



Grade Level: K-5

Essential Skills: 1, 4, 5, 9

CCSS: K.RL.1, K.RL.2, K.RL.3, K.RL.7, K.RL.10, K.RI.1, K.RI.2, K.RI.3, K.RI.7, K.RI.10, K.SL.1, K.SL.2, K.SL.3, 1.RL.1, 1.RL.2, 1.RI.1, 1.RI.2, 1.RI.7, 1.SL.1, 1.SL.2, 2.RI.1, 2.RF.1, 2.SL.1, 2.SL.2, 3.RL.1, 3.RI.1, 3.SL.1, 4.RI.1, 4.SL.1

Time: 45 minutes

Materials:

Eating Plants Kit* or:

- *Try it!: How Frieda Caplan Changed the Way We Eat* book
- 6 sets of paper lunch bags labeled roots, stem, leaf, flower, seed and fruit.
- 30 fruit and vegetable cards
- Plant parts bookmark

Eating Plants

Description:

Students identify the structure and function of six plant parts and classify fruits and vegetables according to which parts of the plants are edible.

Activity Directions:

Activity 1: Introduction to Plant Parts

1. Ask a student volunteer to make a sketch of a plant on the board. Encourage them to draw a simple plant with a stem, leaves, roots, and a flower.

2. To begin introducing the lesson and to assess prior knowledge, point to each part of the plant (roots, stem, leaves, flower) and ask the students if they know the name of that portion of the plant. Label each part as you discuss it. Inform your class that they will be learning more about each of these plant parts and which portions of the plant that we eat.

Activity 2: Read the Book!

1. Ask the students "What kinds of fruits or vegetables have we tried?" Have students brainstorm different fruits and vegetables they know.

2. Introduce the topic of Produce Markets explaining to students that produce markets are markets where schools, restaurants and grocery stores would purchase produce to sell to consumers. This is a little different from the farmers markets we might be familiar with today.

3. Explain to students that you are going to read the book, *Try it!: How Frieda Caplan Changed the Way We Eat*. Frieda Caplan introduced many new fruits and vegetables to customers. As you read the book, ask students to pay close attention to the unique vegetables and fruits that Frieda made popular.

4. After you have read the book, lead the students in a few follow-up questions.
a. How was Frieda successful at the market?
b. What types of produce did Frieda introduce at the market?
c. Were there any fruits or vegetables you haven't heard of?
d. Where did these new foods come from?

5. Explain to students when we are eating fruits and vegetables, we are eating different parts of plants.

6. Distribute bookmarks to each student. Use the bookmark to review the parts of a tomato plant with students. Ask students to explain the functions of each part of the plant.

Root: Roots anchor the plants to the soil. Roots also absorb water and nutrients from the soil.

Stem: Stems support the leaves, flowers, and fruit. Stems transport water, nutrients and sugars to the rest of the plant.

Leaf: Leaves catch energy from the sun and produce food for the plant.

Flower: The flower attracts pollinators to the plant.

Fruit: Fruit is responsible for protecting the seeds.

Seed: Seeds sprout and grow into a new plant.

Part 3: Eating Plants

1. Explain to students that they will be challenged to sort different fruits and vegetables based on what part of the plant they come from.

2. Review some examples of fruits or vegetables that come from the root, stem, leaf, flower, fruit or seed of plants from the book. Some examples are listed below. Point out a picture of a fruit and ask students what part of the plant the item comes from.

Root: carrots

Stem: potatoes, asparagus

Leaf: (no example in the book) Provide students with an example of lettuce to give them an idea of what a food that comes from the leaves of the plant would look like.

Flower: cauliflower

Fruit: mango, blood orange

Seed: snap peas

3. Divide students into small groups (no more than six groups per class) and explain that students will be identifying which edible part of the plant the fruit or vegetable pictured on the cards came from.

4. Explain to students that each group will receive a set of six bags and a deck of *Eating Plants* cards. Instruct students to place these bags in the center of the group. Each group will also receive a set of cards with fruit and vegetables pictured on them. Instruct students to divide the cards up among group members and work together to sort them in to the bag labeled with the part you are eating when you eat the fruit or vegetable.

5. When students have separated the cards into bags, choose one group's cards to review the contents of each bag with students. Begin with the cards in the "Root" bag, all cards in the root bag should have a blue frame around the photo. If there are any cards with a different colored frame ask students to what part of the plant they think the card belongs to. Repeat this process for each box. See the Fruit & Vegetable Classification below for the correct classifications.

Root (Blue frame, 4 cards): beets, carrots, jicama and radish

Stem (Orange frame, 2 cards): asparagus and potato*

Leaf (Yellow frame, 6 cards): brussel sprouts, cabbage, celery*, lettuce, rhubarb* and spinach

Flower (Red frame, 3 cards): artichoke, broccoli and cauliflower

Fruit (Green frame, 10-11 cards): apples, avocado, cherries, cucumber, grapes, kiwi, mango, snap peas, strawberry*, tomato and watermelon

Seed (Black frame, 4-5 cards): bean, corn, peanut, strawberry* and sunflower seeds

**Indicates a challenging or confusing classification with explanation below.*

Potato*: A potato is the stem of the plant. Potatoes have several nodes called eyes which shoots grow from to create new potato plants.

Celery/Rhubarb*: Celery and rhubarb are the stalk of the leaf, called the petiole.

Strawberry*: When eating a strawberry, you are eating both the seeds and the fruit. The seeds are located on the outside of the fruit.

6. After the activity, discuss the following questions:

- Were there any challenges? What fruits or vegetables were surprising to us?
- What parts of the plants do our fruits and vegetables come from?