

Plant Parts we Eat

Lesson Summary: In this lesson, students will classify different foods according to plant parts. Students will also have the opportunity to taste different vegetables from each type of plant part.

Objectives:

Students will be able to:

- Identify the various plant parts we eat and that are used for food.
- Classify plant parts as roots, stem, leaves, flowers, seeds and fruit.

Time Required:

35-40 minutes

Background Information:

Plants are an important part of our everyday life. We need them to make air and they provide food and fiber so that we can have something to eat and something to wear. They are also used to give us homes and believe it or not they provide us transportation. In some ways, we use every part of the plant.

We eat the root of some plants, the leaves of other plants, and we eat the fruit. It is seldom that we eat the entire mature plant. Usually when we eat plants and call them either fruits or vegetables. Since most plant foods are grouped into the two groups many of the foods we eat as vegetables are actually fruits. Some of the foods we call vegetables are not vegetables at all. They belong in another group. Plant scientists have given us some ways to tell if a plant is a leafy food (vegetable) and root food (not a vegetable) and a tuber (not a vegetable) and a fruit. Here are ways you can decide if a plant is a vegetable or a fruit or a tuber or a root:

A fruit is a fruit if the seed is surrounded by a fleshy part that we eat. Foods such as apples, bananas, cucumbers, peppers, tomatoes, squash are all fruits because there is a fleshy part around the seed that we eat. True vegetables are the leaves, stems or immature flowers of plants. They include things like lettuce, cabbage, turnip greens, celery, cauliflower and asparagus. We also eat the roots of some plants. A root is under the ground and has many hair like parts that get minerals and water from the soil. Root foods include carrots, radishes, parsnips, and turnips. Sometimes we eat only the seeds of a plant. Some of these foods include corn, peas, and beans. But they also include nuts like pecans, walnuts and almonds. Other seeds we eat are rice, wheat and oats.

Materials:

- *Tops & Bottoms* by Janet Stevens

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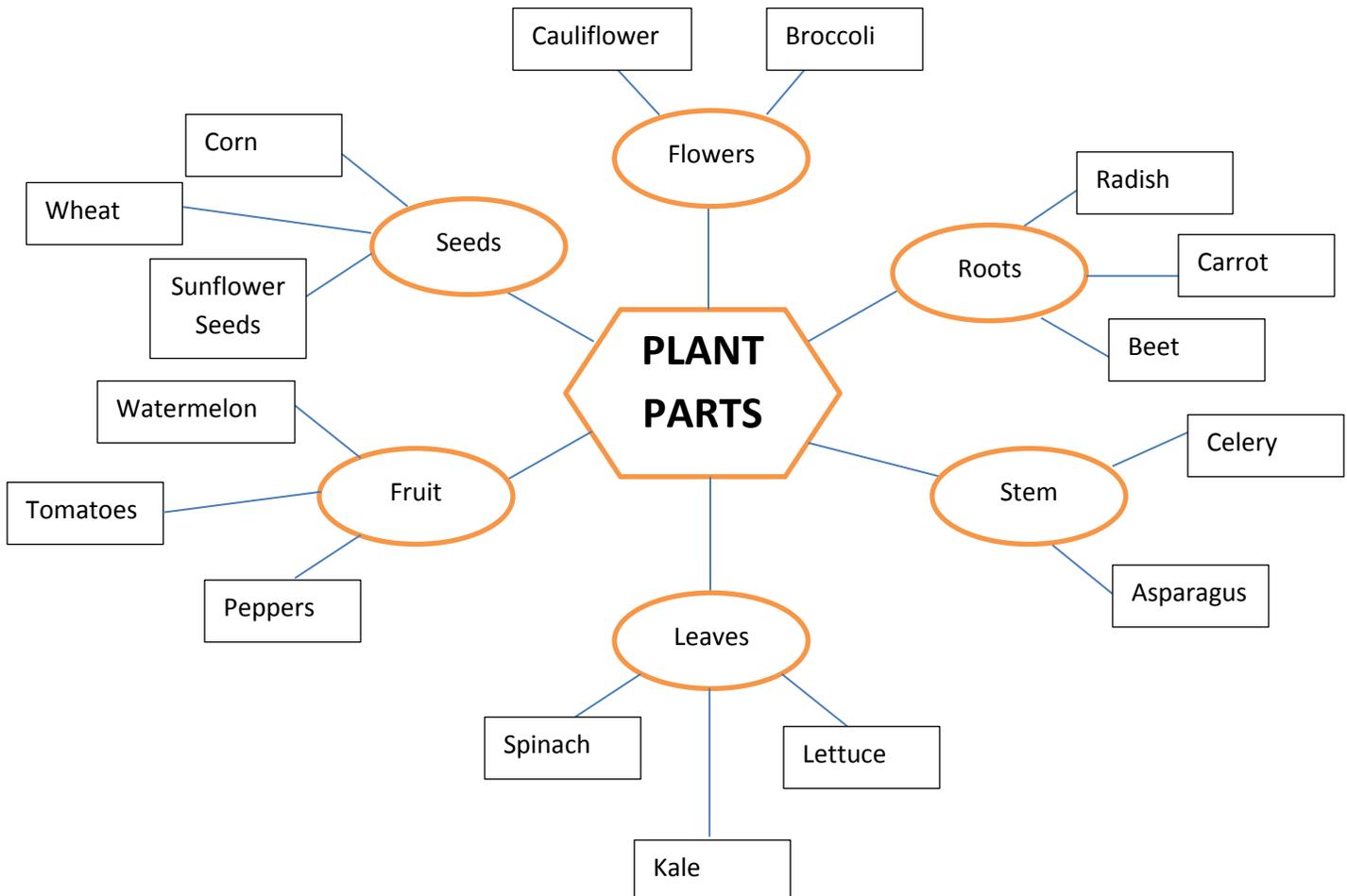
- Plant Parts Web Diagram Poster Board with associated picture cards
- Plant Parts Label Poster with associated plant part cards
- Napkins, small plates, gloves
- Chalk and/or dry erase markers
- Samples of each plant part food item (root, stem, leaves, flower, fruit, and seeds) for taste testing activity. It is best to prepare these ahead of time.
- Optional Craft Activity: construction paper, sunflower seeds, coffee filter/cupcake liners, straw/pipe cleaner, crayons/markers, scissors, plant parts/descriptions worksheet
 - <http://crayonbits.blogspot.com/search/label/Plants>

Procedures:

- 1) Today we are talking about the Plant Parts We Eat! Plants are an important part of our everyday life. We need them to make air and they provide food and fiber so that we can have something to eat and something to wear. They are also used to give us homes and believe it or not they provide us transportation. In some way we use every part of the plant. We eat the root of some plants, the leaves of other plants, and we eat the fruit.
- 2) Read the story- *Tops & Bottoms* by Janet Stevens.
 - a) YouTube Recording: https://www.youtube.com/watch?v=Qj7_IdQTZBc
 - b) Amazon Link: <http://www.amazon.com/Tops-Bottoms-Caldecott-Honor-Book/dp/0152928510>
- 3) Teach students about the six basic plant parts. Explain that plants are similar to our bodies and they require different parts to work together. While discussing the plant parts, create a plant parks food web or use the poster provided. In the middle of a poster board/white board/chalkboard, write the words PLANT PARTS (see example below). As the students call out of the names of each of the plant parts below, write them in the poster and connect them.
 - a) Roots
 - i) Found in the soil, carry water and nutrients to the plant
 - b) Stem
 - i) Supports and carries water and food throughout the plant
 - c) Leaves
 - i) Uses sunlight to make food for plant
 - d) Flowers
 - i) Usually bright in color and are the colorful part of the plant
 - ii) When they are pollinated by insects or wind, they produce seeds, which are sometimes stored in fruit. This seed can then make a new plant.
 - e) Seeds
 - i) Produced by pollination and stored in fruit

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- f) Fruit
 - i) Nutritious part of the plant that is eaten
- 4) Using the Plant Diagram Poster, see if students can label each part by raising their hand. Apply the correct part to the plant poster.
- 5) Next, have students recall the six basic plant parts from above.
 - a) Ask students to name which plant parts, can be eaten by people.
 - b) Using the Plant Parts Web Diagram poster, hand out pictures of different plant parts to students. Have students come up to the poster and put the respective picture in the correct spot.
 - i) Roots- carrot, onion, radish, ginger, beet
 - ii) Flowers- cauliflower, broccoli, eggplant
 - iii) Seeds- pumpkin seeds, dill, bean, rice, wheat, sunflower seeds
 - iv) Fruit- Watermelon, tomato, peppers, eggplant, apple, banana, squash
 - v) Leaves- basil, parsley, spinach, lettuce, mint, cabbage
 - vi) Stems- asparagus, celery, kohlrabi, green onions, chives
- 6) Tasting Activity
 - a) Bring in a vegetable that represents a plant part from each category for students to try. You can even make a homemade vegetable dip to go with the samples.



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Supporting Materials:

Biology of Plant Parts: <http://www.mbgnet.net/bioplants/parts.html>

The Great Plant Escape: <http://urbanext.illinois.edu/gpe/case1/c1facts2a.html>

References/Resources:

Junior Master Gardner Teacher/Leader Guide.

The Growing Classroom. Garden Based Science. 2007