



Look At Those Leaves

Connected Next Generation Science Standards

K-ESS3-1 Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live

2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats

Featured Science and Engineering Practices

Asking Questions and Defining Problems

Constructing Explanations and Designing Solutions

Featured Cross-Cutting Concepts

Structure and Function

For younger students, demonstrate how to harvest leaves with a student helper. Their body is the stem and their arms are the leaves. Put a hand on their shoulder and arm to demonstrate where you would twist the leaf to harvest. (Don't actually twist the student's arm.)

Overview

Get students comfortable harvesting in the garden with this leaf lesson. Explore the variety of garden leaves, then end the lesson with a leaf taste test. This lesson works well in the fall with changing leaves but can be taught anytime there is a variety of leaves growing in the schoolyard.

Students will

- Compare and contrast garden leaves through close observation
- Practice careful leaf harvesting
- Explain the basic purpose of leaves

Teacher Preparation

- Walk through the garden and notice interesting leaves
- Decide if there are any leaves ready to be harvested (lettuce, kale, sorrel, etc.)

Guiding Question - Why do plants have leaves?

Explore

On your way out to the garden, ask the students if they have ever looked closely at a leaf before. What have they notice about leaves before? Why do you think plants have leaves? Popcorn student responses.



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Materials

- Various leaves
- Garden journal or worksheet and clipboard
- Crayons, markers, or coloring pencils
- Magnifying glasses

Setting

- School garden or green space
- Lesson works the best in the fall. Plant perennials, like sorrel and herbs, to extend the season.

- Tell students, today they are going to explore and harvest leaves to figure out why leaves are important. First, we need to know how to collect leaves that are still on a plant.
- Demonstrate harvesting a leaf using two hands - one hand holds onto the stem and the other twists the leaf off. What could happen if you pull the leaf off with one hand? Remember to follow the rule of 5 when harvesting. Only take a leaf if the plant has 5 or more leaves.
- Divide the class into pairs or small groups and pass out Leaf Scavenger Hunt worksheets.
- Assign each group 2 types of leaves from the Leaf Scavenger Hunt or use your own leaf categories.
- Remind students of any boundaries or garden expectations and give students 5-10 minutes to look for and harvest 2 leaves.
- Point out interesting garden or schoolyard leaves students may miss.

Digging Deeper

- Bring students back together before they get distracted and have each student choose their favorite harvested leaf.
- Pass out the magnifying glasses and demonstrate how to use. (Hold up to your eye and move the leaf closer until it gets into focus. Avoid holding the magnifying glass horizontal in direct sun.)



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- Pass out drawing materials and have students make a scientific leaf drawing. Encourage them to focus on capturing information about the leaf, not making a pretty picture. Students can trace around the perimeter of the leaf, if that is easier. For younger students, ask what they notice about the leaf and write a caption.
- As students finish their drawing, have them compare their leaves and drawing with another student. What is similar and different about the leaves?

Making Connections

- As students make comparisons, begin writing a list of what all the leaves have in common. Revisit the guiding question, Why do you think plants have leaves?
- Many of the leaves are flat. Leaves collect sun for the plant and the flat surface helps with that job. Plants use the sun to grow/make food/photosynthesize. (Choose terms that work best for your students.)
- Leaves also are used by people as food! What are some of your favorite leaves to eat?
- Have students compost their collected leaves and harvest an edible leaf to try, if available.