

Harvest of the Month

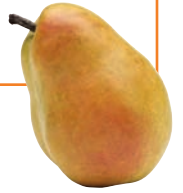


Network for a Healthy California



Health and Learning Success Go Hand-in-Hand

Studies show that memory function, healthy immune systems and even vision are linked to healthy eating habits and regular physical activity. **Harvest of the Month** connects with core curricula to give students the chance to explore, taste and learn about the importance of eating fruits and vegetables. It links the classroom, cafeteria, home and community to motivate and support students to make healthy food choices and be physically active every day.



Taste Testing with California Pears

Taste testing activities allow students to experience the featured produce with their senses, engaging them in the learning process and creating increased interest, awareness and support for increasing consumption of fruits and vegetables.

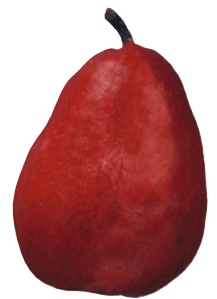
Tools:

- Variety of red, yellow, green and brown pears, whole and quartered* (refer to *Home Grown Facts* on page 3 for varieties)
- One pear variety per every four students
- Whiteboard or chalkboard
- Dry erase markers or chalk

*To reduce browning (oxidation), cut pears immediately before tasting

Activity:

- Divide students into four groups (red, yellow, green and brown pears)
- Make four columns on the whiteboard: red, yellow, green and brown
- Each group observes, smells, feels and tastes their assigned pear
- Note the different features in the columns on the whiteboard
- Use descriptive sensory words like sweet, fragrant, yellow, grainy, crunchy, etc.
- Discuss the similarities and differences in the four groups
- Sample the other colors



For more ideas, ask your child nutrition staff or ask to borrow: *Fruits and Vegetables Galore*, USDA, 2004.

Nutrition Facts

Serving Size: 1 medium pear (166g)

Calories 96

Calories from Fat 2

	% Daily Value
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 2mg	0%
Total Carbohydrate 26g	9%
Dietary Fiber 5g	21%
Sugars 16g	
Protein 1g	
Vitamin A 1% Vitamin C 12% Calcium 1% Iron 2%	

Source: www.nutritiondata.com

PEARS
October

Cooking in Class: Breakfast Pear Parfait

Ingredients:

Makes 32 tastes at ¼ cup each

- 2 cups plain oat cereal
- 2 cups honey oat cereal
- 2 cups pears pared and diced pears
- 2 cups lowfat yogurt
- Small paper cups

Mix cereals together. Top mixture with pears and lowfat yogurt. Divide evenly among cups and serve.

Adapted from:

www.usapears.com/delicious/recipes.asp

For more ideas, reference:

Kids Cook Farm-Fresh Food, CDE, 2002.

Reasons to Eat Pears

Pears are:

An excellent source of dietary fiber, 41 percent in the form of pectin, which helps sustain blood sugar levels and promotes bowel regularity.

A good source of Vitamin C, essential for metabolism, healing and guarding against infectious diseases.

A source of potassium, an element lost easily in children due to their active lifestyles.



October Events

- National School Lunch Week
- Walk to School Week
- World Food Day

Student Sleuths

- 1 Why do our bodies need potassium?
- 2 Define what a bud sport is.
- 3 Research and describe the technique called grafting that is used to grow and cultivate pears. What other fruits use the grafting technique?
- 4 Label the parts of the pear.

For information, visit:

www.calpear.com

www.dole5aday.com/ReferenceCenter/Encyclopedia/Pears

www.usapears.com/healthy/nutrition.asp

Just the Facts

There are more than 3,000 varieties of pears worldwide.

Ninety-eight percent of all pears grown in the United States are grown in California, Oregon and Washington.

The Bartlett pear variety is America's favorite pear.

Pears ripen better off the tree and from the inside out.

Pears are best when eaten with the peel, as that is where most of the fiber and antioxidants are found.

The wood of pear trees is one of the preferred materials in the manufacture of high quality woodwind instruments.

How Do Pears Grow?

Pears need a location with good air circulation where the ground is slightly elevated and sloping because the trees bloom early and the flowers may be damaged in the spring by frosty air, which settles in low-lying areas. Pears should be grown in heavier soil types and will not survive on ground that is saturated with water.

The pear tree has glossy leaves and white flowers grouped in corymbs, which are pollinated to become the edible fruit. In early spring, bees help the pear trees pollinate from flower to flower on the different pear trees. During the growing season, pear orchards need the ideal warm days and cool nights that are found in California, Oregon and Washington regions.

The California pear harvest begins in mid-July and continues through September. Pears do not ripen properly on the tree so growers pick the fruit when it is mature but green. Pears are harvested by hand, placed into bins and transported to a packing house. The pears are graded for quality, sorted by size and packed for the fresh market or sent to a processing facility. Next, pears are cooled to slow down the ripening process. To initiate ripening, pears need to be brought to room temperature.

Pears are processed into canned pears, fruit cocktail, juice concentrate, baby food products, and are often dried.

What's in a Name?

Pronunciation: pâr

Spanish name: pera

Family: Rosaceae

Genus: *Pyrus*

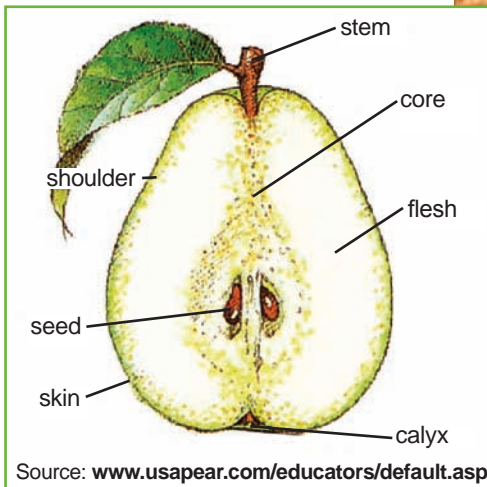
Species: *P. communis*, *P. pyrifolia*

Pear is the name for the fruit tree of the genus *Malus* and for its fruit, a pome, which is edible in most species. There are 30 known species of pears, three of which are important for edible fruit production. The common pear, *Pyrus communis* or European Pear, is cultivated mainly in Europe and North America, while *Pyrus pyrifolia* is grown mainly in eastern Asia and is known as the Nashi, Asian or Apple Pear. The Ya Pear, *Pyrus bretschneideri*, is also cultivated in Asia.

Other pear species are used as rootstocks for European and Asian pear trees and as ornamental trees. For example, the Bradford Pear (*Pyrus calleryana*) and Willow-leaved Pear (*Pyrus salicifolia*) are grown only for decoration and have become widespread in North America.

For more information, visit:

www.fruitsandveggiesmatter.gov/month



A Slice of Pear History

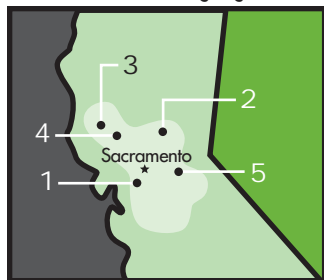
Pears date back to ancient times as one of the earliest cultivated fruit trees. The Romans used special grafting techniques to develop more than 50 varieties of pears, which were introduced to other parts of Europe with the rise of the Roman Empire.

The Bartlett pear was developed in England in the 17th century by a schoolmaster named John Stair. He sold some cuttings from a pear tree (which are used for grafting,

a technique for developing new trees and fruit varieties) to a horticulturist named Williams, who further developed the variety and renamed it after himself.

Early Americans brought pear seedlings across the Atlantic to the Massachusetts Bay Colony. In 1812, nurseryman Enoch Bartlett discovered the pear variety and, unaware of the pear's true name, distributed it as a "Bartlett." However, it is still known as the "Williams" pear around the world. Bartlett cuttings eventually came west when the forty-niners headed for the great California Gold Rush and they continue to grow in California today.

California Bartlett Growing Regions



- 1) Sacramento River Delta
- 2) Upper Sacramento Valley
- 3) Mendocino County (north coast)
- 4) Clear Lake
- 5) El Dorado County

Source: www.calpear.com/cns_use.cfm

Home Grown Facts

Seventy-five percent of California's pear acreage is for the Bartlett pear.

California ranks No. 1 in Bartlett pear production, producing 60 percent of the nation's Bartlett crop.

California ranks No. 2 in all pear production, producing 32 percent of all pears grown in the United States.

California produces more than 270,000 tons of pears each year, contributing more than \$91 million to the state's economy.

Other California varieties include Bosc, Seckel, Comice and Red Anjou.

Eat Your Colors

Fruits and vegetables come in a rainbow of colors. Eat a variety of colorful fruits and vegetables every day — red, yellow/orange, white, green and blue/purple. Pears can be red, yellow, brown (white color group) or green.

- Red fruits and vegetables help maintain a healthy heart, memory function and urinary tract health. They may also lower the risk of some cancers. Examples include red pears, red grapes, beets, tomatoes and radishes.
- Yellow/orange fruits and vegetables help maintain a healthy heart, vision health and a healthy immune system. They may also lower the risk of some cancers. Examples include yellow pears, persimmons, butternut squash and sweet corn.
- White, tan or brown fruits and vegetables help maintain a healthy heart and cholesterol levels that are already healthy. They may also lower the risk of some cancers. Examples include brown pears, bananas, dates, cauliflower, garlic and jicama.
- Green fruits and vegetables help maintain vision health and strong bones and teeth. They may also lower the risk of some cancers. Examples include green pears, green grapes, spinach, avocados and green peppers.

For more information, visit:
www.fruitsandveggiesmatter.gov

Student Advocates: Promoting Pears

- Have students work with the child nutrition staff to design posters with pear drawings and facts to hang throughout the school and cafeteria. Partner with a local grocery store to hang students' posters at the checkout stands.
- Help students organize their own composting crew with your school's child nutrition staff to help reduce waste from the cafeteria. See the *School Garden* section for activity details.

For more ideas, visit:
www.ciwmb.ca.gov/schools

School Garden: Recycled Compost Piles

October is an excellent time to make a compost pile in your school garden by recycling wastes from the garden and cafeteria. If made properly, a recycled compost pile will make a nutrient-rich fertilizer for your soil.

- **Size and shape:** The pile should be 3' x 3' x 3' and built as a large cube to create enough heat.
- **Moisture:** Like all living things, microorganisms need moisture. Keep the pile about as wet as a damp sponge. Avoid soggy.
- **Air:** Microorganisms also need air. Help your pile stay aerated by laying stalky branches beneath the pile to lift it off the ground.
- **Ingredients:** Alternate layers of dried and fresh matter. Do not use any meat, dairy foods or oil.

Adapted from: www.compostingcouncil.org

For more ideas, visit:

www.lifelab.org

www.foodlandpeople.org

Project Food, Land & People is an organization that promotes approaches to learning in an effort to help people better understand the interrelationships between agriculture, the environment and the world's people.

Student Sleuths

- 1 Map the various geographical regions in California where pears are grown.
- 2 What are the top three pear-producing counties in California? When do these regions harvest pears? What is the volume of pears produced?
- 3 Determine what percentage of the pears harvested in California goes into processed foods and juices and how much is available to be sold whole/fresh.

For information, visit:

www.calpear.com

www.fruitsandveggiesmatter.gov/month/asian_pear.html

www.cfaitc.org/Commodity

Cafeteria Connections

- Set aside a time each day to discuss the menu with your students. Ask which meals they would like to try. How many times is the featured produce included on the menu? Does each meal include a fruit and a vegetable?
- Team up with the child nutrition staff to celebrate National School Lunch Week (NSLW) during the second week of October. NSLW encourages hunger awareness and community involvement, and opens the doors for further nutrition learning and discussions. Take this opportunity to involve your classroom in a particular NSLW activity.
- Visit www.schoolnutrition.org or contact your child nutrition staff for more NSLW information.

For more ideas, reference:

School Foodservice Guide – Successful Implementation Models for Increased Fruit and Vegetable Consumption, Produce for Better Health Foundation, 2005, pp. 39-42.

Physical Activity Corner

Eating healthy is only one step toward fighting overweight in youth. Children should engage in at least one hour of physical activity every day to stay healthy and fit, both mentally and physically. Dedicate the month of October to playing a different game or activity, like *Super Hero's Cape*, each week in or out of the classroom.

Super Hero's Cape

Objective: Develops strength, locomotor skills and group cooperation

Supplies:

- Parachute or large bed sheet
- Whistle or music (optional)

Preparation:

- Choose four students to be *Super Heroes* (each student will get a turn)
- Group *Super Heroes* at one end of the chute
- Other students circle around the chute

Activity:

- On GO command (or use whistle/music), everyone lifts the chute above heads
- Anyone who is not a *Super Hero* lets go and moves out of the way
- *Super Heroes* continue to hold cape and run forward together; the chute will flip and look like a cape
- Repeat until all students have had a turn being a *Super Hero*

Go Farther: Have students model *Super Hero* movements while running forward or use other types of motor skills (e.g., walk, skip, jump).

Bring It Home: Encourage students to talk with family members about their favorite *Super Heroes* and the importance of being active every day.

For more ideas, visit:
www.sparkpe.org



Literature Links

- **Primary:** *Hooray for Orchards* by Bobbie Kalman, *Mr. Putter & Tabby Pick Pears* by Cynthia Rylant and *Too Many Pears* by Jackie French and Bruce Whately.
- **Secondary:** *Pears on a Willow Tree* by Leslie Pietrzyk, *A Fruit & Vegetable Man* by Roni Schotter and *The Garden and Farm Book of Fruits and Vegetables* by Robert C. Barron.

Adventurous Activities

Field Trip:

Take students on a pear-picking field trip or to a farmers' market. Or bring the field trip to the school. For information on Farm to School programs, visit www.farmtoschool.org/ca/index.htm.

Guest Speaker:

Ask a local pear farmer or horticulturist to hold a hands-on grafting demonstration or explain how they harvest pears.

Problem Solving:

Use pears in math equations, such as addition, subtraction and fractions, or introduce pie charts and chart the different ways and corresponding percentages that pears are sold.

- **Example:** Sixty-five percent of pears go to canneries, 25 percent are sold fresh, 10 percent go to baby foods, etc.

Science Investigation:

- **Materials:** Unripe pears of each variety being tested, thermometers, resealable plastic bags and supplies as determined by students.

Activity:

- 1 Explain that pears ripen best after they have been picked. Brainstorm variables that may affect the ripening rate.
- 2 Create and perform experiments that will test each variable. For example, separate pears in plastic bags. Place one bag in the refrigerator and one on a countertop. Over the next few days, record temperatures and changes in color, firmness, etc. Compare the ripeness of the two sets of fruit.
- 3 Discuss the results of each of the performed experiments.

Adapted from: www.cfaitc.org/Commodity/Commodity.php

Calendar Connection:

Participate in **Walk to School Week** by encouraging students to walk with a friend or an adult during the first week of October. Visit www.cawalktoschool.com for details.

For more ideas, visit:

www.nass.usda.gov/Education_&_Outreach/NASS_Kids
www.ars.usda.gov/is/kids



Next Month: Kiwifruit

