



For the Homeschool Educator

In this lesson, your child will learn that plants have roots, stems, leaves, and flowers and the primary functions of each.

About Plant Parts

The four parts of most vascular plants (plants that transport water) are the leaf, the stem, the roots, and the flower.

The leaf is an organ of a plant that is specialized for photosynthesis. Leaves capture energy from sunlight as well as collect **carbon dioxide** from the air. Many leaves are flat and thin in order to catch as much sunlight as possible. However, leaves come in many different shapes including long skinny needles that are found on pine trees.

The stem supports leaves and flowers. Stems move food and water around the plant to help it grow. Plants often store food in their stems.

The roots of a plant keep the plant from falling over and gather water and minerals from the soil. Some plants store food in their roots. The two major types of roots are fibrous roots and taproots. Taproots tend to have one major root that grows very deep, while fibrous roots have many roots that grow in all directions.

Flowers contain the reproductive parts of the plant and attract insects and birds who pollinate plants.

Signs of Readiness

This lesson was designed for children ages 6-8. It is expected that your child will have completed the lesson in this course, Plants Need Light, or have equivalent knowledge regarding plants.

Common Misconceptions

Your child may believe that all plants have true stems and roots, but this is only for vascular plants.

Key Vocabulary

Use these definitions to explain key terms that are used in the activities below.

Word or Phrase	Definition
carbon dioxide	“a part of air that plants need to make food”



Lesson Options:

Use the lesson elements below to create a single-day or multiday lesson.

Digital Playlist: Generally, your child will complete the Digital Playlist first, then follow up with some or all of the activities described below. As you select and do these activities with your child, you may wish to reassign some or all of the digital activities for additional practice.

Explore Activity: This follow-up is designed to be used closely with the Digital Playlist to help your child understand the topic.

Dig Deeper Activity: This offline activity provides an additional learning experience with the same topic.

Extend Activity: This offline activity extends your child's understanding and application of the same topic

Note that each activity begins with a question. This is done both to inspire curiosity and to model for your child the practice of posing questions as an element of scientific thinking. You are encouraged to share the question at the beginning of each activity or, if you prefer, at some point during the activity.

Explore Activity

Question

What are the basic parts of a plant?

Steps

1. Watch *Professor Hester, Parts of a Plant*. Ask your child to tell you what the video was about, and what they learned from it.
2. Have your child play *Professor Hester and the Parts of a Plant*.
3. Have your child complete the activity Plant Painting: Flower.
4. Have your child create and color a drawing that shows a green plant and all of its parts and label the parts.

Materials

- Drawing paper and tools



Dig Deeper Activity

Question

Do the parts of different plants look the same?

Steps

1. Have the child complete the Parts of a Plant: Vegetable puzzle.
2. Print out Plant Parts: Memory Match Resource Page and cut out the individual images. You may wish to tape them to 3 x 5 cards for easy handling.
3. Play the memory match game with your child, matching the same parts of different plants (roots, leaves, stems, flowers).
4. Take a walk outside (a park, a garden, or even a garden store) and take pictures showing how the stems, leaves, and flowers look different for different plants. Have your child put those pictures into their plant scrapbook.

Materials

- Plant Parts: Memory Match Resource Page
- Digital camera
- Scissors

Modifications

- For **beginning learners**, you may wish to place the cards all face-up and have your child match them.



Extend Activity

Question

How can I show someone the parts of a plant?

Steps

1. Explain to your child that together you are going to look at a plant and take it apart to show all of its parts.
2. Get an inexpensive green plant that has a flower from a nursery.
3. Remove the plant from the pot and gently remove all the dirt from the roots.
4. Lay the plant on a piece of paper and begin to observe and dissect it:
 - a. Cut the flower from the stem and look at it. Does it have different parts? Can you count the petals?
 - b. Carefully cut off a leaf and observe it. What is the texture? What do the veins in the leaf look like?
 - c. Remove the rest of the leaves from the stem and put them aside. Observe the stem. What does it look like? Is it smooth or fuzzy?
 - d. Carefully cut the stem in half down its length. What does it look like inside? Is it hollow?
 - e. Find where the roots meet the stem and cut them off to remove the stem. What do they look like? Is there one main root? Do they branch out or just go down?
 - f. Take the plate (or the circle on your poster board) and divide it into sections (like a pie). You will want four sections: one labeled "flower," one labeled "leaf," one labeled "stem," and one labeled "root."
5. Work with your child to glue parts of the plant to the appropriately labeled section on the plate.
6. Invite your child to explain what each of the four parts of a plant is for and how they can look different on different parts to a friend or family member.

Materials

- One green plant out of the pot with roots intact (examples: a pea plant, mint, or basil)
- Scissors
- Paper plate or white poster paper
- Markers or pens of different colors

Modifications

- **Advanced learners** may want to use multiple types of plants so that they can compare the different leaves, stems, and roots.

Our activities are designed to be safe with adult supervision. Please follow directions carefully.