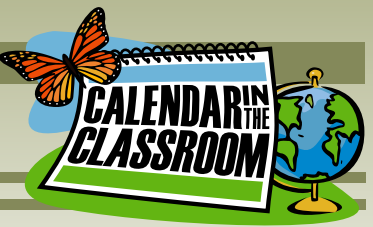




# Picking Plant Parts

Gardening



## Overview

Students will be able to identify the basic parts of a plant: fruit, seed, flower, leaf, stem and roots. Students will classify common food plants according to the parts that we eat.

## Background

Students are likely familiar with many vegetables and fruits, but they have probably not thought about what part of a plant they may be eating.

### Plant Parts Defined

**Root:** Usually forms below ground serving as an anchor that absorbs water and minerals. May act to store water and food for the plant.

**Stem:** Provides support for any branches, buds and leaves. Defines shape of the plant and transfers water, minerals, gases and sugars. Some stems grow underground.

**Leaf:** Part of the plant that (in most cases) carries on most of the photosynthesis (food production).

**Bud:** A growth area on the plant that can form leaves or flowers.

**Seed:** Formed from a fertilized flower and contains an embryo (new plant) and the food necessary for its early growth.

**Fruit:** The enlarged ovary (fleshy growth) that holds and protects a newly developed seed or seeds. Tomatoes, squash and several things that we call “vegetables” are actually defined as fruits.

**Flower:** Contains one or both structures for sexual reproduction. Only a few like Nasturtiums and some Orchids are eaten in the U. S.

## The Activity

### Warm Up

Ask students to name some of the plants they eat and list them on the board. Review the parts of a plant with students and have them draw the parts in their science journals.

After your students have created a labeled drawing of all the parts, discuss the functions of each plant part. Write a one or two word “definition” of the function of each plant part next to each part on a plant diagram on a large notepad or on the board (use the information in the “background” section above to define the plant parts). Introduce the idea that plants make (produce) and store energy from the sun in different parts of their bodies. People harvest and eat (consume) parts of a variety of plants to get energy. Ask the children to think about what plants they eat (consume). Do they eat the entire plant or just a part of it?

If there is a school garden, go outdoors to see how many edible plant parts students can find in the garden and list the plant and the part eaten in their science notebooks. If there is no garden or to extend the lesson to other plants, bring a selection of fruits and vegetables that represent each part of a plant. See materials for suggestions. Keep these items out of view.

### Time:

60 minutes

### Skills:

Identification  
Classification

### Vocabulary:

bud  
flower  
fruit  
leaf  
root  
seed  
stem

### Materials Needed:

- Vegetable samples
- Leaves: lettuce, spinach  
cabbage
- Stems: celery, potatoes
- Roots: carrots, radishes,  
turnips, beets
- Buds: broccoli, brussel  
sprouts, cauliflower,
- Fruits: peppers, grapes,  
green beans, tomatoes,  
squash, pumpkin
- Seeds: shelled peas, oats,  
sunflowers
- Science notebooks /  
Journals
- Plant Part Labels
- *Minnesota Weatherguide  
Environment™ Calendar*

Distribute labels for the seven parts of a plant around the room. You may want to appoint a captain for each plant part. Now ask students in teams of two to come and pull one of the vegetables out of the box or tote, and try to match their food with a plant part and then take it to the correct plant part label/captain. When everyone has had a turn review and critique.

### Questions for Discussion

- Ask students what plants they have eaten recently and which part of the plant it was that they ate.
- Ask students what is your favorite: root? leaf? stem? bud? fruit? seed?

### Extensions

- If there are no problems with allergies students can be introduced to a variety of these vegetables by using some of the plants as a relish tray with dip for a class treat.
- Have students describe their lunch (or last meal) in terms of plant parts.
- Students can research other foods that we harvest from plants. Spices can be very interesting and students may be surprised to learn the origin of chocolate and maple syrup.
- Students could plant a small plot with seeds of some of the garden plants to see how they grow. Consult the *Minnesota Weatherguide Environment™ Calendar* for suitable dates.
- Ask students to devise a dinner with dessert using only one category of plant parts.

### Resources

*Minnesota Weatherguide Environment™ Calendar*

online: <https://jeffersfoundation.org/programs/calendar-in-the-classroom/>

#### Songs

*Roots, Stems, Leaves* - Banana Slug String Band

*Dirt Made My Lunch* - Banana Slug String Band

*Sun, Soil, Water & Air* - Banana Slug String Band

*Yo! I'm a Flower* - Billy B.

### Minnesota Academic Standards

#### 3-D Science Standards

##### Science Practices:

1. Asking Questions
2. Developing and Using Models
3. Plan and Carry out Investigations (investigating through observation)
4. Analyzing and Interpreting Data
8. Obtaining, Evaluating and Communicating Information

##### Crosscutting Concepts:

1. Patterns
6. Structure and Function

##### Disciplinary Core Ideas:

LS1: From molecules to organisms: Structures and processes

K: Observe how plants require light, water, and other resources in order to survive

1st Grade: Develop a model to represent how a plant's external parts help it grow and survive

LS3: Heredity: Inheritance and variation of traits

1st Grade: Observe similarities and differences between young plants and their parents

PS1: Matter and its interactions

K: Sort objects (including natural) and communicate the reasoning for the sorting system

# Plant Parts

Bud



Flower



Fruit



Leaf



Root



Seed



Stem

