods or if the taste they found prevalent was different then what is usually associated with the food (i.e. a lime that tastes sweet.)

CONNECTIONS TO GARDEN LESSONS

Arugula for sampling can be harvested from garden. If the garden has lemon or lime trees they can provide the sour food sample.

Ask students what things in the garden they think might be easily identifiable with one of the major 4 tastes. What are things they might want to plant that are sweet, salty, bitter or sour?

Food waste from the taste test can be collected and brought to the garden for composting.

POSSIBLE EXTENSIONS

BAM! Box: Work with your caregivers to find and record something in your regular diet that fits each of the taste sensations. Share in a future class.

ADDITIONAL RESOURCES

Our Sense of Taste

OTHER COMMENTS

Remember to have students describe future dishes made in future lessons using the major tastes and other sensory information.

RECIPE VARIATIONS: PESTO

Kitchen

NEW! GRADE 3 | SCHOOL PARTNER LESSON PLAN

Grade 3 • 45 mins

ESSENTIAL QUESTIONS

- What is pesto?
- What is it traditionally made of?
- What other things can it be made of?

MATERIALS

- Food processor
- Rubber spatulas
- Ingredients as found in this Basil Pesto recipe
  - If there are students who are allergic to nuts toasted sunflower seeds can be used in place of pine nuts.
  - If basil is out of season, or unavailable, try making the pesto with spinach, kale, or nasturtium leaves.
- Paper boats for serving
- Woven wheat crackers to dip in pesto. Alternatively, cooked pasta can be made to mix pesto into.

VOCABULARY

- Traditional—produced, done or used, in accordance with tradition.
- Tradition—a long established custom or belief that had been passed from one generation to another. (For culinary purposes this custom can be the inclusion of certain ingredients, the method of preparation, or both.)
- Variant—a form or version of something that differs in some respect from other forms of the same thing or from a standard.
- Substitute—to use or add in place of.

PREPARATION (45 MINS)

Instructional Warm-up/Opening: Entry. Hand washing. Greetings.

Teacher asks if any students have prior knowledge or have tried pesto before. Teacher describes the ingredients of traditional pesto, followed by explanation of the many ways that pesto has been adapted (you can even make nasturtium pesto.)

GUIDED PRACTICE

Teacher provides overview of lesson, explaining that students will use the food processor to process spinach, sunflowers seeds and other ingredients to make pesto. (Sunflower seeds are used since DJOD is a nut free campus.)

Dr. John Ochsner Discovery Health Sciences Academy

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

TEACHER BACKGROUND

Pesto is typically a sauce made of fresh basil, garlic, oil, pine nuts, and grated cheese. We will be modifying the recipe to avoid pine nut allergens. Pesto originated in Genoa, the capital city of Liguria, Italy.

LESSON DESCRIPTION

Pesto is easy to make at home! In this lesson, students will learn how to make homemade pesto using fresh ingredients and practice your skills using a flexible recipe.

LEARNING OBJECTIVES

- Define traditional pesto as a sauce of crushed basil leaves, pine nuts, garlic, Parmesan cheese, and olive oil, typically served with pasta.
- Understand that many chefs have experimented with the concept of pesto over the years with many different ingredients such as cilantro, parsley, spinach, and substitutions for the pine nuts and parmesan.
- Identify pesto as a base concept of crushed leaves, and oily nut or seed, parmesan or nutritional yeast, garlic and olive oil.

Content Learning Objectives

Culinary Flavors and Textures

CFT.3.4 Identify flavors, foods, and dishes from other cultures

CFT.4.3 Assess main ingredients, seasonings and dishes of other cultures

CFT.5.2 Explain food traditions of other cultures using sensory language to describe flavor and ingredients

ACADEMIC STANDARD CONNECTIONS

CCSS.ELALITERACY.L.3.1.G Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 4: Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

NOTE:
Although pesto is high in fat, most of that fat is unsaturated. Fats from plants and nuts are believed to have heart health benefits. Besides adding fresh flavor, pesto has health benefits. Its ingredients are part of the heart-healthy Mediterranean diet. Plus, certain compounds in the ingredients may reduce your risk of heart disease, diabetes, and cancer.

Lesson Sequence

Prepare to Cook (5 min)
Students will tie hair back if necessary and wash their hands.

Recipe Introduction:
Teacher asks if any students have prior knowledge or have tried pesto before. Teacher describes the ingredients of traditional pesto, followed by explanation of the many ways that pesto has been adapted (you can even make nasturtium pesto.)

Review Familiar Skills:
Remind students to always wash their hands properly before handling food. Kitchen equipment such as a food processor should be used with adult supervision. Safety always remains a top priority.

Demonstrate New Tools and Skills:
Traditional pesto is commonly made with basil, garlic, pine nuts, olive oil, salt, and parmesan cheese. Today, we will be flexible with our recipe by using alternative ingredients. Instead of pine nuts we will use sunflower seeds. Instead of cheese, some tables will use nutritional yeast. We look forward to trying different varieties.

Divvy Up Tasks:
Students will work in an assembly line to add ingredients to the food processor.

Cook!
Students add to food processor bowl: spinach, and pre-measured amounts of other ingredients. Students blend pesto in processor. If pesto is too dry they add more olive oil. If pesto is too wet more nutritional yeast or parmesan can be added. Students scrape out prepared pesto with rubber spatulas serve on paper boats with several crackers.

Enjoy!
Students enjoy a snack of pesto and crackers. Students describe the taste, and texture of the pesto. Students are asked how they think that the flavor would be changed by having different ingredients in the pesto, specifically greens that are more naturally spicy like mustard or nasturtium, or have a distinct flavor such as basil.

Clean Up:
Students throw away all trash and line up for dismissal.

Reflect:
Students share out whether they cared for the pesto using polite words.

CONNECTIONS TO THE GARDEN

Use basil from the garden. Use pesto as a dip for something ready to harvest from the garden, such as carrot sticks. Bring compost out to the garden.

Ask students to identify other green leaves that are growing in the garden that pesto could be made from, such as spinach, nasturtium leaves, mustard leaves, beet or broccoli greens or kale. Have students looking over a chart of planting and harvesting times for different greens and determine what types of pesto could be made from in season greens throughout different parts of the year.

DIGGING DEEPER EXTENSIONS

Students can interview family members about their experiences with pesto, and what their favorite pesto dish is. Students can inquire with cafeteria staff as to the possibilities of adding a dish including pesto, such as pesto pasta, pesto pizza, or pesto bread to a lunch offered at the school.

ADDITIONAL RESOURCES

Simple Spinach and Basil Sunflower Seed Pesto (Tree Nut Free)
(Variant adapted by Jason Madden from the following two recipes:
- Spinach and Sunflower Seed Pesto (Vegan and Nut Free)
- Emeril's Basil Pesto

INGREDIENTS

- 3 packed cups of spinach and fresh basil leaves (kale can also be substituted for spinach)
- 1 clove of garlic
- ⅓ cups sunflower seeds
- ¼ cup parmesan cheese
- ¼ tsp salt
- ⅛ tsp pepper
- ½ cup Olive Oil
- 1 ½ tablespoons Lemon Juice

DIRECTIONS

In the bowl of a food processor or blender add the spinach, garlic, sunflower seeds, parmesan cheese, salt and pepper and pulse until well combined, but not totally smooth. Slowly drizzle in the olive oil while pulsing. Add lemon juice, salt and pepper to taste.

SWEDISH CUCUMBER SALAD

Kitchen

Grade 3 • 45 mins • Fall

ADAPTED GRADE 3 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
Jane Madden • jane.madden@discoveryhsf.org

ESSENTIAL QUESTIONS

- What are the three rules of knife safety we learned last class?
- Why should we take all knives seriously and treat all knives with respect?
- What are two different basic cuts learned today?
- How do your hands look when in "Bear Claw" and in "Bridge?"

VOCABULARY

- Blade
- Focus
- Distraction
- De-seed

ASSESSMENT

- **Cooking Observational Checklist**
- **Cleaning Observational Checklist**

MATERIALS

Materials for Introduction

- Printed copies of recipe for Swedish Cucumber Salad from Emerils.com
- **Cooks Notes handout**

Equipment

For Each Group of 10

- 10 Vegetable Peelers
- 5 Paring Knives
- 10 Cutting Boards
- 10 Melon Ballers or Spoons
- 2 Colanders
- 2 Large Non-Reactive Bowls
- 2 Whisks
- 2 Measuring Spoons Set
- 2 Liquid Measuring Cups

For Whole Class

- 30 Vegetable Peelers
- 15 Paring Knives
- 30 Cutting Boards
- 30 Melon Ballers or Spoons
- 6 Colanders
- 6 Large Non-Reactive Bowls
- 6 Whisks
- 6 Measuring Spoons Set
- 6 Liquid Measuring Cups

NOTE:
Adapted from **Grade 3 Kitchen Lesson #4: Swedish Cucumber Salad**, pg. 309.

DR. JOHN OCHSNER DISCOVERY HEALTH SCIENCES ACADEMY

CREATED BY
Dr. John Ochsner Discovery Health Sciences Academy in 2022

Ingredients

- Large cucumbers (1 per student)*
- Salt
- White Vinegar
- Apple Cider Vinegar
- Sugar
- Fresh Dill*

* Denotes foods that could be found in the Garden.

Materials for Enjoying the Food

- Plates or bowls for finished salad
- Forks
- Napkins

Materials for Cleaning Up

Sink with dish soap and sponges available. Drying rack. Cloth towels. Cleaning Spray for surfaces.Materials for Enjoying the Food

PREPARATION

Setup for lesson introduction: Print copies of recipes for each student. Pring Cooks Notes handouts for each student. Write the 3 rules of knife safety on the board with key words from each rule removed and _____ in place of the words. *Setup for cooking:* All student cooking tools and materials (except knives) stacked on the end cap or cart at the end of the table for easy distribution. Cucumbers washed and ready to distribute. Ingredients for dressing on the table or end cap. *Setup for enjoying food:* Plates, forks, and napkins counted and stacked in an area of the kitchen classroom that is easily accessible to students. *Setup for cleaning:* 3 compartment sink filled with warm soapy water, clean warm water to rinse, and sanitizer. If 3 compartment sinks are not available, then available sinks are filled with warm soapy water. Sponges available on sides of sink. Folded cloth towels and spray bottles available in an area easily accessible for students.

TEACHER BACKGROUND

While cooking can be a highly engaging and educational activity, it can also be dangerous. This is particularly true when using sharp knives, such as paring knives. Nonetheless, by effectively establishing procedures at the outset, such as a classroom set of "knife safety rules" that are demonstrated by the teacher, and sufficiently supervising students, students can safely use kitchen knives to participate in a wide variety of food preparation activities. We recommend allowing students to work in pairs using 1 knife between the two of them, or even 1 knife per 4 students if this is more in line with the teacher's comfort level. This reduces the number of knives out in the classroom, and allows for easier supervision by the teacher. Another method is to designate one table as a "cutting station" where a limited number of students make cuts under the supervision of a teacher, and the other students work independently on a less dangerous aspect of the cooking lesson, like measuring seasoning or mixing a dressing.

LESSON DESCRIPTION

Students will review and practice safe utilization of paring knives and vegetable peelers while peeling, de-seeding, and cutting cucumbers. After mixing the dressing listed in the recipe students will enjoy eating Swedish Cucumber Salad with their classmates.

LEARNING OBJECTIVES

Content Learning Objectives

Recipe Concepts

RC.3.2 Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment.

Kitchen Tools and Equipment

KTE.3.1-4 Kitchen Tools and Equipment.

Life Skills Learning Objectives

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC STANDARD CONNECTIONS

NGSS Crosscutting Concept: Structure and Function—All organisms have external parts...Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.

Lesson Sequence

Preparation to Cook (3 mins):
Students should tie any long hair back with hair ties to avoid hair touching the cucumbers they are cutting or the dressing they are mixing. Students should wash hands thoroughly for twenty seconds or more at one of the handwashing stations within the classroom. Students should return to their seats.

Recipe Introduction:

- Show students an unpeeled cucumber. Ask students to visualize the inside of the cucumber underneath the peel. What is on the inside of the cucumber? What does the cucumber hold a lot of? Students should be able to identify seeds as being inside the cucumber and that cucumbers are vegetables that hold a lot of water.
- Ask students what happens to water filled vegetables like cucumbers or cabbage when salt is applied to them and they are placed in colander. Scaffolding may be required, but students and teacher together should come to the conclusion that water will be removed from the salted vegetable and drip through the colander into the bowl.
- Inquire whether any students have experience removing the water from vegetables for recipes such as cole slaw. Have students share.
- Ask students to share any experiences they have had making homemade salad dressing. What type of dressing was it? What were the ingredients?

Review Familiar Skills:

- Ask students to think back to the 3 rules of knife safety that they learned last class. Students can briefly discuss what they remember within their table groups.
- Call on individual students to complete the rules as listed on the board by identifying missing words, and to provide a brief summary of what the rule means in practice.
- Build upon student summaries so that whole class has a proper review of the 3 rules of Knife Safety:
  - Focus—there should be a direct line of sight from your eyes to what you are cutting. You are not talking, looking in a different direction, or allowing yourself to be DISTRACTED by anything else in the room. Your thoughts and attention should be solely centered on the cut you are making.
  - Knife on the cutting board, always—(A) When you are cutting food the food should always be on a cutting board large enough that the no part of the knife is touching another surface during the cut. (B) Anytime you are not making a cut your knife should be laying down on the cutting board. Anytime you feel DISTRACTED, or feel the need to stop cutting food, place the knife on the board until you are ready to cut again. Never hold or wave a knife around when talking. Avoid taking the knife from the table unneccessarily.
  - Use Bear Claw, and Bridge—To avoid cutting the tips of your fingers while using a sharp knife, rest the flat part of the knife's BLADE against the flat front of your knuckles. This is commonly refered to as the Bear Claw. When making a long, lengthwise cut, grip the edges of the food you are cutting with your index finger and thumb in a wide curve (like a C on it's side) and place the knife in the space between finger and thumb to cut. This is commonly refered to as the Bridge.
- On a cutting board that the whole class can see, make a small demonstration for each rule by making cuts on a peeled cucumber. Demonstrate using the Bridge cut to slice cucumber in half lengthwise, and the Bear Claw to protect tips of fingers while making slices on the halved cucumber.

Demonstrate New Skills:

- Introduce the vegetable peeler to class. Remind students that even if it seems harmless, a vegetable peeler can be dangerous if not used correctly. Students should peel with the blade moving away from their body, and use long slow strokes with moderate pressure to avoid cutting hands or fingers.
- Introduce the melon baller to class. Explain that part of the cooking activity today will involve DE-SEEDING the cucumber and then demonstrate using the melon baller to scoop the soft seeded center of the halved cucumber out, leaving the cucumber in a U shape. This can also be demonstrated by using a large spoon.

Divvy Up Tasks:

- Explain that students will be working in groups of two. Each student will have their own cucumber, cutting board, peeler and spoon or melon baller. Each pair of students will share one knife.
- Explain Rally Coach assignment. The student who isn't using the knife to make cuts is the Rally Coach for their partner. The Rally Coach is also intently focused on the cuts their partner is making. The Rally Coach provides polite, productive feedback to their partner in the moment, such as "curl your fingers into the Bear Claw" or "put the knife into the space between your finger or thumb." If the student cutting is adhering to the 3 rules of knife safety and doesn't require constructive feedback, then the Rally Coach can offer words of encouragement like "great job" or "you are really focused." Students will alternate turns making cuts with the knife and playing the role of the rally coach.
- After explaining Rally Coach and assigning partners, give each student an assignment to help prep the space for the cooking activity. Assignments can include: passing out cutting boards, passing out peelers, passing out spoons or melon ballers, passing out cucumbers, and putting compost buckets on tables. Only the Teacher should distribute knives.

Cook:

- Students use peeler in safe fashion to peel their cucumbers.
- Students place cucumber peels into compost container.
- Students take turns cutting their cucumbers in half lengthwise utilizing the Bridge cut. When it isn't their turn to use the knife students act as Rally Coach and provide feedback.
- Students use melon ballers or large spoons to remove seeds from cucumbers as demonstrated earlier.
- Students place seeds parts of cucumber into compost bucket.
- Students take turns cutting thin "half-moon" slices from their de-seeded cucumber halves utilizing their Bear Claw for safety. When it isn't their turn to use the knife students act as Rally Coach and provide feedback. During this time circulate and observe students' adherence to the 3 rules of knife safety while cutting. Record observations into the Cooking Observational Checklist.
- Students combine cut cucumbers into colanders on table. Salt is shaken over the cucumbers and the colander is placed in a larger bowl to collect water. Depending on schedule and time allotted students can place the colander and bowl into refrigerator overnight and finish recipe in next lesson. If this is not possible, then the cucumbers will drain while the students clear their tools and cutting boards, and work on creating the salad dressing.
- While the cucumbers drain, students follow recipe to create the salad dressing. Students will measure and combine both vinegars and sugar, then whisk until the sugar is completely dissolved.
- The cucumbers are transferred to a non-reactive bowl where they are tossed with the dressing and fresh dill (from the garden if possible.)

Enjoy:

- The salad is served onto the students' plates.
- Students enjoy their salad at their table with their classmates.
- Students are encouraged to try at least a small amount of the salad, even if they are unsure that they will care for it.

Clean Up:

- Assign each student a task to perform during clean up. Tasks should include: Collecting all silverware and dishes and walking them to the sink. Cleaning the dishes and silverware with soap and a sponge before placing them in the sanitizer. Removing dishes from sanitizer and drying with a dish towel before placing on the drying rack. Removing dried dishes from the drying rack and returning them to their designated places. Wiping down table tops and other surfaces with spray and cloth towel. Sweeping floors.
- During clean up observe students and assess their performance of their assigned task. Record observations into the Cleaning Observational Checklist.

Reflect:

- Students should fill out their Cooks Notes handout with feedback about the recipe, including whether they liked it, what they would change, and ways they could include local produce or produce from the garden.
- Call on a few students to share out their opinions.
- Collect the Cooks Notes sheets.

CONNECTIONS TO GARDEN LESSONS

During this lesson, compare guidelines for safe knife use with guidelines for safe garden tool use.

POSSIBLE EXTENSIONS

Cafeteria: Invite in your food service director to discuss and demonstrate knife safety.
Community: Invite in a local chef to demonstrate knife safety.
Classroom: Make the connection between structures and functions of the knife parts (i.e. an edge to cut, a handle to hold) with other examples of structure and function, such as structures of a seed or insect

ADDITIONAL RESOURCES

- There's A Chef In My World by Emeril Legasse
- If a television or smartboard is available in your classroom search for a video on basic knife cuts and correct knife grips on Youtube.com or another source.

OTHER COMMENTS

Encourage students to relay the 3 rules of knife safety to caretaker or guardian at home and to practice knife cuts under the supervision of their caretaker or guardian.

BASIL PESTO

Kitchen

NEW! GRADES 3–5 | SCHOOL PARTNER LESSON PLAN

INGREDIENTS

- 2 cups fresh basil leaves
- ½ cup grated Parmesan cheese
- ⅓ cup pumpkin seeds or sunflower seeds
- 2 garlic cloves
- ½ cup extra virgin olive oil
- Juice of ½ lemon
- Pinch of salt + pepper to taste

HOOK/INTRO (5 MINUTES)

- Begin by engaging the students with a discussion about different types of pasta dishes they may have tried or heard about.
- Show images or visuals representing Italy and pesto, and ask students if they can guess the connection between the two.
- Explain that pesto pasta is a popular dish in Italy and that today they will be learning how to make it themselves.

DEMO/LESSON (5 MINUTES)

Share interesting facts about pesto and Italy, such as:

- Pesto originated in Genoa, Italy and is traditionally made with fresh basil, Parmesan cheese, pine nuts (or walnuts), garlic, and olive oil.
- The word "pesto" comes from the Italian word "pestare," which means "to crush" or "to pound," referring to the traditional method of making pesto using a mortar and pestle.
- Pesto is a versatile sauce that can be used not only for pasta but also as a spread, dip, or topping for various dishes.

COOKING/INSTRUCTIONALLY EMBEDDED ASSESSMENT

- Instruct each group to measure and gather the ingredients required for the pesto sauce.
- Combine the basil leaves, grated Parmesan cheese, pumpkin seeds or sunflower seeds, and garlic cloves into the molcajete and grind.
- Add olive oil and mix.
- Add a pinch of salt and pepper to taste.

ASSESSMENT/WRAP UP

"I tried it and"

ADAPTED

GRADE 3

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
6. Cooking with What's in Abundance	Home Economics **(HE)**	**HC.3.2** Demonstrate an understanding of local and seasonal foods. **HE.3.3** Describe abundance and the causes of abundance in the garden **KTE.3.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Identify something in abundance in the garden. Have students define local and seasonal and discuss why this crop is in abundance (season, planting choices, etc.). Search for that crop on Emerils.com to find a recipe that uses it. Then work with students to harvest and prepare the recipe. If you have time to split this lesson across 2 sessions, have your students research and select the recipe themselves.	**PLS.2** Students are able to express empathy and caring for themselves, others, and the environment.	Start this lesson in the garden so that abundant produce drives recipe selection.	**BAM! Box:** Bring home a bag of produce that was in abundance in the school garden together with a recipe you found to use that produce. Prepare it together with your caregivers.	**NGSS Science and Engineering Practice:** Asking Questions and Defining Problems See TEKS on following page.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Note: This lesson was adapted to include Texas Essential Knowledge Skills and utilizes the recipe for **Emeril's Homemade Sweet and Spicy Pickles,** pg. 627.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

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TEKS ALIGNEMENT FOR ELF LESSONS USED

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

3.5 Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:

(B) describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container.

3.3 Number and operations. The student applies mathematical process standards to represent and generate fractions to solve problems. The student is expected to:

(E) represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operation

Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Revised 2022

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(C) explain that the unit fraction 1/b represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero number

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

4.5 Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:

(B) compare and contrast a variety of mixtures, including solutions

5.5 Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:

(C) identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.

Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Revised 2022

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CUBAN BLACK BEANS AND STEAMED RICE

Kitchen

NEW! GRADES 3—5 | SCHOOL PARTNER LESSON PLAN

HOOK/INTRO

Recipe exploration:

- Project recipe on screen, printed copies, cook books, cooking magazines
- Look at recipes from home (have extra in case they don't bring) or cookbooks mingle—compare and contrast OR look at flow of a recipe—how many people it serves, ingredients, procedure—and connect to math—if we have this many students, how much should we multiply, etc.; Make a recipe together.
  - What is step #1?
  - What measuring utensils needed?
  - What are the ingredients?
  - Serving size—How many people will this recipe feed?
  - What elements of math are you noticing in this recipe?

DEMO/LESSON

- Introduce today's recipe: Cuban Black Beans & Steamed Rice.

COOKING/INSTRUCTIONALLY EMBEDDED ASSESSMENT

- Every table group is in charge of an ingredient.
- Every table group adds it to the pot of beans at the front.

CLEANING PROCEDURES

- 3 Bin System: Rinse, Wash, Sanitize, dry?
- Group job rotations—scrubbing dishes, rinsing dishes, sanitizing?, dry, sweep (4 students with brooms, 4 with dust bins), wiping down tables, collect compost, picking up scraps off the floor

ASSESSMENT/WRAP UP

- Assessment Chart: Tried it, not my favorite; Liked it; Loved it!
- Share next week recipe

FAST FINISHERS/EXTENSIONS

- Provide cookbooks, food magazines for students to flip through

NOTE:
Have recipes printed, have cooking books out, share recipes kids might have brought out. Check in with teachers about what math they are/have learned.

FOOD MEMORIES AND PROCEDURES

Kitchen

ADAPTED GRADES 3—5 | SCHOOL PARTNER LESSON PLAN

PREPARATION

- Set up seating chart with teacher
- Lay out nametags for students assigned spots

FLOW

- Students come in and sit down at their spots
- 8 mins: Call for attention and review kitchen agreements
- Write Kitchen Agreements up to reference
- Ask students for examples—T-P-S?
- 15 mins: Food Memory
- Drawing
- Interviews: Interview Question Cards
- Make a food memory together throughout the spring!
- 5 mins: Handwashing
- 10 mins: Knife Skills
- 15 mins: Chop & Taste—toast
- 15 mins: Cleaning
- Assign student jobs (2 students/table/job)
- Maybe make each seat—a vegetable and each table a number
- "All broccolis are sweeping today"
- Reward to use dishwashing station in the back—must show responsibility
- 2 mins: Assessment

HOMEWORK

Bring a recipe from home! Practice procedures & knife skills & cleaning—cutting jicama and cucumber with Tajin

HOOK/INTRO

- Introduce students to the idea of sharing food memories by sharing a personal story of your own.
- Encourage students to draw their favorite food memory.
- Model a food memory interview for students.
- Pair students to share food memories with interview questions.
- Interview Question Cards
- Say: We're going to be making a food memory today and for the next few weeks together. Before we do, let's make sure to review our community agreements and knife skills.

NOTE:
Adapted from **Grade 6 Kitchen Lesson #1: Welcome to the Kitchen**, pg. 538.

CREATED BY
Starlight School in 2023

DEMO/LESSON

- Review Community Agreements
- Bear claw: Review bear claw. Give students a "quiz" where they tell you if you are doing it right or wrong. E.g. Bear claw but your thumb is sticking out.

COOKING/INSTRUCTIONALLY EMBEDDED ASSESSMENT

- Cutting Jicama: Teacher peels the jicama ahead of time. Students: Cut in half. Cut into steaks. Cut into little rectangles.
- Cutting Cucumber: Peel some strips off (optional). Cut out circles.

CLEANING PROCEDURES

- 3 Bin System: Rinse, Wash, Sanitize, dry?
- Group job rotations—scrubbing dishes, rinsing dishes, sanitizing?, *needs policy for sharps* drying dishes, sweep (4 students with brooms, 4 with dust bins), wiping down tables, collect compost, picking up scraps off the floor

ASSESSMENT/WRAP UP

- Assessment Chart: Tried it, not my favorite; Liked it; Loved it!
- Share next week recipe (encourage students to bring recipe from home)

KALE CHIPS

Kitchen

NEW! GRADES 3–5 | SCHOOL PARTNER LESSON PLAN

FLOW

Harvest & Taste Raw v. Cooked Kale Chips Recipe
Sequence Images
5 senses exploration—cooked v. raw
- Class Agreements
- Sequence
- Harvest
- Handwash
- Prep and Cook

HOOK/INTRO (20 MIN)

Hold up a raw piece of kale and a kale chip. Ask "what do you notice?" (I notice... I wonder... It reminds me of... Style of questions) Compare and contrast worksheet.

DEMO/LESSON (15 MIN)

Tasting the kale chip, then asking "how do you think this was made?"
Sequencing—put real pictures of kale chips cooking in order
- Kale in the garden growing
- A bunch of kale harvested
- Washing kale—kale in a colander
- Drying drying rack
- Cooking sheet with olive oil
- In process—wilting kale
- Finished product—kale chips!! YUMM

COOKING/INSTRUCTIONALLY EMBEDDED ASSESSMENT 20 MIN (5 MINUTE HARVEST, 15 WASHING, DRYING ETC.)

Harvest & dry kale together. Pause and walk through instructions to make kale chips for the next class.

ASSESSMENT/WRAP UP

Write recipe card + add your own flavoring ideas.

WORKSHEET IDEA

Sequencing from raw kale —> kale chip (real pictures—to see transformation through cooking); also the compare and contrast.

ADAPTED

GRADES 3–5

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
3. Knife Cuts	Recipe Concepts **(RC)** Kitchen Tools and Equipment **(KTE)**	**RC.5.2** Demonstrate knowledge of basic recipe techniques using kitchen tools and equipment. **KTE.5.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Demonstrate how to cut a zucchini in half long-ways using a small chef's knife. Hand out knives and have students practice on a zucchini of their own. Then have them put the flat surface of the zucchini down, and demonstrate each of the following knife cuts, giving students time to practice on a fraction of zucchini afterwards: cube, rough chop, fine chop, dice, and slice. Discuss when each cut might be important. **Caution**	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use zucchini from the garden. Bring compost out to the garden.	**Cafeteria:** Invite your food service director to discuss and demonstrate knife safety.	**NGSS Crosscutting Concept:** Structure and Function See TEKS on following page.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Note: This lesson was adapted to include Texas Essential Knowledge Skills for Grades 3-5 and utilizes the recipe **Emeril's Homemade Sweet and Spicy Pickles**, pg. 627.

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Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Revised 2022

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ADAPTED

GRADES 3–5

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
11. Label Reading	Health Concepts **(HC)**	**HC.3.6** Read and interpret a food label	**Cooking Concept Lesson:** Ask students to bring 2 nutrition labels into class with them. Demonstrate how to identify the components of a nutrition food label. Have students explore, comparing and contrasting the labels from highly processed food items to those of minimally processed food items. Make sure you have extra nutrition food labels to use as examples in case students forget or there aren't enough minimally processed / whole food items represented. Have students elaborate, journaling about the difference between the labels, providing prompts.	**PLS.5** Students develop the ability to make informed and responsible decisions.	During this lesson, search the garden for growing sources of carbohydrates, such as grains, fruits and vegetables.	**Community:** Video a student-led tour of the bakery section of the grocery store, describing the different options available and the health benefits.	**CCSS.ELA-LITERACY.RI.3.9** Compare and contrast the most important points and key details presented in two texts on the same topic. See TEKS on following page.	**National Health Education Standard 3:** Students will demonstrate the ability to access valid information, products, and services to enhance health. **National Health Education Standard 5:** Students will demonstrate the ability to use decision-making skills to enhance health.

Note: This lesson was adapted to include Texas Essential Knowledge and Skills and utilizes the recipe **Maple-Buttery Corn Muffins**, pg 602.

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RECIPE MEASUREMENTS AND AGUA FRESCAS

Kitchen

Lesson Sequence

NEW! GRADES 3—5 | SCHOOL PARTNER LESSON PLAN

Engage **Ignite Interest (5 minutes):**

- Hold up a Large mason jar full of water and a measuring cup.
- Ask students to estimate how many cups of water are inside and share out to the class.

Explore **Stir Discoveries (10 minutes):**

- Give each table group a measuring set including: measuring cups and spoons of differing amounts, a cup of water and a tray to contain any spillages.
- Invite students to explore how many tablespoons fit into a cup, or how many teaspoons fill up a tablespoon...not every group will have the same measuring tools.
- If time allows, groups could trade measuring tools and continue to explore.

Explain **Clarify New Ideas (5 minutes):**

- Students share out to the rest of the class about what they noticed when they were measuring with different cups/spoons.
- "When I was measuring water, I noticed that_____"

DEMO/LESSON: MAKING AGUA FRESCAS

- Provide ingredient options such as lemons, limes, cucumbers and mint. Students write their own recipe from a template.
- Incorporate measurements when designing recipe

COOKING/INSTRUCTIONALLY EMBEDDED ASSESSMENT

- Students make their agua frescas in table groups in mason jars
- Sample each other's recipes

CLEANING PROCEDURES

- 3 Bin System: Rinse, Wash, Sanitize, dry?
- Group job rotations—scrubbing dishes, rinsing dishes, sanitizing?, dry, sweep (4 students with brooms, 4 with dust bins), wiping down tables, collect compost, picking up scraps off the floor

ASSESSMENT/WRAP UP

- Assessment Chart: Tried it, not my favorite; Liked it; Loved it!

CREATED BY
Starlight School in 2023

ADAPTED

GRADES 3–5

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
12. Student Plays	Health Concepts **(HC)**	**HC.5.1** Summarize seed to plate process.	**Cooking Concept Lesson:** Have students elaborate on kitchen and garden learning to date by having them write short plays summarizing the process from growing to preparing to eating something this year. Evaluate their understanding of this process as they perform plays for a live audience (such as a younger class).	**CLS.2** Students cooperate and communicate well with each other. **PLS.6** Students actively seek creative and resourceful solutions.	Perform the plays in the garden. Use real props from the garden, such as plants and tools.	**Community:** Invite community partners to come see the performances and learn more about the garden and kitchen program.	**CCSS.ELA-LITERACY.SL.5.4** Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace. See TEKS on following page.	**National Health Education Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

Note: This lesson was adapted to include Texas Essential Knowledge Skills for Grades 3-5 and utilizes the recipe **Maple-Buttery Corn Muffins**, pg 602.

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ADAPTED

GRADES 3–5

Lesson # & Title	Topic	Content Learning Objective(s)	Suggested Lesson Activity	Life Skills Learning Objective(s)	Connections to Garden Lessons	Possible Extensions	Academic Standard Connections	Health Standard Connections
4. Sweet and Spicy Pickles	Culinary Flavors and Textures **(CFT)** Food Preparation **(FP)**	**CFT.4.2** Create basic flavor combinations using international cuisines. **FP.4.2** Describe and perform food preservation processes such as drying, freezing, pickling. **RC.4.2** Demonstrate the ability to follow recipe instructions with increased independence. **KTE.4.1-4** Kitchen Tools and Equipment	**Cooking Lesson:** Discuss the value of preserving seasonal foods that are in abundance in order to enjoy them year-round. Have students prepare **Emeril's Homemade Sweet and Spicy Pickles, *Emerils.com***. As students work, have them save and freeze onion and garlic peels for making vegetable stock in the winter. Demonstrate how to process the jars, focusing on food safety, and then demonstrate how to fill and process a jar of pickles before having them do the same in small groups. Follow the USDA's Complete Guide to Home Canning to preserve jam safely. Let pickles age at least 2 weeks before enjoying.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.	Use cucumbers, onions, and garlic from your garden. Bring compost out to the garden.	**Community:** Make jars of pickles as gifts for loved ones. **BAM! Box:** Bring home a jar of pickles and come up with a fun way to enjoy them, such as on crackers or sandwiches. Take photos and share your pickle ideas with the class.	**CCSS.ELA-LITERACY.RI.4.3** Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text. See TEKS on following page.	**National Health Education Standard 7:** Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Note: This lesson was adapted to include Texas Essential Knowledge Skills for grades 3–5.

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(B) describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container.

3.3 Number and operations. The student applies mathematical process standards to represent and generate fractions to solve problems. The student is expected to:

(E) represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operation

Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Revised 2022

3.3 Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to:

(C) explain that the unit fraction 1/b represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero number

Texas Essential Knowledge and Skills (TEKS) for Science, Elementary, Revised 2022

4.5 Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:

(B) compare and contrast a variety of mixtures, including solutions

5.5 Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:

(C) identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.

Texas Essential Knowledge and Skills (TEKS) for Mathematics, Elementary, Revised 2022

5.3 Number and operations. The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to:

(L) divide whole numbers by unit fractions and unit fractions by whole numbers

EMPANADAS AND JAM

Kitchen

NEW! GRADE 4 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Empanadas and Jam		
Grade: 4	**Lesson Number: 4**	
Estimated Time: 45 mins.	**Season:** Fall	**Type:** Cooking
Teacher Background and Lesson Description:		
Lesson Objectives: FP.4.3 Demonstrate ability to make simple recipes inspired by world cultures. CFT.4.1 Review basic sensory attributes of flavors KTE.4.4 Practice various tool techniques with increasing independence.		
Academic Standard Connections: Social Studies Cultural Traditions Social Studies Diversity and Community	**Health Standard Connections:** National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.	
Essential Questions: How can we adapt recipes to make them easier to facilitate? How can we make fruit jam?		
Vocabulary: empanadas, Latin America, Hispanic Heritage Month, jam		

Materials:

Lesson Introduction:

- *Waiting for the Biblioburro - Monica Brown*
- Discuss and share how the book was inspired by a librarian near La Gloria, Colombia who used a biblioburro to bring books to children

Equipment:

Empanadas

- Empanada molds
- 4 cans of refrigerated honey butter biscuits (5 count)
- Forks
- Pastry brush

Berry jam:

- Cutting boards and paring knife
- Canning funnel
- Jars for jam
- Candy or instant-read thermometer
- Oven mitts or pot holders
- Juicer or reamer
- Measuring cups
- Grater or rasp
- Pot

Ingredients:

Empanadas

- 4 cans of refrigerated honey butter biscuits (5 count)
- 2 eggs for egg wash

Berry jam:

- 4 pints fresh strawberries, halved
- 5 cups of sugar
- Juice and zest of one lemon

Materials for Enjoying Food:

- *Plates & forks*

Materials for Cleaning Up:

- Trash, recycling, and compost bins

Assessment:

Observations

Teacher Prep:

- Open the biscuit containers and have them ready on plate for students to separate
- Have empanada molds readily available
- Have equipment ready to go for cooking lesson

Additional Resources:

- Waiting for the Biblioburro

Prep to Cook:

- Have students tie hair back, wash hands (review steps if necessary), put on aprons (if relevant) and find their cooking station (these may be pre-assigned).

Recipe:

- Empanadas:
  - Heat oven to 375°F. Lightly grease cookie sheet with shortening or cooking spray. Separate dough into 10 biscuits. Press or roll each to form 5-inch round. Place on cookie sheet.
  - Bake 10 to 14 minutes or until golden brown after filled with filling
- Jam:
  - 1.Combine the fruit, sugar, lemon juice and lemon zest in an 8-quart stock pot. Stir to dissolve and then bring to a boil over medium-high heat. Maintain at a full rolling boil until the jell point is reached, 220 degrees F. This may take a while—depending on your cooktop. Use your thermometer to make sure it comes up to the proper temperature. While the mixture cooks, stir it occasionally so the fruit does not stick to the bottom of the pan. You can test the jam by spooning a small amount onto a cold plate; if it has cooked long enough, a skin will form on the surface as it cools.
  - 2. Remove jam from the heat, skim off any impurities that have risen to the top.
  - 3. (**for leftover**) Using a canning funnel, ladle the fruit into the hot sterilized jars. Fill the jars, leaving 1-inch from the top of the jars for headroom, and wipe the rims well with a clean damp paper towel. 4. Seal the jars. They should pop and seal as they cool if they seal properly. (Any jars that do not seal properly should be refrigerated and used within several weeks.)

Review Familiar Skills:

- Ask students what tools they have used so far in the kitchen (at school or at home) and write a list on a piece of chart paper in one color.
- Then ask students what other tools they can think of that chefs use and add that to the chart paper in a different color. If no one mentions knives, add knives to the list.

Enjoy:

- Students may have to take empanadas back to their classroom to allow to cool down

Clean Up:

- Have a couple of students pick up dirty knives, cutting boards, and measuring cups from each table/ station and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

Connections to Garden Lessons:

Use fresh fruit from the garden.
As students enjoy, trace ingredients back to their source. Bring compost out to garden.

Possible Extensions:

Classroom: Read From Strawberry to Jam by Lisa Owings. Then create your own version of a "How to" Guide based on your own recipe. Community: Interview local restaurants on how their menu changes through the seasons.

FRENCH GREEN SALAD & TINY TOMATO TOASTS *Kitchen*

NEW! GRADE 4 | SCHOOL PARTNER LESSON PLAN

Lesson Title: French Green Salad & Tiny Tomato Toasts		
Grade: 4	**Lesson Number: 6**	
Estimated Time: 45 mins.	**Season:** Fall	**Type:** Cooking

Teacher Background and Lesson Description:
We'll be traveling to France and Italy as we get inspiration for our green salad and tiny tomato toasts for this lesson!
Map the European countries and share the quick info located under materials.

Lesson Objectives:
FP.4.1 Demonstrate knowledge of how to wash and store fruits and vegetables.
RC.4.2 Demonstrate the ability to follow recipe instructions with increased independence.
KTE.4.1 Kitchen Tools and Equipment

Academic Standard Connections:
4.1Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
(A) apply mathematics to problems arising in everyday life, society, and the workplace
4.3 Number and operations. The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value. The student is expected to:
A&C: represent a fraction as a sum of fractions,(C) determine if two given fractions are equivalent using a variety of methods

Health Standard Connections:
National Health Education Standard 7: Students will demonstrate the ability to practice healthenhancing behaviors and avoid or reduce health risks.

Essential Questions:
What continent do France and Italy belong in?
Why is it important to wash some fruits and vegetables?

Vocabulary: Italy, country, France, whisking, strainer

NOTE: This lesson was creating using **Green Salad with French Dressing**, pg. 630.

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CREATED BY
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Materials:

Lesson Introduction:

- Revisit KWL chart
- France:
  - Official language: French
  - Capital: Paris
  - Currency: Euro
  - Official name: French Republic
  - Population: 67,364,357
- Italy:
  - Official language: Italian Republic
  - Capital: Rome
  - Currency: Euro
  - Official name: Italian Republic
  - Population: 62,246,674

Equipment:

Green Salad & French Dressing:

- Measuring cups and spoons
- Medium nonreactive mixing bowl
- Paring knives
- Salad tongs or wooden spoons for tossing salad
- Whisk
- Large salad bowl
- strainer

Tiny Tomato Toasts:

- Paring knives
- Cutting board
- Bowl (large and small)
- Pastry brush
- Baking tray
- Large spoon to scoop

Ingredients:

Green Salad w/ French Dressing (8-10 servings)

- ¼ cup red wine vinegar
- ¼ cup lemon juice
- 2 teaspoons Dijon mustard
- 2 teaspoons paprika
- 1 cup olive oil
- 12 cups mixed salad greens or spring mix
- 1 small red onion, to slice
- 2 to 3 medium tomatoes, cored and cut into wedges
- 2 cups croutons, for garnish

Tiny Tomato Toasts: (about 2 dozen)

- 12 cherry tomatoes
- 1 clove garlic, crushed
- 3 tablespoons olive oil
- 1 teaspoon balsamic vinegar
- 6 basil leaves
- Salt and pepper
- 1 baguette
- Sea salt
- Freshly ground black pepper

Materials for Enjoying Food:

- *Plates or cups for snack*

Materials for Cleaning Up:

- Trash, recycling, and compost bins

Teacher Prep:

- Pre-cut baguettes, lay out the ingredients and preheat oven to 350 degrees

Additional Resources:

- Converting equivalent fractions:
  - Lay out recipe measurements and have students generate equivalent fractions for olive oil, vinegar, lemon juice etc.
- Have students find the difference between the population of the countries.

Prep to Cook:

- Have students wash hands and put their hair up.
- Explain the reasoning we wash vegetables, fruits and greens is because of the soil the resides in the fruits as well as when they are displayed in the grocery store, many people put them back.
- Lay out ingredients along with measurement spoons, cups, and cutting boards.
- Split students up into groups for each recipe: cutting and measuring, mixers,

Recipe:

- Before students begin cutting the tomatoes, assign some vegetable/fruit washers within the groups.
- Green Salad with French Dressing:
  - Students chop up the tomatoes into small wedges and can do a rough chop of the greens & measure out the wet ingredients. Students can chop up onions if they are ready for that.
  - Make the dressing by whisking together the vinegar, lemon juice, Dijon mustard and paprika until well blended. Slowly whisk in olive oil until emulsified.
  - To make the salad, combine the greens, sliced red onion and tomato wedges into a large wooden salad bowl, and drizzle with enough of the dressing to lightly coat the salad. Top with croutons and serve.
- Tiny Tomato Toasts:
  - Tomato topping:
    - Cut the tomatoes into quarters and put them in a bowl.
    - Add garlic, 1 tablespoon of olive oil, balsamic vinegar, and chopped basil. Stir well, then add salt and pepper to taste. Set aside.
  - Arrange pre-cut baguette into ½ -inch slices on baking sheet. Measure the remaining 2 tablespoons of olive oil into a small bowl. Add a pinch of salt. Paint the oil on the bread on both sides with a pastry brush.
  - Bake until the bread is lightly toasted (350 degrees), about 7 minutes per side. Use tongs to turn the bread over once during baking.
  - Take toasts out and have students spoon the topping onto each toasts just before serving.

Possible challenge: challenge students to use other spoons and find equivalent fractions for measurements given (ex: ¼ = __ eights of a cup)

Review Familiar Skills:

- Review how to handle a paring knife and review safety precautions with students.
- Review to double check they use the correct measuring spoons and cups to ensure deliciousness.

Enjoy:

- Have plates ready for students, remind students to not wreck someone's yum!

Clean Up:

- Have a couple of students pick up dirty knives, cutting boards, and measuring cups from each table/ station and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

Connections to Garden Lessons:

Use lettuce from the garden. Add in other produce growing in the garden. Garnish with herbs and/or edible flowers growing in the garden. Bring compost out to the garden.

Possible Extensions:

Connection: Students do a quick-write of the similarities between French and Italian cuisine.

Students find how many cups and teaspoons are needed to make __ amount of servings.

Tiny tomato toasts:

FRIED RICE

Kitchen

NEW! GRADE 4 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Fried Rice (3-4 servings)		
Grade: 4	**Lesson Number:** 12	
Estimated Time: 45 mins.	**Season:** Winter	**Type:** Cooking

Teacher Background and Lesson Description:
Fried rice is a popular part of Eastern and Southeast Asian cuisines. As a homemade dish, it's typically made with ingredients left over from other meals, which means there are countless variations. Fired rice is thought to have originated in the city of Yangzhou in the eastern province of China.

Lesson Objectives:
CFT.4.2 Create basic flavor combinations using international cuisines.
CFT.4.3 Assess main ingredients, seasonings and dishes of other cultures.

Academic Standard Connections:
4.1 Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
(A) apply mathematics to problems arising in everyday life, society, and the workplace
4.2 Number and operations. The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value. The student is expected to:
(F) compare and order decimals using concrete and visuals models to the hundredths;
4.4 Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:
(D) use strategies and algorithms including standard algorithm to multiply up to a four-digit number
(F) use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor

Health Standard Connections:
National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.

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? Essential Questions:

How have people used food leftovers to create a tasty dish?

Vocabulary: Chine, fried rice, cuisines, leftovers, wok

Materials:

Lesson Introduction:

- China
  - Official Name: People's Republic of china
  - Official language: Standard Chinese and Mandarin
  - Capital: Beijing
  - Currency: Yuan (~0.14 USD)
  - Fun facts:
    - One third of China's land area is made up of mountains.
    - Mount Everest sits on the border between China and Nepal

Equipment:

- Knife
- Chopping board
- Frying pan or a wok
- Spatula
- plate

Ingredients:

2 medium carrots
2 spring onions
3 tablespoons butter
2 eggs (one serving can be made without it in case of allergies)
2 tablespoons frozen green peas
One medium bowl of cooked rice
2 tablespoons soy sauce

Materials for Enjoying Food:

- *Plates or cups for snack*

Materials for Cleaning Up:

- Trash, recycling, and compost bins

Teacher Prep:

- Have ingredients set up for groups to get started

+ Additional Resources:

- Math connection:
  - Converting Yuan to USD
    - ____ Yuan = ____ USD
    - Convert to Yuan: 5, 10, 842, 5,928,

Prep to Cook:

- Have students sanitize and put hair up.
- Review expectations for cutting.

Recipe:

- Have students chop the carrots into small cubes and slice the spring onions
- In pan, with adult supervision, place over medium heat, add a tablespoon of butter and let it melt. Add the eggs and scramble them until they are fully cooked, then put them on a side plate.
- Let the rest of the butter melt in the same pan. Add the carrots, spring onions, and peas. Cook for 5-6 minutes, until vegetables are a bit softer.
- Add the rice and eggs and mix everything together with the spatula.
- Cook for 2-3 minutes, add the soy sauce and cook for another 2 minutes and serve.

Review Familiar Skills:

- Ask students what tools they have used so far in the kitchen (at school or at home) and write a list on a piece of chart paper in one color.

Enjoy:

- Enjoy a spoon of fried rice. Please be cautious of those who have egg allergies.

Clean Up:

- Have a couple of students pick up dirty knives, cutting boards, and measuring cups from each table/ station and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

Connections to Garden Lessons:

Use herbs from garden and take the compost pile.

GERMAN APPLE PANCAKE

Kitchen

NEW! GRADE 4 | SCHOOL PARTNER LESSON PLAN

Lesson Title: German Apple Pancake* ***(contains dairy and egg)***
4 servings (1 large pancake)
Two recipes = 2 large pancakes would feed about 10 kids

Grade: 4	**Lesson Number: 5**	
Estimated Time: 45 mins.	**Season:** Fall	**Type:** Cooking

Teacher Background and Lesson Description:
****this recipe contains eggs and dairy: in case of allergies, eggs can be substituted with unsweetened apple sauce (¼ cup = 1 egg) or plant-based egg (JUST Egg), milk can be substituted with almond or oatmilk at all times, 1 cup of butter is equivalent to one cup of shortening or pumpkin puree**

This super-huge pancake is fit for a royal! It's made from a simple batter that is poured over the sautéed apples and then baked for a puffy treat you eat hot from the oven. It is traditionally eaten with confectioners' sugar, but kick yours up with maple syrup, if you like! The Germans call this "appelpfannkuchen."

Lesson Objectives:
CLS.5 Students participate in the development of agreed upon protocols and behaviors for the garden and kitchen environments.
CFT.4.2 Create basic flavor combinations using international cuisines.
KTE.4.1-4 Kitchen Tools and Equipment

Academic Standard Connections:
CCSS.ELALITERACY.SL.4.1 Engage effectively in a range of collaborative discussions (oneon-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly

Health Standard Connections:
National Health Education Standard 7: Students will demonstrate the ability to practice healthenhancing behaviors and avoid or reduce health risks.

Essential Questions:
What are traditional foods?
Where is Germany located and what stories do we know come from Germany?

Vocabulary: Germany, appelpfannkuchen (apple pancake), pancake, whisk, food substitutes,

NOTE:
This lesson was created using **German Apple Pancakes**, pg. 624.

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CREATED BY
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Materials:

Lesson Introduction:

- Germany
  - Locate on map
  - Share that Hansel & Gretel, Sleeping Beauty and Little Red Riding Hood are famous tales from Germany
- Official language: German
- Capital: Berlin
- Currency: Euro
- KWL chart to be revisited at end of lesson if time permitted
- Fun facts:
  - The largest train station in Europe is in Berlin, Germany
  - German is the third most widely taught language in the world
  - There are more than 20,000 castles in Germany

Equipment:

- Measuring cups and spoons
- Paring knife
- Apple corer (or pre-sliced apples)
- Whisk
- Wooden spoon
- Heavy ovenproof 12-inch skillet
- Cutting board
- Vegetable peeler
- Large mixing bowl
- Sifter
- Oven mitts or pot holders

Ingredients:

- 4 large eggs, lightly beaten*
- 1 cup whole milk*
- 1 cup all-purpose flour (gluten free can be an option)
- ½ teaspoon vanilla extract
- 3 tablespoons unsalted butter*
- 2 large apples, peeled, cored, and thinly sliced
- ⅛ teaspoon ground nutmeg
- Pinch of salt
- ⅓ cup packed light brown sugar
- Confectioners' sugar
- Maple syrup (optional)

*see dairy note under teacher background

Materials for Enjoying Food:

- *Plates and silverware for class*

Materials for Cleaning Up:

- Trash, recycling, and compost bins
- Dishwashing stations and equipment

Teacher Prep:

- Have world map out or globe and have samples or books of Red Riding Hood, Hansel & Gretel, Sleeping Beauty

Additional Resources:

- Germany NewsELA
- Childrens book about Germany
- Storyteller (have students act out) - Hansel and Gretel
- Storyteller - Red riding Hood
- Red Riding Hood - have books available

Prep to Cook:

- Have students wash hands and put hair up.
- Preheat oven to 450 degrees F
- Have 12 inch skillet out (one skillet = 1 pancake)
- Have mixing bowls prepared

Recipe: *Recipe link*

- 1.In a large mixing bowl, combine the beaten eggs, milk, flour, and vanilla, and whisk until just blended, being careful to not overmix. Set the batter aside to rest at least 20 minutes.
- 2. Position rack in center of oven
- 3. In a heavy ovenproof 12-inch skillet, melt 2 tablespoons of the butter over high heat. Add the apples, cinnamon, nutmeg, and salt and cook, stirring frequently, until the apples are soft and lightly golden around the edges, about 6 minutes.
- 4. Add the brown sugar and cook, stirring, until the apples are caramelized and very soft, 2 to 3 minutes longer. Add the remaining tablespoon of butter and stir to melt.
- 5. Working very quickly, pour the batter evenly over the top of the apples. Using oven mitts or pot holders, transfer the skillet to the oven and bake until the pancake is golden brown and puffed, about 15 minutes. Don't be alarmed when you see the edges of the pancake puff up over the top of the pan—this is supposed to happen!
- 6. Using oven mitts or pot holders, remove the skillet from the oven and serve the pancake immediately, sprinkled with sifted confectioners' sugar or drizzled with maple syrup, as desired.

Review Familiar Skills:

- Ask students what tools they have used so far in the kitchen (at school or at home) and write a list on a piece of chart paper in one color.
- Then ask students what other tools they can think of that chefs use and add that to the chart paper in a different color.

Enjoy:

- Two recipes (2 large pancakes) would be plenty for 10 kids to taste
- Recommend making one allergy-friendly pancake

Clean Up:

- Have a couple of students pick up dirty knives, cutting boards, and measuring cups from each table/ station and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

Connections to Garden Lessons:

Use fresh fruit from the garden.
As students enjoy, trace ingredients back to their source. Bring compost out to garden.

Possible Extensions:

Students write their own version of red riding hood to fit Texan culture

newsela

Countries Of The World: Germany

By National Geographic Partners, adapted by Newsela staff on 04.02.18
Word Count **628**
Level **530L**

Neuschwanstein Castle is located in southern Germany in the state of Bavaria. It was commissioned by Ludwig II, the King of Bavaria, in the late 1800s. The castle was not completed when he passed away in 1886. Photo from: Pixabay.

Germany is a country in Europe. The region has many interesting landscapes. Mountains and hills rise in the center and south of the country. River valleys cut through these areas. In the north, the land flattens into a wide plain. Germany's coastline is on the North Sea.

Nature

Germans take pride in protecting their natural areas. Their country has almost 100 nature reserves. The Black Forest is the largest of them. Germany also does a lot to protect its wildlife.

Two areas of Germany are especially unspoiled. The northern coast is home to much sea life. Birds wade along its shores. In

Source credit: Newsela, Countries of the World

the south, big mammals wander in the forests. They include wildcats, boar and ibex, a kind of wild goat.

Image 1. Map 1: mapchart.net/Newsela staff.

People And Culture

About 1 in 10 people in Germany comes from a foreign country. The Turkish people are the country's largest minority group. Turkish people come from the country of Turkey.

The arts are very important in Germany. The country has a tradition of talented artists. It has been called the "Land of Poets and Thinkers." Their contributions to music are well known. Great German composers include Bach and Beethoven.

Government And Economy

Germany is a parliamentary democracy. A parliament is a group of lawmakers. In Germany, the parliament has two houses: the Bundesrat and Bundestag. Its members vote to pass laws. The leader of the government is called the chancellor.

Today, Germany belongs to the European Union. The EU is a group of 28 countries in Europe. They work together on problems involving money. Germany has become a leading member of the EU.

History

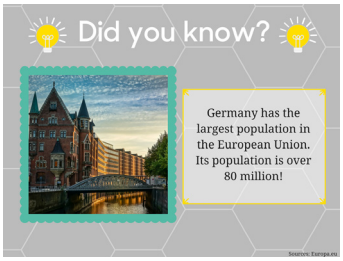

Image 2. Newsela staff.

Germany has a long history. The first people to move into northern Europe arrived about 10,000 years ago. People who spoke an early form of German came later. They arrived about 5,000 years ago.

Early Germany was a patchwork of small states. They were ruled by dukes and kings. In 1871, though, these states were unified. They became one connected state. Otto von Bismarck is considered the father of Germany. He led efforts to create the new nation.

In the late 19th century, Germany wanted more influence in Europe. It also wanted to set up colonies in Africa and Asia. It took land on these continents to make those colonies.

Other countries in Europe were not happy with Germany. Its actions led to disagreements and anger. Eventually, this led to World War I. This big global conflict began in 1914. It lasted four years. Millions of people died in the war. In the end, Germany lost. The war ended in 1918. That was 100 years ago.

In 1933, a man named Adolf Hitler rose to power in Germany. He was the leader of the Nazi Party. In 1939, the Nazis invaded Poland. This attack started World War II.

During the war, Nazis tried to destroy the Jewish people. They built prison camps during the war. Millions of Jewish people were murdered in these camps.

Source credit: Newsela, Countries of the World

The war ended in 1945. Germany was defeated. The United States, United Kingdom and other countries on their side had won the war.

After World War II, Germany was divided into two parts. One was West Germany. The other was East Germany. The country became part of a struggle between the Soviet Union and Western powers. The Soviet Union was a group of countries led by Russia. The Western powers included the United States and the United Kingdom. This conflict was called the Cold War. It lasted 44 years. In 1989, East and West Germany were reunited. The Cold War came to an end soon after.

Image 3. Map 2: mapchart.net/Newsela staff. Note: The country of Russia spans two continents: Europe and Asia.

Source credit: Newsela, Countries of the World

GETTING STARTED WITH PARING KNIVES

Kitchen

ADAPTED GRADE 4 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Getting Started with Paring Knives		
Grade: 4	**Lesson Number: 2**	
Estimated Time: 45 mins.	**Season:** Fall	**Type:** Cooking Concept

Teacher Background and Lesson Description:

While cooking can be a highly engaging and educational activity, it can also be dangerous. This is particularly true when using kitchen knives. Nonetheless, by effectively establishing procedures at the outset and sufficiently supervising students, students can safely use kitchen knives to participate in a wide variety of food preparation activities. When students are using knives, particularly for the first time, we recommend having them work in groups of 10 or fewer with 1 or more adults. You can do this by running a cutting station while other students work independently on a separate project, or by inviting other adult volunteers to supervise small groups.

In this lesson, students will explore tools that are used for different tasks including those they have used in the garden and the kitchen. They will then learn about knives—their different parts and how they function as simple machines. Then, the techniques of "claw and slaw" and "low and slow" will be modeled by the teacher before the students utilize knives to slice fruits to make a fruit salad and eat as a snack.

Lesson Objectives:

RC.4.2 Demonstrate the ability to follow recipe instructions with increased independence.
KTE.4.1. Use tools introduced in previous grades independently.
KTE.4.2. Name, identify, locate, and safely use new tools.
KTE.4.3. Demonstrate proper care and storage of tools/equipment.

Academic Standard Connections: Structure and function of the kitchen	**Health Standard Connections:** National Health Education Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks

Essential Questions:

How are tools used to make tasks easier?
How can we be mindful with our bodies and energy level to keep ourselves safe when using tools?

NOTE: Adapted from **Grade 3 Kitchen Lesson #3: Getting Started with Paring Knives**, pg. 516.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

CREATED BY
Cunningham Elementary School in 2023

🔤 **Vocabulary: Knife, Wedge, Tip, edge, handle, Slice (verb), slice (noun)**

🍴 **Materials:**

Lesson Introduction:
- *The parts of a Kitchen Knife*
  *one per student

Equipment:
- Cutting boards (1 per student)
- Paring knives (1 per student)
- Small bucket to hold clean knives (1 per cook station)
- Small bucket to hold dirty knives (1 per cook station)

Ingredients:
- Watermelon
- Pineapple
- Cantaloupe
- Grapes
- Strawberries

**recommend buying pre-cut portions so that students can practice cutting fruits into smaller portions*

Materials for Enjoying Food:
- *Plates or cups for snack*
- *Plastic forks*

Materials for Cleaning Up:
- Trash, recycling, and compost bins
- Dish soap
- Scrubber (for dishes)
- Drying rack
- Sponge or rag(for counters)
- Broom and dustpan

✅ **Assessment:**
Observational checklist

⏰ **Teacher Prep:**
- Gather materials, equipment, and ingredients listed above.
- Distribute fruit across tables with labels (in case of student allergies)

➕ **Additional Resources:**
- The Tool Book - Gail gibbons, noticing tools that different professionals use to help them complete their tasks.

🔥 **Prepare to Cook:** *Ignite Interest*
- Have students tie hair back, wash hands, put on aprons (if available) and go to their station.

🔪 **Recipe Introduction: (5 minutes)**
- Our goal today will be to effectively and carefully use paring knives to create a scrumptious fruit salad. You have some pre-chooped fruits, to make a fruit salad, we will cut the fruit piece smaller.
- Model how to carefully and safely pick up each fruit and make the cut.

Demonstrate New Tools and Skills: *Clarify New Ideas*

- Explain that a **knife** is a useful tool in the kitchen for cutting. The knife itself is a **wedge**, which is a type of simple machine. When a wedge is placed on an object and force is applied, the wedge drives the object apart into two.
- 2. Reiterate to students that to use tools, it is important to understand how they work and how to use them safely, particularly if the tools are sharp and could be dangerous, like knives. Explain to students that using knives is a privilege, and if anyone is playing with them or not being safe, that privilege will be taken away in order to keep everyone safe.
- 3. Show students one of the knives that they will be using and draw a model of it on chart paper. Identify the parts (structures) and label on the model.
    - **tip**
    - **edge**
    - **handle**
- Explain that the only part of the knife that students will touch is the handle. It may be useful to wrap the handle in a certain color electrical tape as a visual cue

Divvy up tasks: *Watch It Rise*

- Make sure knives are out of reach of students while you introduce and discuss them. Demonstrate how to pick up and hold a knife properly, then return it to its "home base" (the cutting board). Model for students—does the knife go on the counter? on the floor? on your notebook? on a friend? on your lap? (No, only on the cutting board). They only other place it will go is in the cleaning bucket when students are completely finished with their task.
- Also, demonstrate how their other hand will be holding their fruit or vegetable like a "claw" with their fingers tucked. Students can remember these 2 cues by the phrase "claw and saw." Another helpful phrase to encourage a safe motion with the knife is "low and slow." Students may have seen cooking shows where chefs use a fast chop but remind students that in our class we will be using a "claw and saw" and will be doing it "low and slow."
- Request that one student per each group of 10 retrieve cutting boards for all of the students at their table. When everyone has returned to their seats, deliver a bucket of knives to each table.
- Demonstrate for students how to slice their banana approximately every ½ inch. Introduce the vocabulary **slice** which is a specific way to cut something (can be used as either a verb or a noun to describe the result of this cut). On your cue, provide time for students to slice their fruits and then carefully place their knives in the bucket when they are finished.

Evaluate: *Reflect*

- As students are slicing their fruits, remember to use the cooking and cleaning observational checklist to assess students' mastery of cooking skills.
- Review with students:
  - How are tools used to make tasks easier?
  - How can we be mindful with our bodies and energy level to keep ourselves safe when using tools?

Clean Up:

- Provide students with time in their small groups to divide then execute tasks before returning their attention back to the whole group.
- As students work in their small groups, remember to use the cooking and cleaning observational checklist to assess students' mastery of cleaning skills.

Connections to Garden Lessons:

Compare guidelines for safe knife use with guidelines for safe garden tool use.

Possible Extensions:

Cafeteria: Invite in your food service director to discuss and demonstrate knife safety.

Community: Invite in a local chef to discuss and demonstrate knife safety.

Classroom: Make the connection between structures and functions of the knife parts (i.e., an edge to cut, a handle to hold) with other examples of structure and function, such as structures of a seed or insect.

HUMMUS & PITA CHIPS

Kitchen

ADAPTED GRADE 4 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Hummus & Pita Chips		
Grade: 4	**Lesson Number: 8**	
Estimated Time: 45 mins.	**Season:** Winter	**Type:** Cooking

Teacher Background and Lesson Description:
Hummus is popular throughout the Middle East and beyond. Though I don't usually advocate using canned beans or peas, chickpeas are one of the few exceptions, and especially for this use, they work just great. Just make sure to drain and rinse them well. I like to eat my hummus with pita chips—but it also goes great with bagel chips or fresh veggies. If you're a lemon lover like I am, you might want to squeeze a little extra lemon juice over the top of the hummus just before serving!

Lesson Objectives:
KTE.4.2. Name, identify, locate, and safely use new tools.
KTE.4.4 Practice various tool techniques with increasing independence.

Academic Standard Connections:
4.2 Number and operations. The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value. The student is expected to:
(F) compare and order decimals using concrete and visual models to the hundredths
4.3 Number and operations. The student applies mathematical process standards to represent and generate fractions to solve problems. The student is expected to:
(G) represent fractions and decimals to the tenths or hundredths as distances from zero on a number line
4.4 Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:
(D) use strategies and algorithms to multiply up to a four digit number by a one-digit number

Health Standard Connections:
National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.

NOTE: Adapted from **Grade K Kitchen Lesson #16: Mmmm-Hmmm Hummus**, pg 269.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

CREATED BY
Cunningham Elementary School in 2023

? Essential Questions:
What is the connection between hummus and pita chips?

Vocabulary: Egypt, Syria, food processor, tahini, pita bread/chips

Materials:

Lesson Introduction:

- Egypt
  - Official language: Arabic
  - Official name: Arab Republic of Egypt
  - Capital: Cairo
  - Currency: Egyptian pound (~0.032 USD)
  - Fun fact: Without the Nile River, Egypt would be desert
- Syria
  - Official language: Arabic
  - Official name: Syrian Arab Republic
  - Capital: Damascus
  - Currency: Syrian pound (~0.00039 USD)

Equipment:

Hummus:

- Small strainer
- Food processor
- Small bowl for chickpea liquid
- Bowl for hummus

Pita chips:

- Broiler
- Pizza wheels
- Cutting boards
- Baking sheet
- Pastry brush
- Kitchen scissors
- small/medium bowl
- Oven mitts

Ingredients:

Hummus: (6-8 servings)

- 15-oz can of chickpeas
- 1 garlic clove
- ½ teaspoon salt
- 3 tablespoons tahini paste
- 2 tablespoons lemon juice (about half a lemon)
- 1 tablespoon of olive oil

Pita chips: (3-4 servings)

- 2 pita pocket breads
- ¼ cup olive oil
- 1 garlic clove, crushed
- ½ teaspoon salt

Materials for Enjoying Food:

- *Plates or cups for snack*

Materials for Cleaning Up:

- Trash, recycling, and compost bins

Teacher Prep:

- As students walk in, have them sanitize and get themselves ready to cook to allow time for the pita chips and hummus to cool.
- Then go back and introduce the origins of hummus and pita chips.

+ Additional Resources:

- Math connection:
  - Have students compare the equivalency of USD dollars to the currency in both countries
  - Have students calculate how many Syrian or Egyptian pound would equal 15, 48, 100 & 382 dollars.

Prep to Cook:

- Set oven to broil for pita chips.
- Wash hands and put hair up.
- Cutting boards and materials should be ready to go once students arrive to allow time for hummus to thicken in fridge and pita chips to cool.
- Introduce hummus and vegetables as a healthy, well rounded snack. Review how to use colanders, and then have students wash and scrub carrots, or other vegetables you'll be dipping in hummus.

Recipe:

Hummus:

- Drain the canned chickpeas, saving the liquid in a measuring cup or bowl.
- Peel the garlic clove and place it into a food processor. Process until finely minced.
- Add the chickpeas, salt, tahini, lemon juice, and oil to the food processor. Purée the mixture.
- Turn off the food processor and add 1 tablespoon of the reserved liquid from the chickpeas. Purée until the consistency is nice and creamy.
- You can add up to 2 more tablespoons of the chickpea liquid if you want your hummus extra creamy. The hummus will thicken in the fridge.
- Transfer the hummus into a bowl and can be drizzled with a bit of olive oil to serve with pita chips.

Pita chips:

- Cut open each pita pocket with kitchen scissors.
- Place the pitas, one at a time, on a cutting board. Using a pizza wheel, cut into eight triangles (this can be divided into groups and take turns cutting).
- Lightly oil a baking sheet. Arrange the triangles in a single layer on the baking sheet.
- Mix the oil, garlic, and salt in a shallow bowl.
- Using a pastry brush, paint the oil mixture evenly over the pita triangles.
- Broil the pita chips for a minute or two, until they are light brown and crispy. Watch closely because they burn fast!

Review Familiar Skills:

- Review knife and pizza wheel safety procedures.
- How to use a pastry brush

Clean Up:

- Have a couple of students pick up dirty knives, cutting boards, and measuring cups from each table/ station and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

MANGO LASSI

Kitchen

NEW! GRADE 4 | SCHOOL PARTNER LESSON PLAN

Lesson Title: Mango Lassi *2-3 servings* **		
Grade: 4	**Lesson Number: 11**	
Estimated Time: 45 mins.	**Season:** Winter	**Type:** Cooking

Teacher Background and Lesson Description:

**contains dairy products: milk can be substituted for oat milk or almond milk, yogurt can be substituted with coconut milk

This Nepalese style smoothie is popular throughout India and Nepal. Lassi yogurt drinks are cool and creamy. The earliest mentions of Lassi have been found in ancient Indian texts dating as far back as 1000 BC.

Lesson Objectives:

FP.4.2 Describe and perform food preservation processes such as drying, freezing, pickling.

Academic Standard Connections:

4.1 Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
(A) apply mathematics to problems arising in everyday life, society, and the workplace
4.2 Number and operations. The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value. The student is expected to:
(C) compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols <,>,=
4.5 Algebraic reasoning. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:
(A) represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity

Health Standard Connections:

National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.

CUNNINGHAM ELEMENTARY SCHOOL
AUSTIN Independent School District

CREATED BY
Cunningham Elementary School in 2023

? Essential Questions:

When is it best to buy frozen or fresh fruits and vegetables?

Vocabulary: frozen, fruits, Nepal, lassi, abundance

Materials:

Lesson Introduction:

- Nepal
  - Official name: Federal Democratic Republic of Nepal
  - Official language: Nepali, English
  - Capital: Kathmandu
  - Currency: Nepalese rupee (~0.0076 USD)
  - Area: 54,363 miles (slightly larger than the state of Arkansas)
  - Fun fact: Mount Everest, the tallest mountain in the world, rises to 29,035 feet
  - Eight of the world's ten highest mountain peaks are in Nepal

Equipment:

For whole class:

- Blender (can be handheld)
- Cups for smoothie

Ingredients:

- 2 cups frozen or fresh mango
- 1 cup plain yogurt
- ½ cup milk
- ¼ cup sugar (or less or more to taste)
- Ground cardamom (optional)

Materials for Enjoying Food:

- *Plates or cups for snack*

Materials for Cleaning Up:

- Trash, recycling, and compost bins

Teacher Prep:

- Have stations prepared for students as they come in
- Optional to have frozen vs fresh mangoes available for students to use (depending on the season)
- Open up discussion of why we would choose frozen versus fresh mangoes in the recipe

+ Additional Resources:

- Math connection (4.1A, 4.5A & 4.2C)
  - See practice on last page

Prep to Cook:

- Have students wash hands and put hair up
- Have a station with alternative dairy products ready as well as a station with dairy
- Split students into groups and have them gather their ingredients.

Recipe:

- Place the mango, yogurt, milk and sugar into blender
- Put on the lid and blend until nice and creamy, about a minute or two. Pour into cups. Sprinkle each cup with a pinch of cardamom, if student likes

Review Familiar Skills:

- Ask students what tools they have used so far in the kitchen (at school or at home) and write a list on a piece of chart paper in one color.
- In thinking about seasons, a

Enjoy:

- Students choose which smoothie option they want to try and enjoy!

Clean Up:

- Have a couple of students pick up dirty knives, cutting boards, and measuring cups from each table/ station and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

Name:_____

Tallest Mountain Peaks

Mountain	Height (ft)
Mt. Everest	29,035
K2	28,251
Kangchenjunga	28,169
Lhotse	27,940
Makalu	27,825

1)What is the combined height in feet of the five tallest mountains? *Use a strip diagram to solve*

2)What is the difference between the Mt. Everest and Makalu in feet?

2(a) What is difference between them in inches (in.)?

3) What is the difference in height between the second tallest mountain and the 4th talles mountain?

4) Why is it best to sometimes purchase frozen fruits vs fresh? Give an example.

NEW! GRADE 4 | SCHOOL PARTNER LESSON PLAN

Lesson Title: S'mores (4 s'mores)		
Grade: 4	**Lesson Number: 14**	
Estimated Time: 45 mins.	**Season:** Spring	**Type:** Cooking
Teacher Background and Lesson Description: For an all-american summer treat, melt some marshmallows and chocolate chips on top of a graham cracker in the toaster oven (or oven). The first published recipe for "some mores" appeared in a Girl Scouts handbook in 1927.		
Lesson Objectives: KTE.4.1. Use tools introduced in previous grades independently. KTE.4.2. Name, identify, locate, and safely use new tools. KTE.4.3. Demonstrate proper care and storage of tools/equipment.		
Academic Standard Connections: 4.1 Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: (A) apply mathematics to problems arising in everyday life, society, and the workplace	**Health Standard Connections:** National Health Education Standard 7: Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.	
Essential Questions: What is a cultural dessert in the United States?		
Vocabulary: cultural, United States, s'mores, adapt		

Materials:

Lesson Introduction:

- United States
  - Official Name: United States of America
  - Official language: no official language 🙂
  - Capital: Washington, D.C.
  - Currency: U.S. dollar
  - Fun facts:
    - The U.S. is more than twice the size of the European Union
    - There are 50 states & Texas is one of them 🙂

Equipment:

- Baking sheet
- Parchment or wax paper
- Oven mitts or pot holders

Ingredients:

1 cup Mini marshmallows
1 cup chocolate chips
4 graham crackers, broken in half

Materials for Enjoying Food:

- *Plates or cups for snack*

Materials for Cleaning Up:

- Trash, recycling, and compost bins

Teacher Prep:

- Have materials ready for when students come in

Additional Resources:

- Have students share "campfire" stories while they enjoy their s'mores

Prep to Cook:

- Set up materials in stations

Recipe:

- Place 2-4 marshmallows and chocolate chips on four of the graham cracker squares.
- Set the graham cracker squares on the toaster oven tray or a baking sheet.
- Toast until the marshmallows and chocolate chips melt. Watch them closely, since they can burn quickly!
- When the marshmallows are lightly toasted and the chocolate is gooey, they're done!
- Remove from the toaster oven and top each s'more with a second graham cracker. Enjoy!

✨ **Review Familiar Skills:**

- Ask students what tools they have used so far in the kitchen (at school or at home) and write a list on a piece of chart paper in one color.

😋 **Enjoy:**

- Enjoy the s'mores and ensure students wash hands after. If students choose not to eat a s'more, they can deliver it to a staff member in the office to limit waste.

🗑️ **Clean Up:**

- Have a couple of students pick up dirty knives, cutting boards, and measuring cups from each table/ station and place them in the sink. Explain to students that the teacher/TA will clean them later, but we are taking a respectful approach.
- Have two more students wipe down counters, and two others use the broom and dustpan to make sure the floor is clean.
- Model the appropriate clean-up instructions (including collecting food scraps for the compost bucket) and have each student practice following the instructions as they finish eating.

⛓️ **Possible Extensions:**

Have students go home and come back with recipes for graham crackers.

EGG CHEMISTRY

Kitchen

Grade 5 • 110 mins • Fall, Winter, Spring

NEW! GRADE 5 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
Noah Welsh • noah_welsh@bcaemail.org

ESSENTIAL QUESTIONS

- How do we know if something is a chemical or physical change

VOCABULARY

- Chemical change
- Chemical reaction
- Physical change
- Atoms
- Molecules

ASSESSMENT

Students will write a claim-evidence-reasoning response at the end of class where they explain whether a given phenomenon illustrated in a table is a chemical or physical change.

- **Observational Checklist**

MATERIALS

Materials for Introduction

- Kahoot Game: Is this a chemical reaction?
- Scrambled Egg Recipe

Equipment

For each group of 10

- Whisk
- Spatula
- Pan
- Bowl

For whole class

- Plates
- Forks!

Ingredients

From store

- Butter
- Eggs

From garden

- Garnishes including but not limited to chives or green onions

Materials for Enjoying the Food

- Salt
- Pepper
- Plates
- Forks

Materials for Cleaning Up

- Sponge/cleaning brush
- Paper towels
- Soap
- Trash can

CREATED BY
Belle Chasse Academy in 2022

PREPARATION (ESTIMATED TIME VARIES)

Purchasing of eggs and butter. Setting up cooking stations with materials.

TEACHER BACKGROUND

The teacher should understand the difference between chemical and physical changes as well as how to properly cook eggs.

LESSON DESCRIPTION

Students will start a lesson with a Kahoot game where they have to identify whether various pictures illustrate chemical or physical changes. They will then learn to cook eggs and see how this is a perfect example of a chemical reaction.

LEARNING OBJECTIVES

- I can conduct an investigation to determine whether the mixing of two or more substances results in new substances.
- I can follow multi-step directions.
- I can work in a team.

Life Skills Learning Objectives

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC STANDARD CONNECTIONS

5-PS1-4: Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

HEALTH STANDARD CONNECTIONS

5-E-1.1: Analyze elements of effective decision-making model. Student will have to work on decision making strategies as they cook eggs in teams.

Lesson Sequence

Prepare to Cook (15 mins):
Before beginning to prepare students will play a Kahoot game where they have to identify whether various images reflect physical or chemical changes. Student will then wash their hand,
tie their hair up, and put aprons on.

Recipe Introduction (5 mins):
Students will orally compare and contrast raw eggs and scrambled eggs.

Review Familiar Skills (5 mins):
Students will review how to beat eggs, use a spatula, keep eggs from burning, and basic safety techniques.

Demonstrate New Skills (15 mins):
The chef or the teacher will perform a quick step by step walk through of how to scramble eggs. The chef or teacher will specifically demonstrate the skills.

Divvy Up Tasks (5 mins):
Students will choose team roles for egg preparation.

Cook (15 mins):
Students will cook eggs. Early finishers will proceed ahead to the next cleaning step.

Enjoy (10 mins):
Eggs will be plated and garnished with miscellaneous vegetables or herbs from the garden.

Clean Up (10 mins):
Students will split into washing and drying groups and clean the dishes. Other students will sponge the surfaces and throw away trash.

Reflect (15 mins):
Students will write a claim-evidence-reasoning response at the end of class where they explain whether a given phenomenon illustrated in a table is a chemical or physical change.

CONNECTIONS TO GARDEN LESSONS

Eggs will be garnished with vegetables and herb from the school garden.

POSSIBLE EXTENSIONS

Students are now capable of cooking eggs for parent and community involvement events.

ADDITIONAL RESOURCES

Pictures of miscellaneous chemical and physical changes to be used in the introductory Kahoot game.

OTHER COMMENTS

This lesson will take a little more than one class period so the claim-evidence-write portion of the lesson will likely need to take place on the second day.

NEW!

GRADE 5

Lesson	Topic	Content Learning Objective(s)	Lesson Activity	Life Skills Learning Objective(s)	Academic Standard Connections	Health Standards
Menu Development	Create a recipe to scale	Design a pizza creation using fractions	Engage—problem posed to students—create a representation to prove their answer. Explore—Fraction War game cards. Explain—Would You Rather Have statement and use fraction circles. Elaborate—Word problems for students to create on paper plates. Evaluate—Students will create actual pizza according to their plate and see if it matches the order.	**CLS.1** Students demonstrate problem solving and resolve conflict as a team.	**CCSS.MATH. CONTENT.4.MD.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	

CREATED BY
Belle Chasse Academy in 2020

QUESADILLAS

Kitchen

Grade 5 • 35 mins • Fall, Winter, Spring

ADAPTED GRADE 5 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY

Lola Bloom • lbloom@dcbilingual.org

ESSENTIAL QUESTIONS

How can we work together to make a meal?

ASSESSMENT

- **Observational Checklist**

MATERIALS

Materials for Introduction

- Recipe poster

Equipment

For each group of 10

- Platter
- Knives
- 3 bowls

Ingredients

- Tortillas
- Cheese
- Vegan cheese
- Oil
- Salt
- Tomatoes from the garden
- Cilantro
- Limes
- Pepper
- Jalapeño
- Onion

Materials for Enjoying the Food

- Plates
- Napkins

Materials for Cleaning Up

- Paper towels

PREPARATION

- Gather materials, equipment, and ingredients.
- Chop a variety of seasonal vegetables, including at least 1 onion.
- Divide the vegetables, the chopped onion, and the grated cheeses each into bowls.
- Recruit an adult volunteer to heat quesadillas or to support a student volunteer in heating quesadillas.

TEACHER BACKGROUND

Since many of the ingredients are already prepared, this is an assembly lesson that will focus on team building. Each student will have a role in the process, so make sure to identify roles ahead of time (i.e. table setter, recipe reader, measurer, cleaner, etc). The steps to making a salsa and a quesadilla are very straightforward, but prepare a visual poster for students to reference. This is an introductory lesson to making food in the kitchen. As students learn to work with each other and trust the process, more cooking skills will be introduced.

NOTE:
Adapted from **Grade 5 Kitchen Lesson #5: Fiesta Quesadillas with Simple Salsa and Holy Moly Guacamole**, pg. 532.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2022

LESSON DESCRIPTION

Students will work together to prepare quesadillas at their tables and salsa. There are time limits to be able to eat in class, so it is important that students follow directions and help each other out.

LEARNING OBJECTIVES

Life Skills Learning Objectives

Personal Life Skills

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

Lesson Sequence

Prepare to Cook (7 mins):
Wash hands, put on aprons, tie hair back.

Recipe Introduction (10 mins):
Explain to students they will be making Quesadillas with Simple Salsa and their first task will be assembling quesadillas.

Provide each table of 10 students with a bowl of sautéed vegetables, a bowl of chopped onions, and a bowl of grated cheese (each with a serving spoon). Also, provide each table with a platter and 8 (6-inch) tortillas. Each table will also get salsa ingredients.

Share visual of recipe with tables.

Review Familiar Skills (2 mins):
Review safe food handling practices and knife skills with students.

Demonstrate New Skills (5 mins):
Explain to students that each table will have some students working on the quesadillas and some working on the salsa. Divide each table group into 2 smaller groups of 5, one that will work on the salsa and one that will work on the quesadilla.

Model for students how to assemble quesadillas by layering cheese, onions, and vegetables on a tortilla before layering another tortilla on top. Request that students arrange assembled quesadillas on the platter, and when all are complete, deliver to the stove.

Divvy Up Tasks (10 mins):
Have students work as a team to assemble 4 quesadillas and carefully deliver the quesadillas from their table to the counter by the stove to be heated on the stove by an adult or by a student volunteer with the help of an adult.

The salsa team at each table will follow the salsa recipe and assemble using mis en place ingredients. Once the quesadillas and the salsa are done, set the prepared food aside and students will begin clean up.

Cook (10 mins):
An adult or supervised student volunteer will cook the quesadillas at the stove after each group sends a representative with their platter.

Enjoy (10 mins):
Once the quesadillas are cooked, an adult will help serve them to the tables and students will set tables, serve salsa.

Clean Up (5 mins):
Students clean plates as they line up at the door.

Reflect (5 mins):
Class conversation questions: Would you make this at home? What do you like about the recipe? What would you change? How did you help each other make the recipe? Who would you like to shout out?

POSSIBLE EXTENSIONS

Invite the kitchen team to demonstrate other salsa recipes.

QUICK PICKLES

Kitchen

40 mins • Fall

NEW! GRADE 5 | SCHOOL PARTNER LESSON PLAN

ESSENTIAL QUESTIONS

• How do different cultures preserve produce?

MATERIALS

• Carrots
• Cucumbers
• Peppers (bell peppers or any other variety)
• Radishes
• Vinegar (preferably white or apple cider vinegar)
• Water
• Salt
• Sugar (optional)
• Mason jars or containers with lids
• Cutting boards
• Knives (ensure appropriate safety measures)
• Measuring cups and spoons
• Bowls
• Paper towels or kitchen towels
• Labels and markers

VOCABULARY

• Brine

ASSESSMENT

• Observation, Finished product

PREPARATION (30 MINS)

Set up each station with the tools and ingredients necessary for the recipe. Pre-wash and peel vegetables.

TEACHER BACKGROUND

Practice the recipe independently to work through the process and timing. Review various pickling recipes from different cultures.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2023

LESSON DESCRIPTION

Pickling is a fun and delicious way to preserve and enjoy raw vegetables. Students will practice cutting and measuring skills and learn a simple process for pickling vegetables.

LEARNING OBJECTIVES

- Students will be able to understand the process of making quick pickles using various vegetables and will have the opportunity to make their own quick pickles.

Content Learning Objectives

Food Preparation

FP.4.1 Demonstrate knowledge of how to wash and store fruits and vegetables.

FP.4.2 Describe and perform food preservation processes such as drying, freezing, pickling.

HEALTH STANDARD CONNECTIONS

3-5.5.7.12 Plan or prepare a nutritious snack and justify its nutritional value.

Lesson Sequence

Engage **Ignite Interest:**
Present the students with cucumbers, carrots, radishes, and peppers; and a jar of pickles. On whiteboard, do a quick class vote: Which would you rather eat? One of the vegetables or the pickles? Tell the class that we are going to do this vote again after we complete the recipe.

Explore **Stir Discoveries:**
Show the students the materials that they will be using today and remind them of safe kitchen practices (washing hands, knife skills, careful measuring).

Explain **Clarify New Ideas:**
Explain that quick pickling is a method of preserving vegetables by using vinegar, salt, and water. Discuss the benefits of quick pickling, such as enhancing flavors, increasing the shelf life of vegetables, and providing a healthy snack option. Provide each group with the assigned vegetables and the necessary tools, such as cutting boards and knives. Demonstrate how to slice the vegetables into desired shapes, such as rounds, sticks, or thin slices, ensuring appropriate safety measures are followed.

Elaborate **Watch It Rise:**

Brine Preparation (5 minutes) Instruct the students to gather bowls and measuring cups. Explain that the brine is a mixture of vinegar, water, salt, and optionally sugar for flavor balance. Provide the measurements for the brine: 1 cup vinegar, 1 cup water, 1 tablespoon salt, and 1 tablespoon sugar (optional). Instruct the students to measure and combine the ingredients in their bowls. Allow them to stir the brine until the salt (and sugar) dissolves.

Quick Pickle Assembly (10 minutes) Provide each group with mason jars or containers with lids. Instruct the students to pack their prepared vegetables into the jars, filling them up to about ¾ full. Demonstrate pouring the brine into the jars, ensuring the vegetables are fully submerged. Remind the students to leave some headspace at the top of the jars for expansion during the pickling process. Have the students securely close the lids on their jars. Label the jars with student names.

Evaluate **Reflect:**

Students will clean up materials. Tell the students that the pickles will be ready to eat at the next class. Ask them what they think will happen inbetween this class and the next to the vegetables.

NOTE:
This lesson was originally created for Grade 5 students. To accommodate the subject matter, Grade 4 standards for the kitchen were used.

WELCOME TO THE KITCHEN

Kitchen

Grade 2 • 35 mins • Fall, Winter, Spring, Summer

ADAPTED GRADE 5 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY

Lola Bloom • lbloom@dcbilingual.org

ESSENTIAL QUESTIONS

• How do we care for our community in the teaching kitchen?

ASSESSMENT

• Student Work

MATERIALS

Materials for Introduction

• Large chart paper
• Sticky notes
• Markers
• Visuals (soup image, stock pot, word wall)

PREPARATION (30 MINS)

Divide sticky notes per station and sufficient writing utensils. Make word wall with suggested contribution words and phrases. Draw large stock pot on large chart paper

TEACHER BACKGROUND

This is a time for the teacher to listen and engage students in respectful conversation.

LESSON DESCRIPTION

This is a lesson to introduce students to the space and come together to create group agreements.

LEARNING OBJECTIVES

Life Skills Learning Objectives

Personal Life Skills

PLS.1 Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments.

NOTE:
Adapted from **Grade 5 Kitchen Lesson #1: Welcome to the Kitchen**, pg. 340.

DC Bilingual Public Charter School

CREATED BY
DC Bilingual in 2022

Lesson Sequence

Recipe Introduction (5 mins):
How is our classroom like a soup? What are the ingredients in a soup (show a picture on screen)? Each one of you is like an ingredient in soup—but our soup is a classroom. What special thing do you bring to the group? (Show word wall with words like listener, follows directions, sharer, takes turns, cheerleader, etc)

Divvy Up Tasks (2 mins):
Instruct each student to write down what "ingredient" they bring to the class "soup" on a sticky note.

Cook (15 mins):
Students will take a few minutes to write down what "ingredient" they bring to the class "soup" on a sticky note. Once complete all stickies will be added to large chart paper.

After students complete the first task, say "Now that we see all of the special things each of you bring to the class, let's talk about how we can make sure that everyone has an opportunity to shine."

Students will then work at each of their tables to discuss two rules that they think should be part of the whole class agreements. Each table can only submit two, so they need to come to a consensus as a table. Students will write the agreements on paper at each table.

Reflect (15 mins):
Together we will let each table propose the rules to the whole class, and the teacher writes them on chart paper up front. Ask the students, "Were there any challenges in agreeing on rules? Why? How did you solve the problem?"

Duplicate rules will be merged. Once the list is final, all students will vote and sign for class agreement.

POSSIBLE EXTENSIONS

This lesson can serve as an opportunity to reflect and evaluate class community practices for the remainder of the year.

BREAD WEEK

Kitchen

ADAPTED GRADE 7 | SCHOOL PARTNER LESSON PLAN

ESSENTIAL QUESTIONS

- What are some common flatbreads around the world?
- What are some common yeast breads around the world?
- What are some common quick breads around the world?
- How do grains nourish our bodies?
- How is bread made?

MATERIALS

- **Indian Naan Bread**
- Homemade Tortillas
- Delmonico's Cornbread

PREPARATION (30 MINUTES)

For the Naan:

- Gather materials, equipment, and ingredients listed in the following Lesson Sequence.
- Pre-make six batches of dough to be used with the first class so that it can rise for about an hour before being rolled out and baked. Then the dough that the first class mixes will rise for about an hour and be used by the second class, and so forth.
- Heat water on the stovetop to 100–110 degrees F (at least 1⁄2 cup for each small group).
- Prepare and warm clarified butter (at least 1⁄2 cup for each small group).

For the Tortillas:

- In a bowl work the masa harina together with 1 cup warm water, 3 tablespoons softened butter and 1/2 teaspoon salt until it becomes a cohesive dough. Don't overwork it.

For the Cornbread:

- Preheat oven to 400 degrees F and grease a 10-inch cast iron skillet.

LESSON DESCRIPTION

In this lesson, students will share what they know about bread and learn about flatbreads, yeast breads, and quick breads. Students will learn about yeast and how to properly use a sifter while making different types of bread together in their small groups.

NOTE:
Adapted from **Grade 2 Kitchen Lesson #18: Indian Naan Bread**, pg. 499.

CREATED BY
Belle Chasse Academy in 2023

LEARNING OBJECTIVES

Content Learning Objectives

Food Preparation

FP.7.1 Demonstrate knowledge of safe food handling practices with increased skill.

FP.7.2 Use a variety of cooking techniques

FP.7.3 Identify the right cooking technique to complete a task and articulate why it is the correct technique.

Kitchen Tools and Equipment

KTE.7.1 Use tools introduced in previous grades independently.

KTE.7.2 Name, identify, locate, and safely use new tools/equipment.

Recipe Concepts

RC.7.1 Compare and contrast recipes from various world cultures

Health Concepts

HC.7.5 Identify various ways cultures incorporate food groups into their diets.

Lesson Sequence

Prepare to Cook (5 minutes):
Have students tie hair back, wash hands, put on aprons (if relevant) and take their seats.

Recipe Introduction (5 minutes):

- Explain to students that they will be baking bread and review the main ingredients to make dough for the bread: flour and water. Then, introduce the concept of flavor enhancers and explain how salt and butter, which is a fat, can be used to enhance flavor. Next, explain how leavening agents are added to dough to make it rise. Leavening agents create gas which gets trapped in the dough to form tiny bubbles. When the dough is heated in the oven, the tiny gas bubbles rise like hot air balloons and make the "bread rise". One leavening agent is called yeast. Yeast is a tiny living fungus (like mushrooms!) that likes to eat sugar. When yeast eats sugar, it releases carbon dioxide (humans release carbon dioxide when they breathe out or exhale).
- Remind students that grains nourish our bodies by providing energy in the form of carbohydrates. It is recommended that grains make up a quarter of your plate for each meal.
- Explain to students that they will be making 3 different types of breads; flatbread, unleavened bread and cornbread (a quick bread). Many flatbreads are unleavened, meaning they do not use yeast like the cornbread and tortilla, however, the recipe used today will include yeast.
- Show students images of flatbreads, yeast breads and quick breads from around the world using the flashcards.
- Explain to students that they will be making naan, a flatbread from India, tortilla from Mexico, and cornbread from America.

NOTE:
Lesson sequence details for *Review familiar skills, Demonstrate new tools and skills, Divvy up tasks, Cook!, and Enjoy!* are outlined in **Indian Naan Bread** lesson on page 499 and can be used for all breads in this lesson.

Reflect:
- What bread did you enjoy the most and why?
- In your opinion, what additions to the recipe do you think would enhance the taste? (i.e. herbs, vegetables, etc.)

INGREDIENTS

For the Indian Naan Bread:
- **Indian Naan Bread**

For the Homemade Tortillas:
Yield: 12 tortillas
- 2 cups masa harina
- 1 cup warm water
- 3 tablespoons butter, softened, plus more for brushing on tortillas when reheating
- ½ teaspoon salt

For the Delmonico's Sweet Cornbread:
Yield: 8 to 10 servings
- 3 tablespoons salted butter, plus more for serving
- 4 large eggs
- ¾ cup water
- ⅔ cup vegetable oil
- ¼ cup plus 1 tablespoon heavy cream
- 3 tablespoons buttermilk
- 3 tablespoons honey
- 1 tablespoon dark corn syrup
- 2 ¼ cups all purpose flour
- 1 cup yellow cornmeal
- ½ cup plus 1 teaspoon sugar
- 1 ½ teaspoons baking powder
- ¾ teaspoon salt

NOTE:
Masa harina is flour made from corn that has been cooked and soaked in lime water. Traditionally used for corn tortillas, it is available in Spanish markets and supermarkets. If you can't get fresh poblanos, substitute New Mexican Green, Cubanelles, or Anaheim chile peppers.

DIRECTIONS

For the Indian Naan Bread:

- **Indian Naan Bread**

For the Homemade Tortillas:

With wet hands, divide the dough into 12 balls and place 2 pieces of plastic wrap on each, top and bottom. Flatten each tortilla in a tortilla press or with a rolling pin, heavy pie pan, or skillet.

Heat a heavy dry 9-inch skillet over medium heat, and brown the tortillas for about 1 minute on each side. Just before serving, rub each tortilla all over with ¼ teaspoon softened butter and reheat in a hot skillet over high heat, for about 15 seconds on each side.

For the Delmonico's Sweet Cornbread:

Melt the 3 tablespoons of butter. In a large bowl, whisk together the eggs, water, oil, cream, and buttermilk. While still whisking, drizzle in the melted butter, honey, and dark corn syrup. Add all of the dry ingredients to the liquid ingredients and whisk just until thoroughly combined. Pour the batter into the greased skillet and bake until golden on top and a toothpick inserted into the center comes out clean, about 30 minutes.

Remove the cornbread from the oven and brush the top with butter. Let cool briefly before serving; serve hot.

CILANTRO GENETICS

Kitchen

Grade 7 • 110 mins • Fall, Winter, Spring

NEW! GRADE 7 | SCHOOL PARTNER LESSON PLAN

SUBMITTED BY
Noah Welsh • noah_welsh@bcaemail.org

ESSENTIAL QUESTIONS

- Why do people exhibit different traits?

MATERIALS

- Cilantro
- Tomatoes
- Onions
- Peppers
- Tortilla chips
- PTC paper
- Sticky notes
- Paper plates
- Soap
- Water
- Sponge/cleaning brush

VOCABULARY

- Gene
- Trait

ASSESSMENT

Formative discussion throughout the lesson, consensus model and **observational checklist.**

PREPARATION (ESTIMATED TIME VARIES)

All salsa ingredients unavailable in the garden should be prepurchased from the store.

TEACHER BACKGROUND

Students should understand asexual and sexual reproduction. Additionally, they should know how to build blind experiments.

CREATED BY
Belle Chasse Academy in 2022

LESSON DESCRIPTION

Student will make two types of salsa, one with cilantro and another without. These will then be used in a blind taste test, along with PTC paper, to introduce the concept of genetic traits.

LEARNING OBJECTIVES

- I can construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals probability of surviving and reproducing in a specific environment.
- I can work in teams and divide up tasks.

Life Skills Learning Objectives

Community Life Skills

CLS.2 Students cooperate and communicate well with each other.

ACADEMIC STANDARD CONNECTIONS

NGSS.MS-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

7-MS-LS1-4 Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individual's probability of surviving and reproducing in a specific environment.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 2: Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Lesson Sequence

Engage

Ignite Interest (15 mins):
Students will be given the open ended bellwork question: why do people exhibit different traits? A whole group classroom discussion of the hook question should take place here. The teacher must be careful not to explicitly answer the question yet.

Explore

Stir Discoveries (40 mins):
Students will harvest ingredients in the garden. Students will hypothesize why some students like certain foods and others do not. This will likely develop into a dialogue about both genetic and environmental factors as well as the interplay between the two. They will then be split into two groups to make salsa. One group will make salsa with cilantro while the other group will make salsa without cilantro. All other aspects of the two recipes will be identical.

CREATED BY
Belle Chasse Academy in 2022

Explain **Clarify New Ideas (15 mins):**
Students will journal about their initial thoughts on trait inheritance before having a whole class discussion about the particular TRAITS being examined. Here they will hypothesize how these TRAITS might be the products of GENES.

Elaborate **Watch It Rise (20 mins):**
The students will be divided into two groups which make two batches of salsa. One batch will be prepared with cilantro from the garden while the other will not. Students will then design and conduct a blind taste test comparing the two recipes. Afterwards students will conduct a blind taste test using PTC paper.

Evaluate **Reflect (20 mins):**
Students will collaboratively work together on the whiteboard with the teachers guidance to conduct a consensus model as to why some students like cilantro and others do not (as well as to why some students can taste PTC and others cannot).

CONNECTIONS TO GARDEN LESSONS

The cilantro and other salsa ingredients used in the kitchen recipe will be grown and harvested in the garden.

POSSIBLE EXTENSIONS

Students can later prepare salsa for community or parent involvement events.

ADDITIONAL RESOURCES

The next day the teacher should follow up with color blindness tests.

OTHER COMMENTS

This lesson will likely stretch into a second day.

DEHYDRATING VEGETABLES & BOMB CALORIMETRY *Kitchen*

NEW! GRADE 7 | SCHOOL PARTNER LESSON PLAN

Grade 7 • 140 mins • Fall, Winter, Spring

SUBMITTED BY
Noah Welsh • nwelsh@bellechasseacademy.org

ESSENTIAL QUESTIONS

• How much energy is in our food and how do we measure it?

MATERIALS

• Lighter (teacher only)
• 2 types of vegetables from garden
• Refrigerated water
• Ringstand
• Wire Gauze
• Empty Soda Cans
• Cloth for insulating can
• Tape
• Graduated Cylinders
• Food
• Dehydrater

VOCABULARY

• Calorie
• Temperatur
• Heat
• Thermal energy
• Kinetic energy

ASSESSMENT

Students will submit design drawings of their bomb calorimetry systems and **observational checklist**.

PREPARATION (ESTIMATED TIME VARIES)

At least two types of vegetables need to be ready for harvest in the garden. Lab supplies need to be predistributed to lab groups.

CREATED BY
Belle Chasse Academy in 2022

TEACHER BACKGROUND

Students already have comprehension of thermal energy as a phenomenon of particle mechanics. They can predict changes in molecular motion as a function of temperature and pressure changes. Additionally, they can identify chemical reactions and understand conservation of mass and energy.

LESSON DESCRIPTION

Students will dehydrate garden vegetables. After this dehydration process they will build bomb calorimeters in order to calculate the amount of energy in the different types of dehydrated vegetables.

LEARNING OBJECTIVES

- I can plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.
- I can develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.
- I can explain the process of dehydrating food and how it helps with long term food storage.

ACADEMIC STANDARD CONNECTIONS

7-MS-PS3-4: Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.

7-MS-LS1-7: Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.

HEALTH STANDARD CONNECTIONS

The calculation and examination of caloric content of food will serve students in bettering their understanding of energy content of food and their own personal energy requirements.

Lesson Sequence

Engage **Ignite Interest (20 mins):**
Students will harvest different vegetables from the garden and be asked how they can calculate the amount of calories in each food.

Explore **Stir Discoveries (50 mins):**
Students will dehydrate vegetables and design bomb calorimeters to test the amount of calories in different vegetable samples.

Explain **Clarify New Ideas (20 mins):**
Students will journal about and discuss why different food samples were able to generate different amounts of heat (by heating water different amounts).

Elaborate **Watch It Rise (30 mins):**
Students will design a scaled up laboratory version of a bomb calorimeter that could be used to calculate caloric content of food at an industrial level.

Evaluate **Reflect (20 mins):**
Students will discuss and critique the calorimeter designs of their peers. Here they will predict what sorts of errors their classmates devices are likely to yield.

CONNECTIONS TO GARDEN LESSONS
Vegetables to be dehydrated and test will be harvested from the school garden

POSSIBLE EXTENSIONS
Engineering design principle applied in this lesson will serve the students in many future science lessons.

ADDITIONAL RESOURCES
The teacher should google images of bomb calorimeters for students to discuss how they work.

OTHER COMMENTS
This lesson will take two days.

CREATED BY
Belle Chasse Academy in 2022

GARLIC & HERB RADISHES

Kitchen

NEW! GRADE 7 | SCHOOL PARTNER LESSON PLAN

TOPIC

Health Concepts

LEARNING OBJECTIVES

Content Learning Objectives

Health Concepts

HC.7.1 Demonstrate an understanding of how seasonality influences traditional cultural dishes.

HC.7.3 Relate seasonality to availability of ingredients.

Culinary Flavors and Textures

CFT.7.1 Utilize taste sensations: sweet, sour, bitter, and salty in a series of lunch items for the class.

CFT.7.2 Describe the relationship between culinary arts and sight, smell, and taste. Use traditional world cuisines as examples.

Kitchen Tools and Equipment

KTE.7.1-4 Kitchen Tools & Equipment

Life Skills Learning Objectives

Community Life Skills

CLS. 2 Student cooperate and communicate well with each other.

PROCEDURE

- Revisit who is Chef Emeril. Show video of last year's student highlight.
- Guide students in reading and understanding a recipe card. Go over the term *mise en place*.
- Demo preparing: Garlic and Herb Radishes

INGREDIENTS

- 12 medium radishes, cleaned and quartered
- 1 medium yellow onion, chopped
- 1 green bell pepper, chopped
- 6 cloves of garlic, minced
- ½ tsp parsley, chopped fine
- ½ tsp thyme, chopped fine
- ½ tsp rosemary, chopped fine
- 2 tbsp olive oil
- 1 tsp kosher salt
- 1 tsp ground black pepper

CREATED BY
Belle Chasse Academy in 2023

PROCEDURE

In a sauté pan, heat oil over a medium high heat. Add in onions, bell peppers, and radishes. Sauté until onions and peppers become translucent, about 3–5 minutes. Add in garlic and sauté for another 2 minutes, making sure not to burn the garlic. Finally, adding the herbs and spices. Stir well and sauté for another minute or two. Taste and adjust seasonings as needed. Serve as a side dish or a substitution for potatoes.

Students will have a taste of the dish, critique, and explore the possibilities for utilizing radishes in place of potatoes for dietary needs.

CONNECTION TO GARDEN

Use produce from the garden and other ingredients needed, if available. Deliver compost to the garden. As you enjoy, trace ingredients back to the garden.

ACADEMIC STANDARD CONNECTIONS

CCSS.ELALITERACY.W.7.2C

Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.

HEALTH STANDARD CONNECTIONS

National Health Education Standard 7

Students will demonstrate the ability to practice health enhancing behaviors and avoid or reduce health risks.

NEW!

GRADE 7

Lesson	Topic	Learning Objective(s)	Lesson Activity	Life Skills Learning Objective	Connections to Garden Lessons	Academic Standard Connections	Health Standards
Science Collaboration Spherification	Kitchen Behaviors Culinary Flavors and Textures (CFT) Kitchen Tools and Equipment (KTE)	**HC.6.4** Identify where products from different food groups are sourced locally. **HC.6.6** Demonstrate knowledge of whole foods, minimally processed foods and processed foods. **FP.6.1** Demonstrate knowledge of safe food handling practices. **FP.6.2** Name and describe basic cooking techniques and use them as instructed to prepare recipes **KTE.6.1-4** Kitchen Tools and Equipment	Have students explore the kitchen to learn the basic rules and systems. Divide students into teams of two groups to complete lesson on molecular gastronomy: spherification Group 1: will use lemonade Group 2: will use soda Review the tools, ingredients, and procedures. Once the lesson is complete have each team taste their creations and answer questions regarding the lesson.	**PLS.1** Students are self-aware and show respect for their own needs, the needs of others, and the environment. They practice safe and conscientious behaviors in the garden and kitchen environments **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and the kitchen environments. **PLS.4** Students are active and engaged learners who show up on time prepared to learn, and manage their time wisely.	Try using fresh fruit from the garden. Blend or juice and utilize for spherification test.	**NGSS. MS.PS1.B.** Chemical Reactions—Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants. (MS-PS1-5)	**National Health Education Standard 5:** Students will demonstrate the ability to use decision making skills to enhance health.

CREATED BY
Belle Chasse Academy in 2020

SPHERIFICATION

Kitchen

NEW! GRADE 7 | SCHOOL PARTNER LESSON PLAN

PREPARATION

Mixing the Soda and Sodium Alginate:

- Using a hand-held blender or mixing tool, mix the soda or flavored liquid with sodium alginate. This process may take longer than expected, around 5–10 minutes. Let the mixture rest to remove any trapped air bubbles. For the best results, let it rest overnight.

Preparing the Calcium Chloride Solution:

- Using the blender or mixing tool, combine 500 grams of water with calcium chloride until fully mixed. For optimal results, let the solution rest in the refrigerator overnight..

Setting Up the Spherification Station:

- Arrange the following: soda and sodium alginate mixture, calcium chloride bath, tap water rinse, and a holding vessel.

Time Sensitivity:

- These mixtures are time-sensitive. For maximum effect, use within 15 minutes.

PROCEDURE

- Fill pipettes with the juice or soda and sodium alginate solution.
- Gently squeeze the pipettes (syringes or squeeze bottles could also work) to release the solution drop by drop into calcium chloride bath. Be careful not to drop the liquid from too great of a height or they will flatten and resemble small pancakes instead of caviar spheres.
- After you have dropped a small quantity into the bath, remove the spheres from the calcium chloride solution with a small slotted spoon.
- Blot the bottom of the spoon with a towel to remove the calcium chloride solution.
- Place spheres in the water rinsing bath.
- Immediately after rinsing, remove the spheres from the tap water and sample the results.

? ESSENTIAL QUESTIONS

1. Why is it called spherification? *It is the process of turning a liquid into a semi solid sphere or pearl.*

2. How did it first develop? *Originally created as a process for encapsulation in the drug industry for time released medicines.*

3. What is the difference of spherification and reverse spherification? *Both form layers around a liquid, but the reverse process allows for a liquid center which will remain liquid for a longer period of time and allows for a larger size.*

4. Why does a liquid become entirely a solid in spherification and not in the reverse method? *The calcium alginate ions create the outer layer of the shell. The calcium ions are small enough to permeate the shell and continue to gradually turn the alginate liquid into a solid. The process of reverse spherification doesn't behave the same way due to the fact that the alginate molecules are too large to diffuse through the calcium chloride shell. Spherification is time sensitive while reverse spherification is not. The overall theory is that of membrane diffusion.*

5. What is the byproduct of this process?

CREATED BY
Belle Chasse Academy in 2020

NEW!

GRADE 8

Lesson	Topic	Content Learning Objective(s)	Lesson Activity	Life Skills Learning Objective	Connections to Garden Lessons	Academic Standard Connections	Health Standards
Grade 8 Social Studies Collaboration History of Calas	Health Concepts **(HC)** Food Preparation **(FP)** Culinary Flavors and Textures **(CFT)** Kitchen Tools and Equipment **(KTE)** Kitchen Behaviors **(KB)**	**HC.6.4** Identify where products from different food groups are sourced locally. **HC.6.6** Demonstrate knowledge of whole foods, minimally processed foods and processed foods. **FP.6.1** Demonstrate knowledge of safe food handling practices. **FP.6.2** Name and describe basic cooking techniques and use them as instructed to prepare recipes **KTE.6.1-4** Kitchen Tools and Equipment	Have students explore the kitchen to learn the basic rules and systems. Review the history of Calas as it ties into the Louisiana Studies lessons students have been learning. Review the kitchen tools, ingredients, and safe food handling practices. Then, have students prepare a batch of **Calas** using the provided recipe. Once the lesson is completed have students taste their creations and answer questions regarding the lesson.	**CLS.4** Students appreciate and are respectful of differences and diversity in their communities. **CLS.5** Students participate in the development of agreed upon protocols and behaviors for the garden and the kitchen environments. **PLS.4** Students are active and engaged learners who show up on time prepared to learn, and manage their time wisely.	Have students write what they think they could pair with Cala to make a signature dish that is growing in the garden.	**NGSS.MS.LS.D.** Information Processing **CCSS.ELA-Literacy.SL.8.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.	**National Health Education Standard 5:** Students will demonstrate the ability to use decision making skills to enhance health.

This lesson was a collaboration between the culinary instructor and 8th grade social studies teacher at Belle Chasse Academy. To accommodate the class, 6th Grade Content Learning Objectives for the kitchen were used.

CREATED BY
Belle Chasse Academy in 2020

NEW! GRADE 8 | SCHOOL PARTNER LESSON PLAN

CALAS RECIPE (MAKES 12)

- 2 cups cooked rice
- 6 tablespoons flour
- 3 heaping tablespoons sugar
- 2 teaspoons baking powder
- ¼ teaspoon salt
- 2 eggs
- ¼ teaspoon vanilla
- Vegetable oil (for deep-frying)
- Confectioners' sugarCalas History

DIRECTIONS

1. In a bowl, combine rice, flour, sugar, baking powder, salt. Mix until rice is coated with dry ingredients.
2. Add eggs and vanilla and mix well.
3. Heat vegetable oil for deep-frying to 360 degrees.
4. Carefully drop rice mixture by spoonfuls into hot oil and fry until brown.
5. Remove from oil with a slotted spoon and drain on paper towels.
6. Sprinkle it with confectioners' sugar.
7. Serve hot.

CALAS HISTORY

Calas, often called Creole rice fritters or rice doughnuts, are rice cakes. If you were to go to Africa today, to Ghana or Liberia, you would find women in the open-air markets making calas. The origin of Calas is most often credited to enslaved people who made the trip across the Atlantic Ocean from rice-growing regions of Africa, and the dish has become a very important part of New Orleans' history.

Before the Louisiana Purchase in 1803, the city of New Orleans was ruled by the Code Noir, a decree passed by King Louis XIV of France in 1685 defining the conditions of slavery in the French colonial empire.

Free people of color were still placed under restrictions via the Code Noir, but were otherwise free to pursue their own careers. Compared to other European colonies in the Americas, a free person of color in the French colonial empire was highly likely to be literate, and had a high chance of owning businesses, properties and enslaved people.

In the 1700s, during the days of French rule, enslaved people were given one day off each week, usually Sundays. And so after church, African women would roam the streets of the French Quarter touting their wares with the chant "Belle Calas! Tout chauds!"—"Beautiful calas! Very hot!"

When the Spanish took control of Louisiana in the 1760s, they brought with them a powerful legal instrument,

coartacion, which gave enslaved people the right to buy their freedom. For enslaved Black women in the city, selling calas was a key way to earn money for these purchases.

It is said that women were able to buy freedom for their families and for themselves.

Americans ended coartacion soon after the 1803 Louisiana Purchase. But New Orleans remained home to thousands of free people of color—and throughout the 1800s, many of them, especially women, made their living selling calas and other street foods.

I'd say that's a lot more interesting and historic than some old beignet.

Source: Reference for History

SUGAR CHANGED THE WORLD

Kitchen

NEW! GRADE 8 | SCHOOL PARTNER LESSON PLAN

MATERIALS

- *Sugar Changed the World* by Marc Aronson and Marina Budhos
- Copies of the poem *Sugar Cane* by Grace Nichols
- Digital image of *Cane Cutting Scene* folk art painting (circa 1860–1880)
- Smartboard or projector
- Notebooks or paper
- Pens/ pencils / Markers
- Observation Boxes?
- Whiteboard / Chart Paper
- Access to the school garden

OVERVIEW

There are two resources and three activities that will introduce the students to the unit curriculum. The subject of sugar is complex as it ties into not only botany, but also economics and civil rights. The goal is to spark a conversation on these topics while enhancing literacy skills.

Prior to delving into the full text of 'Sugar Changed the World' by Aronson and Budhos, student interest can be built by using resources #1, a folk-art painting of a sugar cane farm from 1860–1890.

Next, the class can use the school garden as resource #2.

Lastly, a poem by Grace Nichols, 'Sugar Cane,' will be read and analyzed for new vocabulary and imagery. Each of these resources will help the students to build an "active comprehension" to begin thinking about the role and impact of sugar cane, to begin the process of building questions, and to develop increased vocabulary.

ACTIVITY #1

Use Smartboard to display folk art image of 'Cane Cutting Scene' circa 1860–1880. This painting portrays African American men cutting sugar cane. Students are instructed to spend 2 minutes recording as many observations as possible about the image in a brainstorming session. Next, students are asked to consider what questions are not being answered in this image. Use a whiteboard or other format to record students' inquiries.

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Belle Chasse Academy in 2023

ACTIVITY #2

Students are tasked to create 3 Observation Boxes. Label the boxes, "1) texture, 2) appearance, 3) size/shape." Each student is challenged to fill in each of the boxes with literary descriptors (minimum 3 observations per box). Next, time for a mini field trip out to the school garden to visit the sugar cane. Students are given 10–15 minutes for this activity.

	School Garden Trip	**'Sugar Cane' by Grace Nichols**
Texture	Ex. rough texture like a cat's tongue	
Appearance	Ex. looks like corn or large grass	
Size/Shape	Ex. over 6 feet tall, straight leaves	

ACTIVITY #3

For this activity, students are given a copy of the poem 'Sugar Cane' by Grace Nichols. They are then tasked to find the descriptive vocabulary that the author uses to create visual imagery of the sugar cane plant and match it to the category that fits.

	School Garden Trip	**'Sugar Cane' by Grace Nichols**
Texture		Ex. skin thick
Appearance		Ex. shiver like ague when it rain, jaundice when he ripe
Size/Shape		Ex. growing tall

CONCLUSION

Each of the activities builds student's ability to comprehend text through analysis, discussion, comparison, and descriptive exercises:

- The first activity opens the door to the larger lesson on the importance of sugar cane with reflective thinking exercise that moves into a discussion web format so that students can compare perspectives and learn from their classmates.
- The second stretches the student's imaginations to begin to see the dynamic nature of a plant and to use their vocabulary and writing skills to bring the living being onto the page.
- The third activity is the first reading activity, and it builds on the second activity with compare and contrast techniques that challenge students to take their written work and lay it side by side with an author's.

All of these activities help to bring animation and interest into the topic prior to diving headfirst into the main text. For the main lessons of this unit, the text 'Sugar Changed the World' will be studied. As the topic of sugar cane is relative to its growing conditions and the politics of its production during the preindustrial period, a comprehension of the weight, height, density, and general toughness of the plant will give the coming discussions and written reflections a real meaning to the students.

Future lessons will include a map charting the spread of the plant along the routes taken during the European colonization of the New World. There will be a reflective essay on the lives of the people who worked to grow and harvest the plant. There will also be a persuasive perspective assignment in which students either create an advertisement selling the usefulness of or an argument explaining the danger of using sugar. Each of these lesson approaches will require students to use the information and vocabulary gained from the reading but will also challenge them to think creatively about the power that a single plant can have on the impact of an individual, a time, or a political power. This is designed to empower the students to see the influence of a seemingly small factor and to engage constructively in reasoning skills to analyze and evaluate the influences of a factor that has impacted their way of life.

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Sugar Cane—The Children's Poetry Archive

ACKNOWLEDGMENTS

About the Emeril Lagasse Foundation

Founded in 2002 by Chef Emeril Lagasse and his wife Alden, Emeril Lagasse Foundation is a 501c(3) public charity headquartered in New Orleans. The Foundation's mission is to create opportunities to inspire, mentor and enable youth to reach their full potential. Since its inception, Emeril Lagasse Foundation has granted more than $20 million to children's charities to support culinary, nutrition, and arts programs. The Foundation accomplishes this through three programs. The Community Grants program provides programmatic and capital support to nonprofit organizations across the nation. The signature program, Emeril's Culinary Garden & Teaching Kitchen, is a national education initiative created to enrich the lives of elementary and middle school children through a fun, fresh perspective on food. The Aarón Sánchez Impact Fund provides culinary arts education and human services programming for Latino youth.

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