

Harvest of the Month

Growing Healthy Students



Health and Learning Success Go Hand-in-Hand

Research demonstrates improved cognitive development, academic performance and behavior with proper nutrition and regular activity, especially among low-income students. **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 Strawberries

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:

- Strawberries, ranging in size from small, medium and large
- Enough berries to provide students with a taste of each size
- Paper and colored pencils

Activity:

- Make three columns on a sheet of paper
- Taste the large strawberries and note in the first column the color, texture, sound, smell and flavor
- Repeat with the medium and small berries, noting characteristics in the second and third columns
- Compare and contrast the similarities and differences
- Determine which size strawberry was the sweetest
- Discuss what may affect the taste and size (variety, sun, water, etc.)

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.

Nutrition Facts

Serving Size: 1 cup, halves (152g)	
Calories 49	Calories from Fat 4
	% Daily Value
Total Fat 0g	1%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 2mg	0%
Total Carbohydrate 12g	4%
Dietary Fiber 3g	12%
Sugars 7g	
Protein 1g	
Vitamin A 0% Vitamin C 149% Calcium 2% Iron 4%	

Source: www.nutritiondata.com

Reasons to Eat Strawberries

One cup (about eight large berries) provides:

- More than 140 percent of the recommended Daily Value for Vitamin C.
- Three grams of fiber, making it a good source of carbohydrates.
- As much potassium as half of a large banana.
- Antioxidants and many essential minerals including calcium and iron.



Cooking in Class: Strawberry Smoothie

Ingredients:

Makes 32 tastes at ¼ cup each

- 3 (8-ounce) containers lowfat vanilla yogurt
- 3 (12-ounce) packages frozen strawberries, partially thawed
- 1½ cups orange juice
- Blender
- Paper cups

Combine half of the ingredients in a blender to make the first batch. Blend 15 to 30 seconds or until smooth. Repeat with the remaining ingredients for second batch.

Adapted from: *Discover the Secret to Healthy Living*, Public Health Institute, 2001.

For more ideas, reference:

Kids Cook Farm-Fresh Food, CDE, 2002.

STRAWBERRIES

Physical Activity Corner

Students who keep physically active have demonstrated better performance on academic tests. Help your students get at least one hour of physical activity every day, in addition to encouraging healthy eating choices.

Relay Race for Kids

Objective: Endurance and team cooperation

Supplies:

- Hard fruits or vegetables (apples, pears, bell peppers)
- Cone or chair
- Whistle

Activity:

- Divide students into two, three or four teams
- Line teams up in single file
- Give hard fruit or vegetable to first student on each team
- Position cone about 30 feet from students
- Use whistle as START cue for first student to run around cone and back to team; students hand the fruit or vegetable to next teammate and repeats until all teammates have run around the cone
- Repeat activity as time permits

Go Farther: Change it up by having students skip, hop, or run backwards.

Bring It Home: With longer daylight hours, encourage students to ask family members to go for walks after dinner, or even a morning jog to jumpstart the brain.

For more ideas, visit:

www.kidnetic.com

Adventurous Activities

Creative Writing:

- Discuss the advantages and disadvantages of hand and machine harvesting.

History Exploration:

- Trace the history of the cross-pollination of the Virginia and Chilean berries.
- Research some medicinal uses of strawberries.

Science Investigation:

- Without cross-pollination, we would not have the strawberry genotypes available today. Explain what a genotype is. Explain the cross-pollination process versus self-pollination.

Calendar Connection:

Take students on a strawberry-picking field trip or to a farmers' market. Or invite a strawberry grower to the school.

For more ideas, visit:

www.foodlandpeople.org

www.nal.usda.gov/kids



Fruity Facts

Strawberries are the first fruit to ripen in the spring.

The seeds of the strawberry are really the fruit while the red fleshy part is the receptacle that holds the parts of the flower together.

On average, there are 200 tiny seeds on every strawberry.

Strawberries are the most popular berry in the United States.

Ninety-four percent of United States households consume strawberries.

Americans eat 3.4 pounds of fresh strawberries each year plus another 1.8 pounds frozen per capita.

What's in a Name?

Pronunciation: strô'bĕrĕ

Spanish name: fresa

Family: Rosaceae

Genus: *Fragaria*

Species: *Fragaria virginiana**

*See text for more information on various strawberry species.



There are many theories on how the strawberry got its name. Some believe that the name came from the practice of placing straw around the growing plants for protection, or from children in the 19th century who threaded the berries with straw and offered them for sale. Others believe the name originated more than 1,000 years ago with the stolons, or runners, which are horizontal branches at the base of the plant that produce new plants from buds at its tips. The name may have been derived from the Anglo-Saxon verb to *strew* (spread) and the fruit came to be known as *streabergen*, *straberry*, *streberie*, *straibery*, *straubery*, and finally, *strawberry* to the English.

Strawberries are of the genus *Fragaria* in the rose family, and are low herbaceous perennial plants with edible fruits. The fruits are referred to as an "accessory fruit," meaning that the fleshy part is not derived from the plant ovaries, but from the peg at the bottom of the hypanthium that holds the ovaries. There are about 12 species of strawberry plants. The common wild strawberry, *Fragaria vesca*, is believed to have been the first species cultivated in the early 17th century. Botanists then found other garden varieties, including *Fragaria elatior*, a European species and the parent of *Fragaria virginiana* from the United States. About this time, *Fragaria chiloensis* was discovered on an island off the coast of Chile. Today, nearly all varieties can be linked to these four species.

Student Sleuths

- 1 What is the recommended Daily Value for folate? Fiber?
- 2 What does the red color of strawberry flesh tell you?
- 3 Identify four factors that can influence the flavor of a strawberry.

School Garden: Plant a Strawberry Patch

Growing strawberries in a school environment is easy and an enjoyable learning experience for students. To get started, all you need are some strawberry plants and a growing area that gets at least six hours of sunlight every day.

Growing Tips:

- Plant strawberries on a cloudy day or in the late afternoon.
- Strawberries prefer a well-drained soil, rich in organic matter.
- Set the strawberry plant in the soil so that the soil is just covering the tops of the roots. Do not cover the crown.
- Plants should be set 18 to 30 inches apart in rows of three to four feet apart. This will allow daughter plants to root freely and to become a matted row.
- Do not plant strawberries where peppers, tomatoes, eggplant and potatoes have been grown. These plants could harbor verticillium wilt, a major strawberry disease.
- Strawberry plants need about one inch of water per week.
- After four or five weeks, plants will produce runners and new daughter plants.

Adapted from:

www.urbanext.uiuc.edu/strawberries/growing.html

For more ideas, visit:

www.kidsgardening.com/teachers.asp

www.agclassroom.org



A Slice of Strawberry History

Strawberries have a history that goes back more than 2,000 years. They are indigenous to both the northern and southern hemispheres. Strawberries grew wild in Italy as early as 234 B.C.E., where the first mention of strawberries occurred in the writings of Cato, a Roman Senator.

European explorers discovered strawberries in North America in 1588 when they landed on the shores of the state of Virginia. The explorers found tiny, sweet, deep red, wild strawberries. Early settlers in Massachusetts enjoyed eating strawberries grown by local American Indians who cultivated them as early as 1643.

The first “refrigerated” shipping of strawberries across the United States occurred in 1843 when some innovative growers in Cincinnati, Ohio spread ice on top of the strawberry boxes and sent them by train. By the middle of the 1800s many regions of the United States were cultivating strawberries.

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. Strawberries are in the red color group.

- 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 strawberries, cherries, raspberries, watermelon, tomatoes, red peppers, radishes and red potatoes.
- Use the *Fresh Fruit and Vegetable Photo Cards* (CDE, 1997) to show students other red fruits and vegetables. Discuss the health benefits of the various color groups.

For more information, visit:

www.harvestofthemonth.com

Literature Links

- **Primary:** *From Seed to Plant* by Gail Gibbons, *The Victory Garden Alphabet* by Jerry Pallotta and Bob Thomson and *How Does My Garden Grow?* by David Tunkin.
- **Secondary:** *The Reason for a Flower* by Ruth Heller, *Strawberry Girl* by Lois Lenski and *The Grey Lady and the Strawberry Snatcher* by Molly Bang.
- **High School:** *Sell What You Sow* by Eric Gibson.

Students for Strawberries

Since strawberries are easy to grow, have students design “Strawberry Instructions” packs that include strawberry seeds, nutrition facts, history and fun illustrations. Send to local senior centers, youth activity centers, or distribute at your school’s Open House.

Cafeteria Connections

Use different questions about strawberries to conduct a contest over several days in the cafeteria. Use questions based on information contained in this newsletter.

For example:

- What is the average number of seeds on a strawberry?
- What is the Spanish word for strawberry?
- What is the botanical name for strawberry?

You can also create your own questions or have older students develop questions and then find the answers. Post questions on the cafeteria bulletin board at the beginning of the week. Then post the answers on Friday. Draw names of the “winners” and have a Strawberry Shortcake Party.

For more ideas, reference:

Fruits and Vegetables Galore, USDA, 2004.



BERRY FUN ACTIVITIES



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Dietary Fiber 3g	12%
Sugars 7g	
Protein 1g	
Vitamin A 0%	Calcium 2%
Vitamin C 149%	Iron 4%

Source: www.nutritiondata.com

Eat the Rainbow!

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. Strawberries are in the red color group.

- Red fruits and vegetables help maintain a healthy heart and memory function. Examples include strawberries, cherries, red grapes, tomatoes, red bell peppers, beets, radishes and red potatoes.

What is a Serving?

A serving of strawberries is one cup of halved berries. This is about eight large berries.

Test Your Strawberry IQ

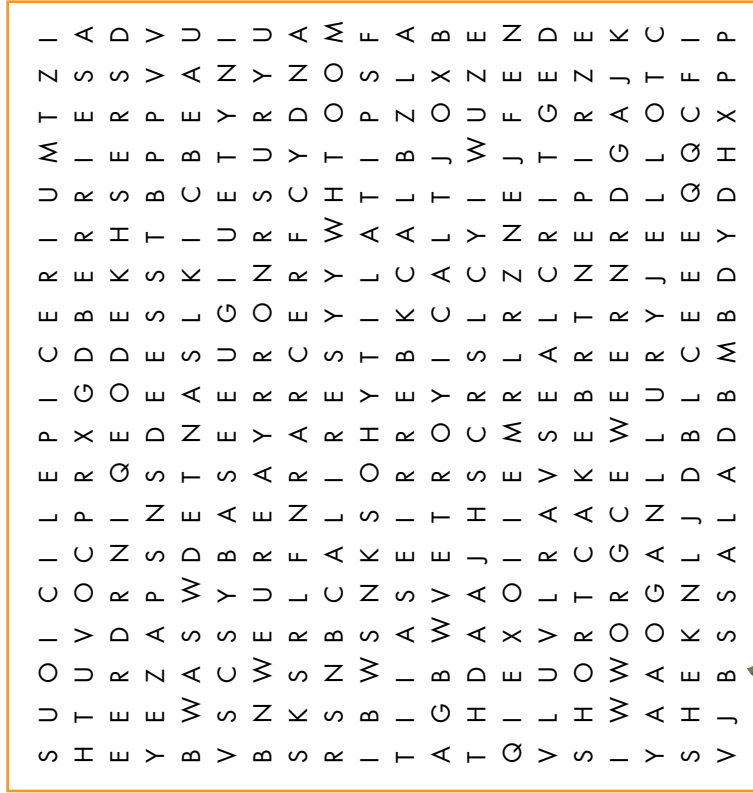
(answers below)

- On average, there are about _____ tiny seeds on every strawberry.
A.) 25 B.) 100 C.) 200 D.) 500
- Strawberries are the highest in which vitamin?
A.) Vitamin A B.) Vitamin B6 C.) Vitamin C
- Which state produces the most strawberries in the United States?
A.) Ohio B.) Florida C.) Colorado D.) California

Answers: 1. C. 2. C. 3. D

Strawberry Word Search

Find the words next to the strawberry slice in the puzzle. Look up, down and sideways.



- STRAWBERRY
- BLUEBERRY
- PICKED
- SHORTCAKE
- BERRIES
- BIG
- SWEET
- JELLO
- PIE
- RIPEN
- SALAD
- RECIPE
- BLACKBERRIES
- BANANA
- FRUIT
- RED
- SNACKS
- FLOWER
- LEAVES
- GROW
- SEEDS



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