
Unit 3: Seeds

Farm to School Lessons

Lesson 13	Seasonal Gardening: Pears, Part 2
Lesson 14	Seeds
Lesson 15	Planting Seeds
Lesson 16	How Do Seeds Sprout?
Lesson 17	Nurturing Seeds Experiment, Part 1
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**Pasadena Unified
School District
with funding from USDA**



Seasonal Gardening: Pears

Part 2

Health Standards Addressed

Kindergarten: 1.1.N Name a variety of healthy foods and explain why they are necessary for good health.

1.2.N Identify a variety of healthy snacks.

7.1.N Select nutritious snacks.

First Grade: 1.3.G Identify a variety of behaviors that promote healthy growth and development.

Second Grade: 1.1.N Name a variety of healthy foods and explain why they are necessary for good health.

1.2.N Identify a variety of healthy snacks.

7.4.N Examine the criteria for choosing a nutritious snack.

Third Grade: 5.1.G Examine why a variety of behaviors promote healthy growth and development.

Fourth Grade: 1.1.N Identify and define key nutrients and their functions.

7.1.N Practice how to take personal responsibility for eating healthy foods.

Fifth Grade: 1.6.N Differentiate between more-nutritious and less-nutritious beverages and snacks.

5.1.N Use a decision-making process to identify healthy foods for meals and snacks.

7.1.N Identify ways to choose healthy snacks based on current research-based guidelines.

8.1.N Encourage and promote healthy eating and increased physical activity opportunities at school and in the community.

CCSS Math Standards Addressed

SMP 1 Make sense of problems and persevere in solving them.

SMP 2 Reason abstractly and quantitatively.

SMP 3 Construct viable arguments and critique the reasoning of others.

SMP 4 Model with mathematics.

SMP 6 Attend to precision.



Materials

Pear from Harvest of the Month (uncut), knife, paper towel or other receptacle to hold seeds, student copies of pear article (optional, 3rd-5th)

Success Skills

Collaboration with their peers during their discussion of food and food choices.

Communication of ideas with peers as students discuss the topic.

Creativity as students illustrate and write about what they have learned about food and food choices.



Challenging Question

Why is fruit a part of the Seed to Table Cycle?

(K-5) Access Prior Knowledge

Remind students that food (vegetables and fruits) are grown and harvested. Have students talk about fruit and what defines a fruit.



Explore

Kindergarten and First Grade Explore

In this lesson, students understand that fruit contains seeds that can grow more fruit. They will also estimate the number of seeds in the fruit, and count the seeds to get an exact amount.

Explain: We talked in a previous lesson about what makes a fruit.

Observe: Look at this pear. (Hold up the pear.)

Ask: How many seeds do you think are in this pear? Where do you think the seeds are located?

- Have students talk to their partners about how many seeds they think are in the pear and where the seeds are located. Cut the pear.

Explain: Most people eat pears *raw*, although some chefs at restaurants used pears in their cooked meals.

Review: Raw means not cooked.

- Cut the pear down the middle. Point to where the seeds are located.
- Pass out a taste of the pear to every student.

Ask: What are some words that describe the taste of pears. How else would you describe the pear?

- Count the seeds removed from the pear.

Ask: How does this differ from the seeds we took out of the melon last month?

Kindergarten and First Grade Revision and Reflection

- In their response journals, have students draw a picture of the outside (what it looked like before it was cut) and inside of the fruit. Have students respond to this prompt. How many seeds were inside the fruit?
- *Write the sentence:* Our _____ pear had _____ seeds. Teachers can use a highlighter to write the words for students or students may write independently.



Second and Third Grade Explore

In this lesson, students understand that fruit contains seeds that can grow more fruit. They will also estimate the number of seeds in the fruit, and count the seeds to get an exact amount.

Explain: We talked in the previous lesson about what makes a fruit.

Observe: Look at this pear. (Hold up the pear.)

Ask: How many seeds do you think are in this pear? Where do you think the seeds are located?

- Have students talk at their table about how many seeds they think are in the pear.
- Each table needs to come to a consensus about the estimation they want to report.
- Chart each table's estimation of seeds in the fruit.
- Cut the pear.

Explain: Most people eat pears **raw**, although some chefs at restaurants used pears in their cooked meals.

Review: Raw means not cooked.

- Pass out a taste of the pear to every student.
- Count the seeds removed from the pear.

Ask: How does this differ from the seeds we took out of the melon last month?

- Point to the table estimations.

Ask: Whose estimation was closest? Were there any estimations that were unreasonable?

Second and Third Grade Revision and Reflection

Students respond to the following questions in their journals:

- How did your group come up with an estimation for the number of seeds in the pear?
- Why do you think there weren't as many seeds in the pear, compared to the melon from last month?

Fourth and Fifth Grade Explore

In this lesson, students understand that fruit contains seeds that can grow more fruit. They will also estimate the number of seeds in the fruit, and count the seeds to get an exact amount.

Explain: We talked in the previous lesson about what makes a fruit.

Observe: Look at this pear. (Hold up the pear.)

Ask: How many seeds do you think are in this pear? Where do you think the seeds are located?

- Have students talk at their table about how many seeds they think are in the pear.
- Each table needs to come to a consensus about the estimation they want to report.
- Chart each table's estimation of seeds in the fruit.
- Cut the pear.

Explain: Most people eat pears *raw*, although some chefs at restaurants used pears in their cooked meals.

Review: Raw means not cooked.

- Pass out a taste of the pear to every student.
- Count the seeds removed from the pear.

Ask: How does this differ from the seeds we took out of the melon last month?

- Point to the table estimations.

Ask: Whose estimation was closest? Were there any estimations that were unreasonable?

Fourth and Fifth Grade Revision and Reflection

Students respond to the following questions in their journals:

- How did your group come up with an estimation for the number of seeds in the pear?
- Why do you think there weren't as many seeds in the pear, compared to the melon from last month?
- Do you think making good food choices will make a difference in your health as an adult?



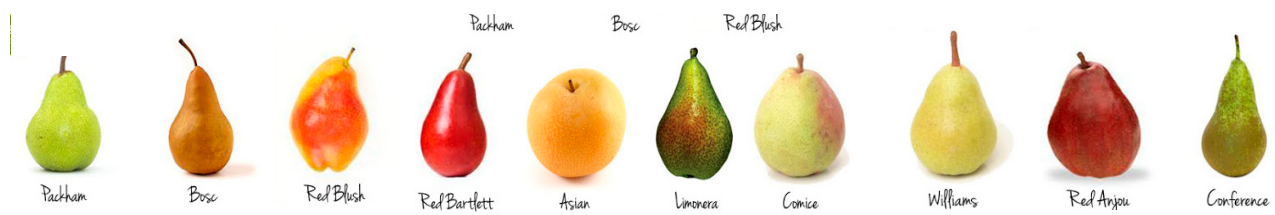
Pears

You are what you Eat, So Eat Pears!

Our bodies are made of the nutrients found in food, thus what we choose to eat has a major impact on how we grow. Children grow at rapid rates, so their nutrient needs are much greater than adults. Pears provide ample vitamin C, fiber, and are cholesterol and fat-free, and more fruits and vegetables in the diet are necessary to help kids grow big and strong! Vitamin C helps your child build strong muscles, blood vessels, bones, and teeth. Fiber helps keep your child regular and prevent blood sugar spikes! Pears are also an excellent source of nutrients for one of baby's first complementary foods!

Fiber has many benefits!

Pears have other benefits for kids, too! Dietary fiber reduces the rate of sugar absorption, which will limit blood sugar spikes. When kids consume sugary snacks or processed food, blood sugars spike quickly then drop quickly. This sends kids running to the kitchen for another treat, usually something sugary. By including pears, a high fiber food, the dietary fiber limits the rate of sugar absorption. So, kids may stay satisfied longer, learn to control their appetites themselves, and learn to make healthy choices.



Prevent Disease!

Unfortunately, several diseases have been shown to start early in life, and including more fruit in the diet may help fight these illnesses. Most of us think of heart disease as an adult's illness, but studies show that heart disease begins to develop in adolescence! Eating fruit and vegetables like pears can help fight the onset when included in an overall healthy diet. Pears contain antioxidants and are a good source of the antioxidant vitamin, vitamin C, which protect against oxidative stress that may lead to heart disease. Pears are also an excellent source of fiber, which has been shown to reduce cholesterol and reduce risk for heart disease.

Make healthy Choices

Ultimately, including more fruits and vegetables in the diet helps kids develop their own taste personalities and lifelong healthful eating habits. Studies suggest that kids who eat more fruits and vegetables eat more fruits and vegetables as adults, too. So if we really are what we eat, then shouldn't we eat healthy foods throughout life to be healthy people? Of course! So, include pears and other fruits and vegetables at every meal!

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