

3-5 Activities Plant

Parts!



GPS Addressed:

- S3L1b. Plant Features*
- S4L1b. Food Web*
- S5L1b. Sorting Plants*

Materials Needed:

For Plant Part Relay:

- Laminated Pictures of Fruits and Vegetables (Included)*
- Laminated Plant Part Cards (Included)*

For Plant Part Salad:

- Fruit and Vegetable Ingredients*
- Salad Dressing Ingredients*
- Large Salad Bowl*
- Bin or Bowl of Water, or Access to Sink (For Cleaning Produce)*
- Salad Spinner*
- Small Safety Knives*
- Vegetable Peelers*
- Cutting Boards*
- Jar with Lid*
- Tongs or Large Spoon and Fork for Tossing Salad*
- Plates and Forks for Students*

Goal: Students will learn the six different plant parts and their functions.

Objectives:

- Students will describe the function of plant parts.
- Students will understand that all plant parts are edible.
- Students identify the commonly consumed part of popular plants.

Lesson Outline:

Engage: Make and Taste a Plant Parts Salad

Explore: Sort Salad Plant Parts

Explain: Plant Parts and Function Discussion

Extend: Plant Part Relay

Evaluate: Lettuce Descriptive Diagram

Time Needed:

- 30 minutes for Relay*
- 30 minutes for Salad*

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Lesson Plan:

Engage:

Make and Taste a Plant Parts Salad (one of each)

- Root—Carrots, Radishes, Beets
- Stem—Celery, Asparagus, Broccoli
- Leaf—Lettuce, Spinach, Baby Chard, Baby Kale, Mesclun, Arugula
- Flower—Broccoli, Cauliflower
- Fruit—Tomatoes, Cucumbers, Bell Peppers, Oranges, Berries
- Seed—Corn, Peas, Sunflower Seeds, Chickpeas

Explore:

Sort Salad Ingredients by Plant Parts

Match each salad ingredient to a picture of the whole plant that it came from. Identify what part of the plant is edible.

Explain:

Discuss the Plant Part Functions

- *Root*: A root is usually found underground and is the part of the plant that anchors the plant to the ground. Roots are critical to the plant's life because they absorb many necessary nutrients and water from the soil. Some roots, such as carrots and beets, are also used as storage areas for carbohydrates.
- *Stem*: Stems hold up a plant and provide structural support. They also transport the essential water and nutrients that the roots collect and deliver them to the leaves and other parts of the plant.
- *Leaf*: The leaf's primary job is to absorb sunlight and use it to create food for the plant. It does this through photosynthesis.
- *Flower*: Flowers are not just for show, they serve a vital function to the plant. They allow the plant to reproduce, which is why they come in so many different colors, shapes, and smells. They use these characteristics to attract pollinators.

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- *Fruit*: Fruits are produced after a flower has been fertilized. They function as a container of seeds. Many things that we consider “vegetables” are technically fruits. Anything that contains seeds is a fruit—watermelon, tomatoes, bell peppers, squash, eggplant, cucumbers, etc. Botanically, there is no such thing as a “vegetable.” “Vegetable” is a cultural term that refers to a root, stem, leaf, or flower of a plant.
- *Seed*: Seeds are the embryos of plants. They form in fruits and, under the right conditions, they will grow into another plant. Seeds come in many shapes and sizes and can be transported in many ways (i.e.: blowing away in the wind or being eaten and discarded by an animal).

Extend:

Plant Part Relay Game

- Set Up
 - Divide the class into two groups.
 - Each group should stand in a single file line with the leaders facing each other.
 - Place one set of plant part names in front of each line leader.
 - Give the line leader a stack of fruit and vegetable cards.
- Play
 - Students must study their fruit or vegetable card to determine which plant part we eat then place the card in the right category.
 - That student goes to the back of the line, passing the stack of cards to the next student in line.
 - The next student can either place the next card or change a card previously placed.
 - The game continues until all cards are placed.
- Review Responses

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Evaluate:

Diagram and Description

- Draw a detailed lettuce plant. Label all 6 plant parts (4 pts / each).
- Describe the function of each of the 6 plant parts (4 pts / each).
- Draw a star by the commonly consumed plant part (4 pts)

Preparing a Salad with Children

Making a salad will teach students the basics for handling and preparing food safely.

Have all students wash their hands.

Demonstrate food preparation safety: Show students how to use a knife safely by cutting one fruit or vegetable and describing the technique. Create a flat surface by cutting the item in half. Place the flat side down so it will not move. Hold the item with your non-dominant hand, with your fingers curled under for protection. Hold the knife with your dominant hand and slowly press the tip of the knife into the item, then pull it down and toward you in a slicing fashion. Have a student volunteer also try the technique while the other students watch. After knives, demonstrate vegetable peelers and any other tools students will be using.

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It is important for students to understand that tools are not toys. The more the students respect the tools, the less likely they are to cause accidents. Students should also treat the person holding the tool with as much respect as the tool. Give them plenty of room to work, as bumping into a person using a knife can be dangerous. Students can crowd in close, excited for their turn, but making the person using the tool “special,” requiring that they have space, leads to safer food preparation. Students using tools could be required to stand, while all other students must stay seated. Demonstrate any other salad preparation tasks.

Assign students to stations and make a salad! Students may rotate jobs so everyone can try everything.

- Station One—Clean the fruits and vegetables by rinsing them in a sink or dunking them in a large bowl or bin full of water, and shaking off the dirt.
- Station Two—Dry and prepare the leafy greens by placing them in a salad spinner and spinning off the water. Alternately, pat the leaves dry with clean towels. Once the leaves are dry, students can tear them into smaller pieces and add them to the salad bowl.
- Station Three—Using the vegetable peeler for any items that need peeling (i.e.: carrots or cucumbers).
- Station Four—Students use knives to slice any produce that needs chopping. This station can be broken into more stations by produce type.
- Station Five—Students will make a salad dressing by putting the ingredients into a jar with a lid, and shaking to combine.

Once all the leafy greens are in the large bowl, pass it to each station for the students to add their ingredients.


Have students clean up their station. If your school garden has a compost pile, you can assign one or two students to collect the compost and take it to the pile. Students should also wash dishes and wipe off tables and desks.

Serve each student some salad on a paper plate so the class can try their creation! Review the parts of the plant in the salad while they are eating.

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Please |  two sets of each word and picture.

Root

Stem

For more information, visit georgiaorganics.org/lettucetryit

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Leaf

Flower

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Fruit

Seed

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Lima Beans

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Sunflower Seeds



Peas

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Asparagus



Celery

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Rhubarb



Lettuce

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Cabbage



Kale

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Swiss Chard



Apple

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Apricot



Eggplant

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Plum



Watermelon

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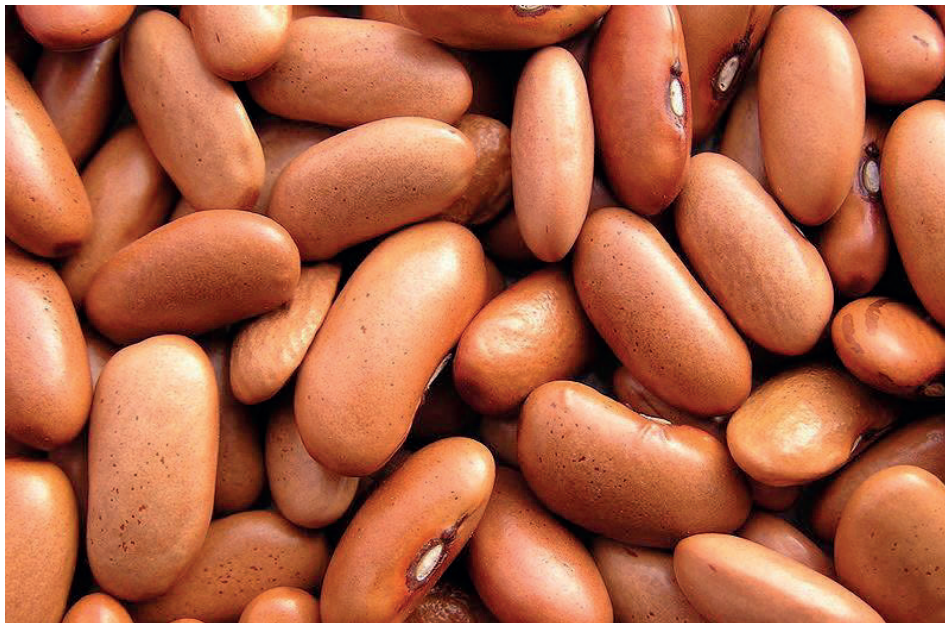
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Tomato



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Pinto Beans



Corn

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Carrot



Radish

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Broccoli



Cauliflower

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Plant Part Relay Answers

Roots

- Carrot
- Radish

Stems

- Asparagus
- Celery
- Rhubarb*
- Swiss Chard (could also be considered a leaf)
- Broccoli (could also be considered a flower)

Leaves

- Lettuce
- Cabbage
- Kale
- Swiss Chard (could also be considered a stem)

Flowers

- Broccoli** (could also be considered a stem)
- Cauliflower**

Fruits

- Apple
- Apricot
- Eggplant
- Plum
- Watermelon
- Tomato

Seeds

- Lima Beans
- Sunflower Seeds
- Peas
- Pinto Beans
- Corn

* The leaves of rhubarb are not edible; in fact, they are poisonous.

** The heads of broccoli and cauliflower are flower buds. If allowed to keep growing, they would eventually open into small, yellow flowers.