

Parts of a Plant

Fall/Spring

Objectives

Students will be able to...

- Identify the different parts of a plant
- Understand the progression of plant growth
- Understand the uses and significance of different plant parts
- Think critically to recognize their daily interactions with different plant parts.

Materials

- Laminated cut-outs of veggies (attached)
- Parts of a Plant Scavenger Hunt handout (attached)
- Ingredients for Parts of a Plant Salad (attached)
- Salad-making materials
 - Bowls, forks, cutting boards, knives, jar for dressing, hand sanitizer
- Blank paper for each student and colored pencils/crayons

Engage

This lesson can easily be broken into a series of lessons, depending on the length/duration and the size of the class. See Procedure options outlined below.

Open lesson by recapping the previous lesson, or by introducing expectations for garden class. “Today we are exploring the Parts of a Plant. Did you know plants have body parts, too?”

“Dance like a Plant” Instructions

Start crouching low to the ground, and be a “SEED.” Put your “ROOTS” in the ground with your fingertips. Slowly stand up straight and tall like a “STEM.” Take your arms out to the sides and spread your palms: “LEAVES.” Reach your arms up overhead in a circle like a “FLOWER.” Take your circle out in front of you: “FRUIT.” (Bonus: explain pollination stage between flower and fruit). Be sure to say together (or even shout..) each plant part listed in all caps above as you go along. Go faster and faster each time, until your students are exhausted!

As you first move through your “dance,” highlight the importance of each plant part: for example, when you are a root, pretend to “suck nutrients” out of the soil; when your arms are leaves, pretend they are soaking in sunlight for energy; etc.



Parts of a Plant Matching Game

Use laminated cut outs of veggies on the board. Create a section on the board for each plant part and label it; for example, have a column for “ROOTS,” and etc. Have students take turns matching common vegetables to their corresponding plant part (e.g. collards = leaves, carrots = roots) by writing it on the board next to the veggie.

Activity

Part 1: Take students on a “Parts of a Plant Scavenger Hunt” through the garden

- Introduce the activity. “Your challenge today is to find each Plant Part listed on your handout. Work with your teammates and remember to look high and low!” Work through an example with students. Guide them through the garden space, and challenge them to think critically!
- Split students into groups. Have them record and draw their findings on the handout.

Part 2: Make “Parts of a Plant Salad”

- Introduce each ingredient and its corresponding plant part (e.x. lettuce – leaves, celery – stems..)
- Break students up into groups, giving each group a corresponding plant part to prepare (for example, “Table 4, you are our seeds today! You will shell the sugar snap peas”).
- Bring the groups back together to toss the ingredients together in a large bowl. Serve and eat salad!
- Clean up work spaces and eating area as a team.
- Re-situate desk spaces and prepare for closing activity/journal entry.

Part 3: Create your own “Parts of a Plant Salad” Recipe!

- The challenge is to include every plant part!
- Encourage students to incorporate foods they love, and think outside of the box. For example, if your student loves pasta salad, remind them that pasta is from the wheat seed!
- Draw/label/color recipes, and share them with the class.
- Choose a few class “favorites,” and vote on one to make the following class (keeping in mind space/equipment limitations)

Procedure Modifications (optional, for accelerated groups or additional time)

- Prepare and eat the “winning” Parts of a Plant Salad Recipe!
 - Recap the previous lesson with the “Plant Dance.”
 - Allow students to share a few of their recipe creations.
 - Break students into “plant part” groups to prepare salad, and eat together.
- Have students create “Dream Plants” (while eating/after cleaning up)
 - The challenge is, again, to use every plant part! Push students to think creatively, maybe they want their fruits to be ice cream sandwiches, their leaves to be dollar bills.... Make sure all plant parts are included and labelled in the drawing.
 - Have students share dream plants in groups or present to the class.

Journal/Follow up:

Journal Entry: Just like our bodies, each part of a plant serves an important function. Why do plants have so many parts? Challenge students to list each plant part and their idea for the function of each. It may be helpful to review the “plant dance,” or have students work in small groups. Recap your journal entry by having students share their responses and writing the correct answers on the board.

“Dream Plants” (outlined above) is another option for a journal entry.

As the seasons change and progress, different plant parts will become evident at different times. For example, some sugar snap pea seeds or cover crop seeds may be evident in early spring, while fruits may be impossible to find. Tomato seeds are inside the fruits, and hard to spot until the tomatoes split open from the sun (or a nibble!). Continue referring back to this lesson outdoors with garden journals. Have students chart the changing plant parts, taking note of the impact of season and temperature on the life cycle of plants.

Flowers



Cauliflower



Broccoli



Artichoke

Stems



Rhubarb



Asparagus



Celery

Leaves



Cabbage



Lettus



Spinach

Roots



Carrots



Radishes



Potatoes



Sweet Potatoes

Seeds



Corn



Beans



Peas



Popcorn

Flowers



Tomatoes



Peppers



Cucumbers



Pumpkins

*The final section labeled "Flowers" above should read "Fruits".

Parts of a Plant Scavenger Hunt

In the garden, I found these...

(draw and label below)

SEEDS

ROOTS

STEMS

LEAVES

FLOWERS

FRUITS

Parts of a Plant Salad Recipe

MATERIALS:

- One large bowl
- 5-6 smaller bowls
- Tongs
- Cutting boards
- Kid-friendly knives or slap choppers
- Graters
- Jar for dressing
- Small plates or bowls
- Forks
- Placemats

INGREDIENTS:

- One head of lettuce
- 3-4 large collard or kale leaves
- One bunch chive flowers
- 20-25 sugar snap peas
- 3-4 carrots, turnips, or radishes
- Broccoli stems (chopped) and florets
- Raspberries as a garnish
- Dressing: olive oil, vinegar, salt, pepper, honey and Dijon mustard to taste. Or, use a prepared dressing, if desired.

PREPARATION:

- Prepare work spaces, pass out materials, and give each child hand sanitizer. Divide students into groups based on their plant parts.
- Assist students as each group prepares their ingredient.
- Mix all chopped/prepared ingredients in a large bowl.
- Shake dressing ingredients in a jar, and pour over salad.
- Separate salad into small plates or bowls. Pass out forks.
- Eat and enjoy!

A NOTE ON INGREDIENTS

Use as much produce from your school garden as possible, trying to get one of every plant part.

Supplement with store bought items for plant parts you don't have. Above is a sample recipe that could be applicable in the spring.

BACKGROUND INFO FOR EDUCATORS

Fruiting plants have 6 parts: Seeds, Roots, Stems, Leaves, Flowers, and Fruits

Each plant part has an important function:

Roots gather nutrients and water from the soil and sent them up to the rest of the plant.

Stems act like a straw, sending water and nutrients to where they need to be.

Leaves convert energy from sunlight into energy that a plant can use as food.

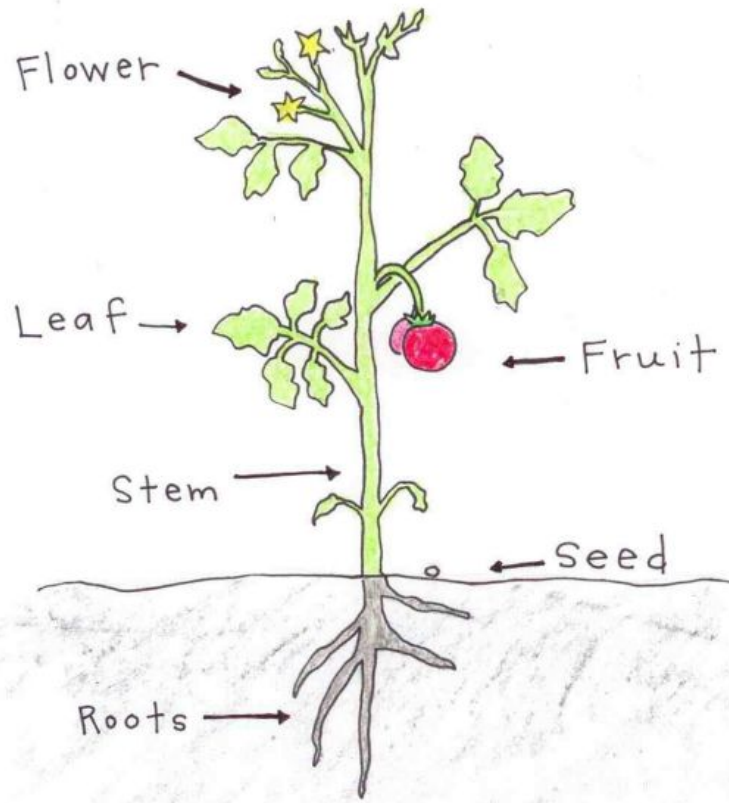
Flowers are responsible for the reproduction of a plant -- requires pollination.

Fruits are often the edible part of the plant, but also house the plant's new seeds.

Seeds carry the genetic properties of the plant and help the plant to continue into future generations.

Different parts of different plants are useful to humans. For example, we eat the **fruit** of the tomato plant, below. Check out different fruiting plants and identify their useful or edible parts!

The Parts of a Plant



Can you think of an edible example of each plant part?