



Freshest Fruits

Purpose

The purpose of this lesson is to learn about fruit and its nutritional value, including vitamin C.

Time

Teacher preparation:
20 minutes

Student activities:
50 minutes

Materials

For the teacher:

- ▶ Fruit knife

For the class:

- ▶ Paper towels
- ▶ One different type of fresh fruit for each group (*Example: apple, peach, kiwifruit, orange, avocado, strawberry, grapes*)

- ▶ Rulers

For each student:

- ▶ *As I See It* handout (page 34)

Background Information

Crops that are usually listed as fruits are grown on trees, shrubs, or vines and produce fruit for a number of years. These include apples, apricots, avocados, cherries, dates, berries, figs, grapes, lemons, nectarines, olives, oranges, and pears. The fruit of a plant generally surrounds the seeds of a plant. The fruit protects the seeds and attracts animals and insects. When animals eat the fruit they usually also eat the seed, which will later be deposited with the animal's scat, or waste. The scat provides nutrients for the seed to grow into a plant. This process helps disperse seeds and plants to new areas. For example, birds might eat berries in one location, then fly to another location and deposit their scat with the berry seeds in the new location. A person might pick an apple from a tree, then carry it to a different place to eat, and drop the seeds in this new location.

Today, Californians are fortunate to have access to fresh fruit year round. This wasn't always the case. When the gold rush in California began in 1849, hundreds of thousands of people began to move west to California seeking their fortunes in the gold mines. These miners and their families lacked fresh foods, especially those rich in vitamin C. A lack of vitamin C causes a disease called scurvy. Symptoms of scurvy include general weakness, bleeding of gums, and rupture of capillaries under the skin. In the gold rush days, citrus juice was often prescribed as a medical cure for scurvy and was sold for \$1 an ounce.

While many miners did not strike it rich in gold, some discovered that the fertile soil in many parts of California was ideal for farming. Many crops were planted, including fruit orchards in order to meet the demand for fresh fruit from miners and settlers. Modern refrigeration was not yet available to keep fruit fresh after it was picked. Canning was the method used to preserve fruit after harvest so it could be eaten throughout the year and shipped to consumers in other parts of the state. Today, shipping of produce has become much faster and efficient than in the 1800s, and both fresh and canned fruit are readily available in our grocery stores all year long. California is the leading agricultural state in the nation, growing over 400 crops.

Fruits are an excellent source of vitamin C in our diets. Vitamin C helps the body heal wounds and lowers the risk of infection. It also helps keep the body from bruising and builds the tissue that holds muscles and bones together. Known as ascorbic acid, Vitamin C also helps the body absorb the iron found in foods and strengthens the immune system.

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Content Standards

Grade 2

Science 2a, 2f, 4b, 4e, 4g

Next Generation Science
2-LS2.A

English Language Arts

- Writing 8
- Speaking and Listening 1a, 1b, 1c

Health 1.7N, 1.4.N

History-Social Science
2.4.1, 2.4.2

Grade 3

Science 3a

Next Generation Science
3-LS1.B

English Language Arts

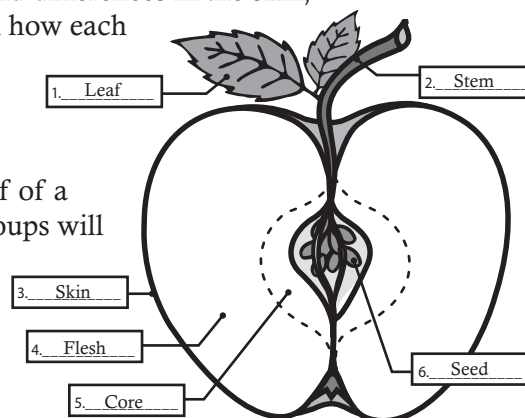
- Writing 8
- Speaking and Listening 1 a, 1b, 1c

History-Social Science
3.1.2, 3.3.2, 3.5.1

Procedure

1. Prior to class, cut each of your fresh fruits in half.
2. Before group work begins, display the entire selection of fruits for the students to observe. Hold each fruit up in front of the class and discuss the similarities and differences in the skin, seeds, and flesh. Explain how each fruit is grown.

3. Organize students into groups of two or three. Give each group one half of a piece of fruit. Not all groups will have the same type of fruit. Instruct students to examine the inside of the fruits and complete the *As I See It* handout.



4. After students complete the handout, discuss the answers as a class. Have students hold up their fruit for all of the class to see and point out the seed, flesh, and skin. Discuss the purpose of these different parts.
5. Have students find the listed percentage of vitamin C for their fruit. Students ages 4-8 need 1 to 1 ½ cups of fruit per day. Students ages 9-13 need 1 ½ cups of fruit per day.
6. These are listed on the *As I See It* handout. Call on each group and ask them for the % vitamin C in their fruit. Write the numbers on the board and make a bar graph for students to see.
7. Ask students to look at the bar graph and determine which two fruits are the best sources of vitamin C. Discuss how vitamin C plays an important role in our diets.
8. As a concluding discussion, review with the class:
 - a. California grows an abundance of fruit crops.
 - b. Fruit is a nutritious snack and provides important dietary requirements like vitamin C.
 - c. The flesh of the fruit attracts animals who eat the fruit. When fruit seeds are planted or deposited in animal scat, they grow into new seedlings and the life cycle of the fruit plant continues.

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Extensions

- ▶ Visit a fruit packing plant or farm. Learn how fruit is grown, graded, and packed.
- ▶ Have students research a particular fruit and make a poster that illustrates how it is grown and how it gets from the farm to our homes.
- ▶ Make a collage using the seeds from the different types of fruit.

Variations

- ▶ Prior to the lesson, ask students to brainstorm ideas for what they should do with the fruit that is used in this activity. Display some recipes for healthy fruit snacks.
- ▶ If fruit is not available, examine pictures of fruit from cooking magazines and identify the parts.

ELL Adaptations

- ▶ Demonstrate activity procedures before allowing students to begin. ELL students will benefit from observing the procedures before they get started.
- ▶ This lesson incorporates hands-on activities. Kinesthetic learning events provide an excellent learning environment for the English learner.