



LESSON PLAN

EXTERNAL PLANT PARTS GRADES K-2

SUMMARY

Students explore external plant parts through real life examples of roots, stems, leaves, flowers, fruits and seeds to understand how they work together to help plants survive. Duration: 20-40 minutes.



Disciplinary Core Ideas	Connections to Classroom Activity
<p>DCI LS1.A: Structure and Function</p> <p>All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)</p>	<ul style="list-style-type: none"> Students will discuss the external parts of a plant including the stem, leaves, roots, flowers and fruit.
Science & Engineering Practices	Connections to Classroom Activity
<p>Analyzing and Interpreting Data</p> <p>Analyzing data in K-2 builds on prior experiences and progresses to collecting, recording and sharing observations.</p> <p>Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.</p>	<ul style="list-style-type: none"> Students make observations on different produce and which plant parts they come from. Students will seek to describe observational patterns among the examples from each plant part.

Crosscutting Concepts

Patterns

Patterns in the natural and human designed world can be observed and used as evidence.

Connections to Classroom Activity

- Students will make observations of edible plant parts and seek patterns within their observations. Then, students will use evidence to group the plant parts.



ENGAGE

Ask students to turn and talk with a partner to brainstorm plants that we eat. Remind students that plants grow out of soil and stay in place. They use sunlight and water to grow. After students have had time to share and think, ask them to share their thinking with you and the entire class. Make sure to clarify any misconceptions between plants and animals that are eaten. If a student mentions a specific part of a plant, use this idea to transition to the next lesson segment – identifying the plant parts that we eat.



EXPLORE

Steps

1. Gather students into a circle so that you can pass around the produce.
2. Create a six-column chart: Roots, Leaves, Seeds, Flowers, Fruit, Stems.
3. Show students an example of a root that humans eat without naming the plant part itself. For example, “This is a potato. We eat potatoes. Look at the potato and imagine which part of the potato plant it might be. Is it leafy and green? Is it rigid and tall like a stem? Is it colorful and soft like a flower?”
4. Allow all students to pass the produce around and share their thinking.
5. Once everyone has spoken, have the class write the name of the produce for each plant part into the chart.
6. Ask students to describe any patterns they see from each group. What do the roots have in common? What is similar about the leaves group?



EXPLAIN

When a seed enters the soil, it grows the necessary plant parts to grow and reproduce. The parts of a plant are the stem, leaves, roots, flower and fruit. They work together to help a plant survive. Humans and animals eat plants to gain the energy they need to survive.

MATERIALS

Variety of fresh produce representing different plant parts. Choose from:

- Roots - Beets, carrots, radishes, onions, potato
- Leaves - Different varieties of lettuce, cabbage, spinach, collards
- Seeds - Peas in the pod, green beans, corn cobs
- Flowers - Broccoli, cauliflower, artichoke
- Fruit - Pepper, tomato, apple, orange, cucumber, pear, eggplant
- Stems - Asparagus, celery, rhubarb
- Whiteboard or other large writing area

** Note: Consider food allergies when selecting produce for your class.*

DIY Activity

- 2 Stalks of celery with leaves attached
- 2 Tubes of food coloring (different colors)
- 2 Clear glass cups
- 1 Pair of scissors (adults only)
- 1 Large container of water
- 1 Spoon for stirring



WATCH THE GENERATION GENIUS EXTERNAL PLANT PARTS VIDEO AS A GROUP

Then facilitate using the Discussion Questions.



ELABORATE

Bring students back into a circle. Ask students to think of other plants they have eaten that were not discussed today. Have them share or write the name of produce and which part of the plant it is into the chart.



EVALUATE

Students can play the online Kahoot! quiz game located below the video which provides downloadable scores at the end of the quiz game. Alternatively, you can use the paper quiz or the exit ticket questions. All these resources are located below the video in the Assessment section.



EXTENSION

Take your students on a nature walk on the school playground. Have students try to find examples of every plant part (roots, stems, leaves, flowers, and fruits) during the walk. They may not be able to find any exposed roots, but should be able to see the visible roots of a tree.

For older students, form pairs to research other examples of plant parts we eat from a specific region of the world that is different from where you live. Students can create a presentation showing their information on a poster.

Suggestions for plant books to read (all available on YouTube if you have access):

- *From Seed to Plant* by Gail Gibbons
- *National Geographic: Seed to Plant* by Kristin Baird Rattini
- *The Tiny Seed* by Eric Carle
- *A Tree Is a Plant* by Clyde Walker Bulla
- *Lola Plants a Garden* by Anna McQuinn

