

Six Plant Parts

Let's learn the six plant parts and their function!

Duration: 1 hour and 10 minutes*

Grade Level: Pre K-3rd*

Location: Outdoor or indoor location for first activity.

Recommended Books:

[This Is Your Garden](#) by Maggie Smith

[From Seed to Plant](#) by Gail Gibbons

[Jack's Garden](#) by Henry Cole

[Plants Feed Me](#) by Lizzy Rockwell

*Note: Educator's choice! This set of activities can be used as one lesson plan, or its resources and activities can be used for separate shorter lessons, based on your classroom structure and student needs!

Materials:

-Book of your choice

-6 plant part [PowerPoint](#) or in [pdf](#)

-Plant part specimens gathered in advance if needed

-Bandanas or other boundary markers for outdoor exploration

-Plant Part Riddles (Appendix A)

-6 plant part Sorting Labels (Appendix B)

-Plant Illustration Worksheet (Appendix C)

-[6 Plant Parts Song](#)



Theme: A plant is a living system and each part has a job!

Goals: Students identify the parts of plants and learn about how those structures function to help the organism grow and survive. Students review the life cycle of a plant and understand how reproduction is essential to continue the existence of every kind of organism.

Students will:

- Investigate the six plant parts, looking up close at natural specimens from the outdoors
- Learn how to use statements to share descriptive observations based on their senses
- Sort plant parts based on their patterns
- Illustrate the six plant parts working together to create a unique plant system

Introduction (15 mins): *Read a favorite plant book*

Draw a picture of a plant on the whiteboard or display a specimen or photo that includes six parts- the roots, a stem, leaves, a flower, a fruit, and a seed. Host a discussion to gauge what students already know: Can they identify the drawings and name what each plant part is? To what degree do they understand the job each plant part does to help the organism grow? (*Optional: sing the [6 Plant Parts Song!](#)*).

Outdoor Activity (10 minutes): *Plant part scavenger hunt and observations activity*

After marking out boundaries with bandanas (or cones!), give students five minutes in an outdoor setting (at a park, in the schoolyard, or during recess) to collect all the plant parts they can find on the ground. They may harvest carefully from living plants (such as gently collecting a leaf), but challenge them to find most items on the ground. (Provide some additional materials as needed to supplement the findings, especially fruits or flowers which might be harder to find in the schoolyard).

Students can showcase their findings by spreading them out in small groups or at tables.



Invite students to look up-close and make observations about the plant parts they see, without actually naming what part it is just yet. Remind students that scientists are excellent observers! What does **observation** mean? (Discuss). See the definition on the right from an Oxbow favorite, the Beetles Project!

Encourage students to state their observations using these prompts: “I notice” “I wonder” “It reminds me of”. Students can share their observations in their small groups, or by raising their hands. Take turns sharing observations, perhaps in a rotation, so everyone gets a chance to state their observations aloud.

Transition back into the classroom and bring your specimens with you!

Indoor Activity (10 minutes): *Plant Parts Powerpoint*

[Go through the plant systems PowerPoint](#) or in [pdf](#)

Optional Indoor Activity (10 minutes): *Plant Part Riddles*

ELA connection for grades 1st and up (as deemed appropriate by the teacher):

Introduce the idea that often people (including scientists!) use comparisons to better understand things they find or notice in the natural world. If appropriate, define the literary terms **metaphor** and **simile**. A simile helps bring meaning and detail to a description by comparing one thing to another. Read the riddles provided in Appendix A (these could also be called similes!). Use these to give a description of the job of each plant part and have students point to or hold up the plant part that they think matches the description.

Use Inquiry Questions to prompt student thinking/conversation:

- Which plant parts collect the things plants need to grow? (Leaves and Roots)
- Which plant part is waiting for a visitor? (Flower)
- Which plant part is a container for seeds? (Fruit)
- Which plant part is capable of starting a young plant? (Seed)

If students are ready, invite a few of them to create their own descriptive clue for the guessing game.

Patterns in Plant Parts Activity (10 mins): Use labels on Appendix B

(optional) to label areas of room as a location for each one of the six plant parts. Use 6 tables or 6 locations throughout the room to designate for each individual plant part.

Introduce “patterns”. Explain to students, “*We just made observations and noticed things that are interesting and unique about these different plant parts, now we’re going to evaluate what makes these things similar to each other- we’re going to observe what they have in common.*” In order to better understand plants, plant scientists, or botanists use patterns to group or sort plants. While living and non-living things in nature might not be exactly the same (and in fact their differences are so important!), once you learn about patterns, you can recognize them and identify them later in life to help you understand the world around you. Have students move around the room and sort the plant parts they found into each category.

Review with the class which plant part belongs on each table and confirm using consensus that each plant part on the table fits into that category. Notice what patterns the specimens in each group may have in common, such as veins in leaves, seeds inside of fruits, or petals on flowers.

From
beetles

instructor resources:

An **observation** is something we notice with our senses (sight, touch, smell, hearing, taste—but please don’t taste anything unless you are told you can. To make an observation, begin a sentence with “I notice,” and then describe what you observe using your senses.

Observations are what you notice in the moment, not what you already know.

For example, saying “I notice it’s a leaf” is an identification, not an observation.

<http://beetlesproject.org/resources/>



Creative Art & Observation, drawing activity (20 minutes or 3 minutes at each station):

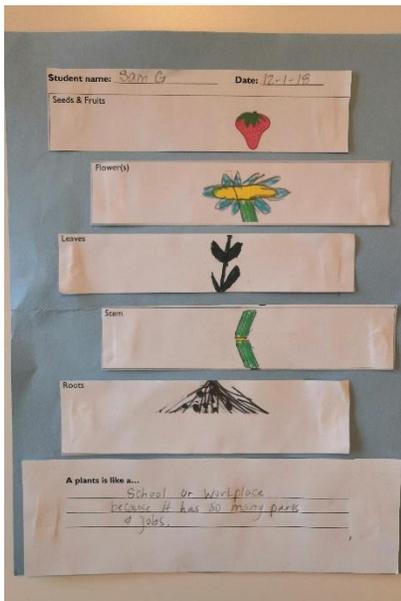
Pass out the handout (see Appendix C) or have students use scrap paper or a page torn from their journal. Instruct students on how to fold the paper so that one section is visible at a time, folding it in on itself works, or a zig-zag accordion style fold. You can cut the strips apart if this is easier. Each paper strip will be used to depict a plant part.

Give students the opportunity to start at a plant part of their choosing, or designate a starting location, at one of the stations from the previous activity. Students rotate through each plant part station for about 3 minutes each, as prompted by the teacher.

At each table, students illustrate the plant part that corresponds with the parts in those locations. They have a choice to either use the gathered specimens as examples and



draw what they see, or design a new version of that plant part from their own imagination.



Sample student illustration (or model) of a unique plant drawn from observations and imagination.

Walk around asking questions to prompt student engagement and sharing tips for observing and illustrating the plant parts:

- Notice the size and shape of the leaves, stem, and roots.
- What color are they?
- Are the leaves or stems textured?
- What patterns do they notice?
- Do the leaves all have something in common? What makes them different/unique?
- Are the characteristics distinct enough to find the same plant out in nature?

Encourage a discussion about the different parts and their jobs.

For 1st and up, have students write a comparison statement, completing the sentence, “A plant is like a...”. After the parts are illustrated, students can cut and paste the strips of paper onto a colored construction paper background, orienting them to show a whole plant system. Display around the room!

Conclusion (5 mins): When each plant part does its job, the plant has everything it needs to grow! Discuss how learning about these plant parts connects to their upcoming field trip at Oxbow Farm. *“On your Oxbow Fall Farm Adventure, you’ll be finding all six plant parts growing in the farm fields and you’ll get to harvest and taste them!”* Discuss with students which types of foods they might find for each of the plant parts. Talk about anything else we might notice when visiting a farm in the fall. Optional, read “Plants Feed Me” by Lizzy Rockwell. Link to a YouTube storyteller here: <https://youtu.be/zbwf0zegsnA>

Inquiry Q’s:

- What season are we in right now? What are some signs in nature that can tell us the season?
- Can you think of a plant that you may see on a farm?
- Will you be able to see all 6 of a plant’s parts just by looking at it? Which plant parts might be hardest to find?
- Which plants can we eat?
- Have you ever eaten any of these plant parts? What’s your favorite plant part to snack on?

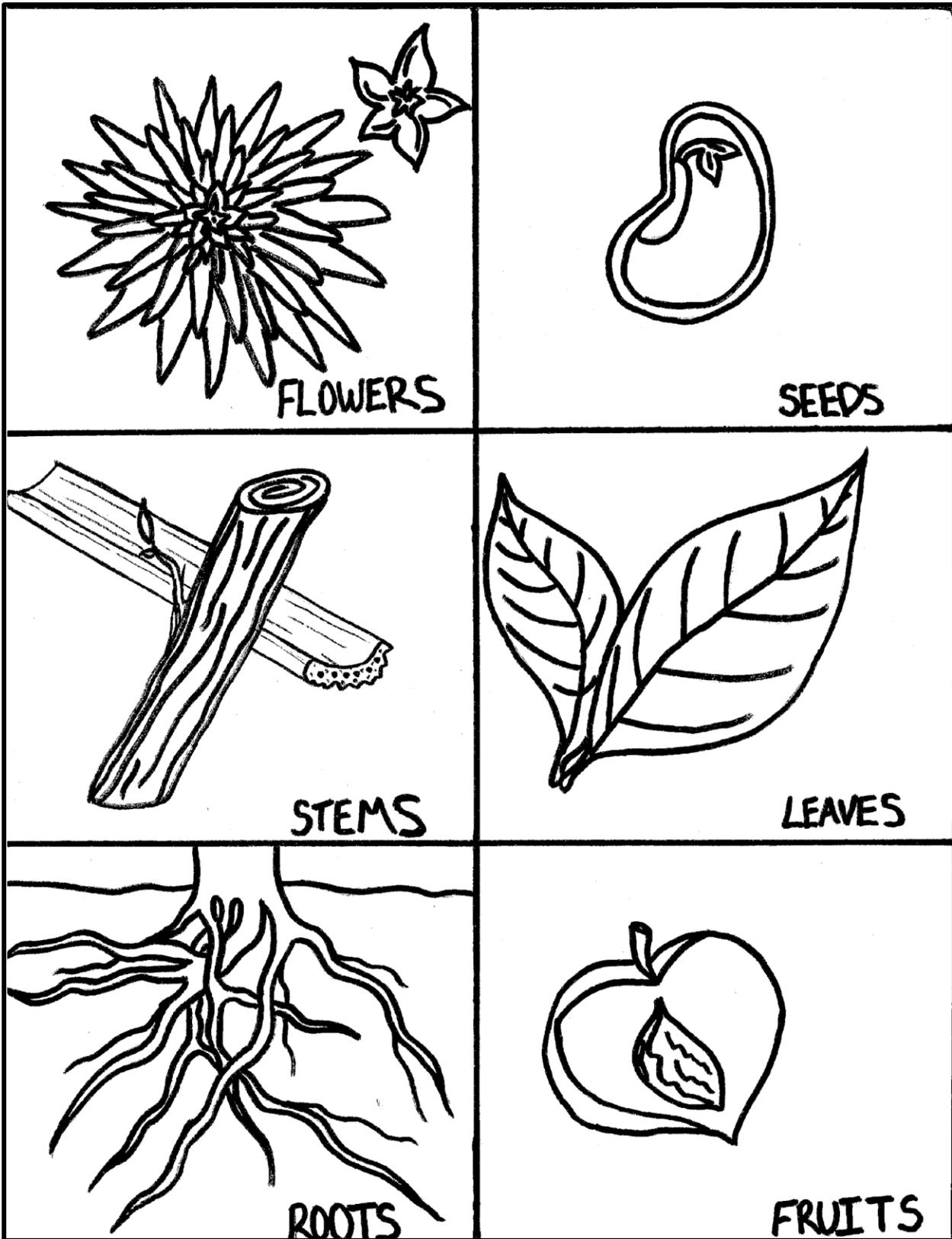
NGSS 3-Dimensions Connections:

Dimensions from Framework	What students are doing
<p>Science and Engineering Practices (SEP) -Analyzing and Interpreting Data:</p> <ul style="list-style-type: none"> • Record information (observations, thoughts, and ideas) • Use observations to describe patterns and or/relationships in the natural and designed world • Use and share pictures, drawings, and or writings of observations. 	<p>Using the materials provided and engaging with the lessons activities, students are introduced to the structures and functions of each plant part and begin to interpret the idea that the plant system is comprised of parts that work together.</p>
<p>Disciplinary Core Ideas (DCI) LS1.A: Structure and Function: Plants have different parts that help them survive and grow</p>	<p>Students understand that plants have parts (roots, stems, leaves, flowers, fruits, seeds) that are used in different ways to help them survive and grow.</p>
<p>Crosscutting Concepts (CC)</p> <p>-Patterns: Patterns in the natural and human designed world can be observed and used to define phenomena, and used as evidence.</p> <p>-Systems and System models: Systems in the natural and designed world have parts that work together. A system can be described in terms of its components and their interactions.</p>	<p>Students will recognize patterns among the groupings of plant parts and sort specimens into fruits, stems, leaves, flowers, fruits, & seeds.</p> <p>Students will discuss the function of different structures of a plant, using comparison statements to describe the parts and functions in comparison to occupations, or systems they are familiar with.</p>
<p>Performance Expectation (P.E.) supported:</p> <p>K-LS1-1 Use observations to describe patterns of what plants and animals need to survive.</p>	

Appendix A: Plant Parts Riddles

<p>I'm like a farmer! I work hard to dig into the land and harvest nutrients and water from the soil. (roots)</p>	<p>I am like a designer! I create new ways to entice animals to visit me, I need their help to transform from one plant part into another and complete my lifecycle. (flower)</p>
<p>I am like a bus driver! I transport water and nutrients to different parts of the plant, and have storage space to hold the extra. (stem)</p>	<p>I am like a teacher! I take care of the plants of the future by keeping them safe while they find new places to grow. (fruit)</p>
<p>I am like a chef! I use ingredients from nature (and a secret ingredient of my own...) to make food for the whole plant to eat. (leaves)</p>	<p>I am like a storyteller! I take all the lessons I've learned from history and I carry them into the future. (seed)</p>

Appendix B: Sorting Labels



Appendix C: Plant illustration worksheet

Student name: _____ **Date:** _____

Seeds & Fruits
Flower(s)
Leaves
Stem
Roots

A plant is like a...
