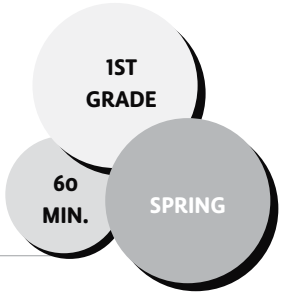
Imaginary Plants

THEME: EXPLORING THE ECOLOGY OF FOOD



ESSENTIAL QUESTION

How can we create our own imaginary plants?

LEARNING OBJECTIVES

✓Students will be able to identify the six parts of the plant and their basic functions.

✓Students will be able to apply their knowledge of the six plant parts to create their own imaginary plant.

CONCEPTS

creativity imaginary six plant parts

ENGAGING THE CLASSROOM TEACHER

- During Action Step 1, suggest that the teacher help students move from table to table as the timer or signal goes off.
- During Action Step 4, suggest that the teacher support students while making their imaginary plants by encouraging their creativity and ensuring they have all six parts.
- During Action Step 5, suggest that the teacher circulate through the room and help students as you model how to paste the plant part names and functions next to each part.

LESSON DESCRIPTION

In this lesson, students review the six plant parts by creating their own imaginary plant through drawing and collage. They then label plant parts and their functions and share their creations with partners. This lesson is designed to be taught in conjunction with Plant Part Mystery, Plant Part Scavenger Hunt, Plant Part Wraps, and Planting a Tops and Bottoms Bed.

MATERIALS

- ☐ "Roots, Stems, Leaves" song by the Banana Slug String Band
- ☐ About 10 pictures or real-life examples of unusual plants such as Venus fly trap, air plant, blossoming cactus, etc.
- ☐ Construction paper
- ☐ Plant Part Functions Worksheet (pp. 190-191) for each student
- ☐ Materials for collage, such as gardening magazines and seed catalogs
- ☐ Glue
- ☐ Scissors
- ☐ Markers, crayons, and colored pencils
- ☐ Library books with photographs of plants to spark inspiration (optional)
- ☐ Clock/timer for sharing time

PREPARATION

› Collect garden magazines and seed catalogs for students to collage with. It's helpful to take the extra step of preselecting and cutting out pages so students do not have to wade through magazines.

- Photocopy the Plant Part Functions Worksheet for each student.
- Make your own imaginary plant (see Action Step 3 below) as a model for the class.
- Set up a gallery walk, but instead of hanging pictures on the wall, display sets of pictures of unusual plants at tables around the room. Groups of students can rotate to look at the pictures (or real plants) at each table.
- Display the Guiding Questions for sharing on the board or on chart paper.

PLANT PART FUNCTIONS

PLANT PART	WHAT IT DOES
ROOTS	Take water from the soil Hold the plant in place
STEMS	Support the plant Carry water to the leaves
LEAVES	Make food for the plant with sun and air
FLOWERS	Make pollen, seeds, and fruit
FRUITS	Protect the seeds
SEEDS	Grow into new plants

GUIDING QUESTIONS FOR SHARING

1. What is the name of your plant?
2. What do you like most about this plant?
3. Where in the world does your plant grow?

ACTION STEPS

1. Unusual Plants Gallery Walk: Gather students in a circle and tell them, *Today you'll get to create your very own imaginary plant!* Explain that you have pictures of some of the unusual plants we find in nature. Have students rotate through viewing each of the unusual plants. Use a timer and a signal, so they know when it's time to switch to a different table. Have students return to the circle, and have them share with a neighbor about their favorite plant they saw and why they liked it. ***(10 min.)***

2. Singing: Review the parts of the plant by singing "Roots, Stems, Leaves," performing the accompanying gestures to each plant part. Have students crouch down to touch their toes for roots, stand tall with their arms by their sides for stems, hold out their arms to the side and do jazz hands for leaves, frame their faces with their hands for flower, hold their hands in a circle the size of an apple above their heads for fruit, and rain down their fingers all the way to the ground for seeds. Then repeat the song. Start slowly, making sure each student has a chance to say the word and perform the gesture. Then do a few silly rounds sped up, if you'd like. ***(5 min.)***

3. Model: Tell students, *When you make up your own imaginary plant, you can be creative. To be creative means you can use your imagination to make something extra special that you thought of. There are so many different kinds of leaves, flowers, and fruits. You just have to make sure that your plant has all six plant parts: roots, stems, leaves, flowers, fruits, and seeds. Show students your model, pointing out different features, for example*, *The root of my plant is like a carrot, and it's very tasty. The stems of my plant are vines that could climb a fence!* Model using your imagination to get students in the spirit. Tell them they can draw

each plant part, cut out images of plant parts from magazines, or do both. ***(5 min.)***

4. Making Plant Collages: Pass out art supplies and collage materials to students. Circulate through the room, and ask students to show you which plant part they're working on. Offer guidance and encouragement where needed. You may want to set up a library corner with books of botanical drawings and photographs of interesting plants that students can visit for inspiration. ***(15 min.)***

5. Identifying Parts and Functions: As students are finishing their plant creations, pass out the Plant Part Functions Worksheet. Show them how you used the worksheet to label each plant part, and show what it does on your own imaginary plant model. Have them cut and glue the names and functions next to the appropriate plant part. If your students need more structure and support, do this as a whole class. Using a document camera, if you have one, move step by step through pasting each plant part name and function onto their plants. For example, you would say, *Let's all find the stem of our plant. Now point to the word that says "stem" on our* worksheet. *Great! Let's cut out the word "stem" and the words that describe what it does—"carry water to the leaves"—and glue that next to the stem.* ***(10 min.)***

6. Sharing: Have students clean their spaces and get into pairs. Then review the guiding questions they will share with their partner. With a student as your partner, model how to share. Demonstrate answering the questions enthusiastically and in full sentences, and show active listening while your partner shares. Tell students that you'll set a timer, and they'll each have three minutes to share. ***(10 min.)***

REFLECTION

Have students discuss the following questions in small groups, then share with the class: ***(5 min.)***

Social and emotional learning

- *How did you decide what kind of plant to make?*
- *What was hard, or a challenge while working on this activity? How did you try to solve it?*

Check for understanding

- *Which plant part holds the plant in the ground? Which plant part can grow into a whole new plant? Which plant part holds the seeds?*
- *What's one thing you learned about your partner's imaginary plant?*
- *What were some of the most creative plants you saw in class today? Why is creativity important?*

ADAPTATIONS

Age: Older students will enjoy playing Exquisite Corpse, a game in which players make a collective drawing without seeing what the person before them has drawn. Traditionally this was done with three different people drawing the head, torso, and legs of a being. But it works just as well with plants! Fold a piece of paper into equal sections, and have one person draw the roots, extending their lines just past the fold, so the next person can pick up where they left off and create the stem, and so on. After each player has had their turn, unfold to reveal your beautiful hodgepodge of a plant!

Reading Extension: Read Paul Fleischman's *Weslandia*, a book about a boy who plants his own imaginary staple crop in his backyard and builds a civilization around it.

Sculpture Variation: Students at any age might enjoy making sculptures of their imaginary plants using recycled materials. You can then decorate your garden with their unusual creations!

ACADEMIC CONNECTIONS

Next Generation Science Standards, Life Science Disciplinary Core Idea

NGSS 1.LS1.A

Structure and Function – All organisms have external parts . . . Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

English Language Arts Common Core State Standards

CCSS.ELA-LITERACY.SL.1.6

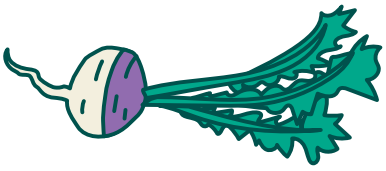
Produce complete sentences when appropriate to task and situation.

Plant Part Functions

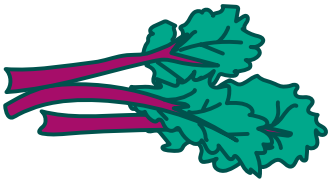
ROOTS

› Take water from the soil

› Hold the plant in place



STEMS



› Support the plant

›Carry water to the leaves

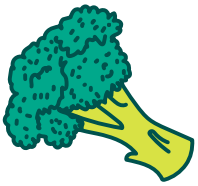
LEAVES

› Make food for the plant with sun and air

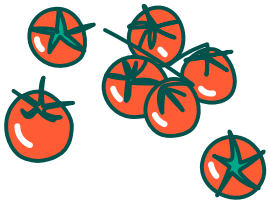
Plant Part Functions

FLOWERS

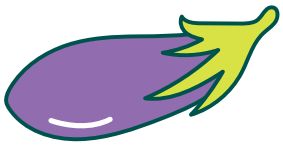
› Make pollen, seeds, and fruit



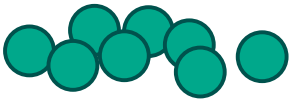
FRUIT



› Protect the seeds



SEEDS



› Grow into new plants