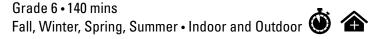
HOW FUNGI RECYCLE MATTER









SUBMITTED BY

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ESSENTIAL QUESTIONS

• How are fungi important to the environment?



- · Mushroom growing set up
- · Mushroom medium
- Oyster mushroom spores
- · Pizza ingredients



Abc 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.





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 gards Students will go into the garden and search the soil for fungal mycellium networks.

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.







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



This lesson will take two days.

