

APIACEAE PLANT FAMILY

Garden

UNIT DAY/LESSON

Apiaceae plant family (carrots, cilantro, celery, etc.)

NEW!

GRADES 7–8

SCHOOL PARTNER
LESSON PLAN

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



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Abc 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](#)



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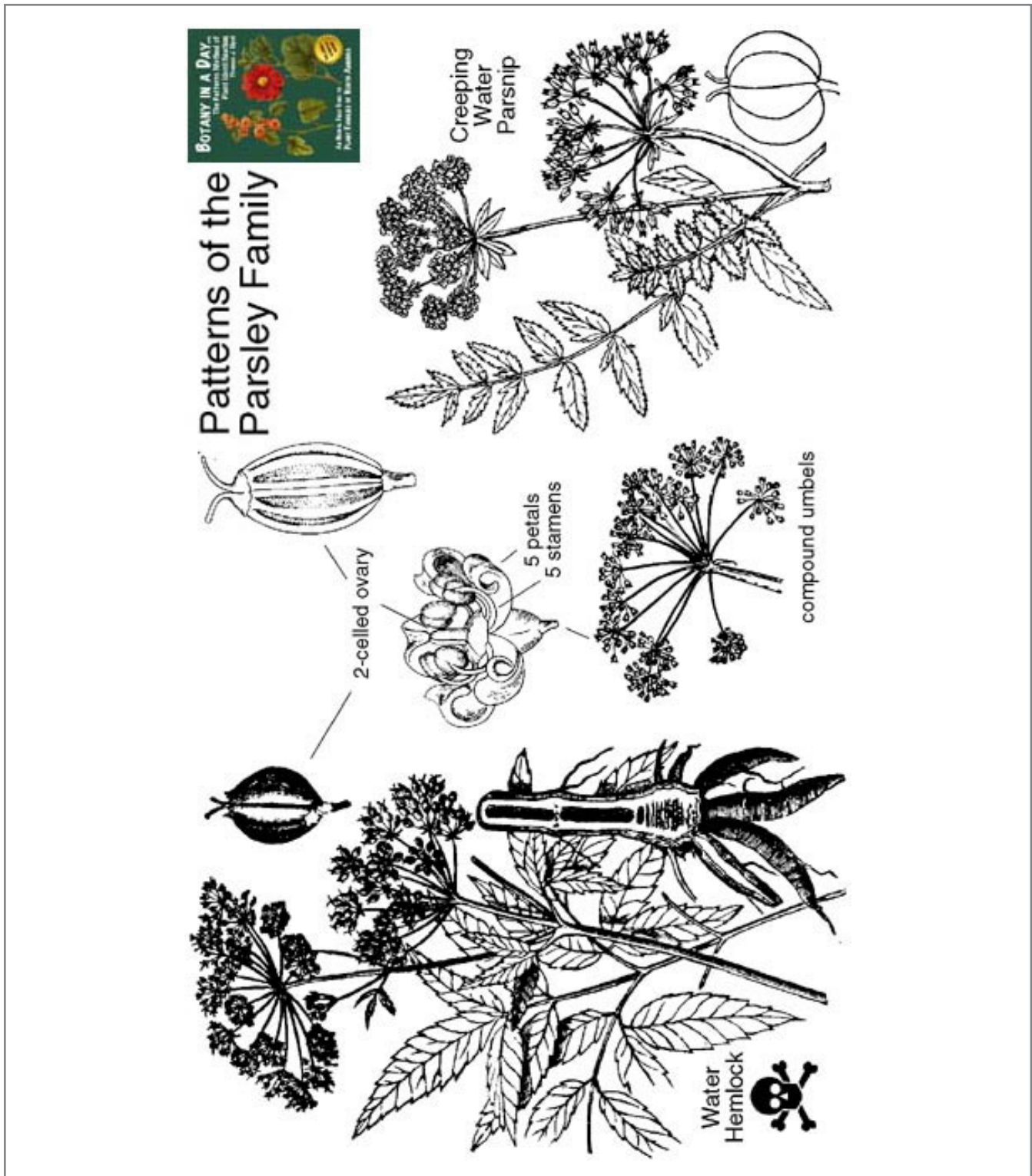


Members of the Apiaceae Family,
 Source [United States Botanical Gardens, The Carrot Family Apiaceae.jpeg](#)



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Shared Characteristics: Source Botany in a Day, Thomas J. Elpel. Apiaceae: Parsley or Carrot Family. Identify herbs, plants, and flowers. (wildflowers-and-weeds.com)



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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:		



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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 AmNO₃ or 2-4 pounds CaNO₃ 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](#)



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