YCS Farm to School Committee

School Garden Curriculum

Botany in the Kitchen: The Plant Parts We Eat

Overview
Students will learn about the parts of plants using food

Grade Level
3 - 5

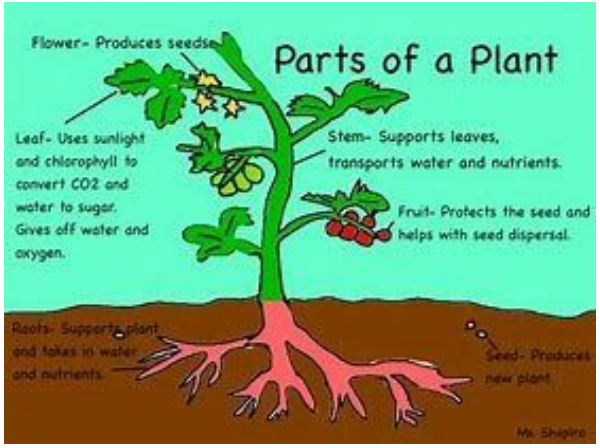
Objective
Students learn to identify the six plant parts (root, stem, leaf, flower, fruit and seed) and relate them to plants we eat
Students learn that humans eat all the parts of plants, but not all the parts of every plant

Time
45 minutes

Materials
Remote learning: Each student needs:

- Access to produce, herbs & spices, canned goods made of plants (students may partner if access is limited)
- A notebook or paper or document to sketch

Background Information



Plants have six parts with specialized roles (see above).
Resources to share with students: Parts of Plants And Their Functions
Video about plant parts: External Structures of Plants: Lesson for Kids - Video & Lesson Transcript

Procedure

As a class, discuss what we know about the parts of plants.

1. Ask, *What plant parts can we name?* Draw the parts for the class, or have them make their own labeled drawings.
2. Ask, *What do we know about what each plant part does?* Explain the different functions of the parts in helping the plant grow and reproduce.
3. Ask, *how many of us ate plants today or yesterday?* Some students may think that "eating plants" only means eating a fruit or vegetable; remind the group that foods made from grains (bread, crackers, cereal) are made of plants too.

What plant parts can we find in the kitchen?

1. Ask, *Do you think you can find all the parts of plants in a kitchen?* If they haven't already, ask students to make a list of the plant parts.
2. Give students/teams five minutes to explore the kitchen and find one example of each plant part. (They can write them down and/or share via video).
3. Ask, *Is anyone having trouble finding an example of a certain part?* Offer clues.
    a. Roots include carrots, onions, radishes, turnips
    b. Stems include celery, asparagus, stems from leafy greens like kale or spinach
    c. Leaves include lettuce, spinach, kale; in the spice rack we find dried leaves of oregano, basil, etc.
    d. Flowers include broccoli, cauliflower, artichokes. Flowers may be found in the spice rack as dried cloves
    e. Fruits include apples, grapes, tomatoes, bell peppers (the plant's fruit contains its seeds)
    f. Seeds include corn kernels, rice, nuts, pepper (we eat the dried seeds of the pepper plant), poppy and sesame

Do we eat all the parts of every plant?

1. Ask, *Can someone tell me what part of the tomato plant we usually eat?* The fruit is the part we eat; it contains the seeds
2. Ask, *Does a tomato plant only have a fruit? What other parts does it have?* Students will name root, stem, leaf, flower, and seed

3. Ask, *Has anyone here ever tasted a tomato root? A tomato leaf? A tomato flower?* Explain that most of the plants we eat have parts that we do not eat.
4. Ask, *Can anyone think of another plant that we only eat one part of? Can anyone name a plant we eat more than one part of?* Pumpkins: seeds & fruit; strawberries: fruit & seeds; spinach/kale: stems and leaves;

Evaluation

Lead a discussion about the parts of plants, their roles and examples of plant parts we eat

Ask, *What have we learned about the parts of plants and their jobs? Were there any plant parts that we could not find in the kitchen? Do we eat every part of every plant?*

Extension Activity

Encourage students to identify the parts of plants they are eating next time they have a snack or a meal, and share with their grownups or their class.

Tomato: Fruit or Veggie? Many students ask if a tomato is a vegetable or a fruit, and the short answer is “both!” When we are eaters thinking about tomatoes, we think of it as a vegetable because of how it is flavored, used in cooking, and it’s nutrient profile. When we are gardeners or plant enthusiasts thinking about tomatoes, we think of the actual tomato as the “fruit of the plant.” Tomatoes are both veggies and fruit!