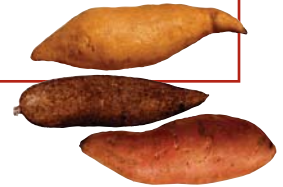


# Harvest of the Month



Network for a Healthy California



## Health and Learning Success Go Hand-in-Hand

Studies show that good nutrition and regular physical activity can help students focus on school work and maintain healthy immune systems, helping them to fight off the flu and colds that tend to spike during the winter months. **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 Sweet Potatoes

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:

- Raw “dry flesh” and “moist flesh” sweet potatoes,\* whole and quartered; canned sweet potatoes; one variety per every four students
- Map of California
- Pencil and paper

\*California grows both “dry flesh” and “moist flesh” varieties. Sometimes the “moist flesh” are referred to as “yams,” but they are sweet potatoes.

### Activity:

- Taste the dry flesh sweet potato, noting the texture, smell, color, taste and consistency
- Locate on the California map where dry flesh sweet potatoes are grown
- Repeat the exercise using the moist flesh and canned sweet potatoes

### Classroom Discussion:

- Compare the regions where dry and moist flesh varieties are grown. Discuss what affects the color and texture of the flesh (e.g., altitude, temperature, climate, weather).
- What is the difference in taste between the raw and canned sweet potatoes? How do they compare in taste to other yellow/orange fruits and vegetables?

### 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, cubes (133g)  
Calories 114

Calories from Fat 1

	% Daily Value
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 73mg	3%
Total Carbohydrate 27g	9%
Dietary Fiber 4g	16%
Sugars 6g	
Protein 2g	
Vitamin A 377% Vitamin C 5% Calcium 4% Iron 5%	

Source: [www.nutritiondata.com](http://www.nutritiondata.com)

**SWEET POTATOES**  
**December**

## Cooking in Class: Sweet Potato Dip

### Ingredients:

Makes 30 tastes at ¼ cup each

- 3 cups boiled or canned sweet potatoes
- 3 tablespoons cinnamon
- 3 teaspoons nutmeg
- 1½ cups nonfat plain yogurt
- 3 cups unsalted crackers or flat bread

Mix sweet potatoes and yogurt together in a mixing bowl. Add spices. Serve with crackers or bread.

Source: *Pasadena Unified School District Nutrition Network*

### For more ideas, reference:

*Kids Cook Farm-Fresh Food*, CDE, 2002.

## Reasons to Eat Sweet Potatoes

### One serving provides:

- An excellent source of beta carotene — almost four times the recommended Daily Value. Beta carotene is a precursor to Vitamin A that may help the body fight sickness and disease.
- A good source of fiber, Vitamin B6 and potassium, all of which aid in a variety of health needs from metabolism to energy and cognitive performance.
- A source of Vitamin C and several essential minerals, including calcium and magnesium.

## December Events

- California Kiwifruit Day
- National Handwashing Awareness Week
- Winter Solstice

## Sweet Potatoes vs. Yams — What's the Difference?

When it comes to sweet potatoes and yams, it can be a bit confusing. Here are a few things to remember:



- What the general public often calls “yams” are actually sweet potatoes.
- To avoid confusion (since the terms are generally used interchangeably), the USDA requires that the label “yam” always be accompanied by “sweet potato” — but there is a big difference. See the chart below to compare the characteristics of yams and sweet potatoes.

	Sweet Potatoes	Yams
<b>What is it?</b>	Root	Tuber
<b>Skin</b>	Smooth Color ranges depending on variety, from pale yellow to dark purple to bright orange	Scaly and rough Color ranges from off-white to dark brown
<b>Flesh</b>	Moist consistency and sweet flavor Colors range from light yellow to pink, red or orange	Dry and starchy Color ranges from off-white to yellow to pink to purple
<b>Nutrition</b>	Very high in beta-carotene and other nutrients	Very low in beta carotene and other nutrients

**For more information, visit:**

<http://aggie-horticulture.tamu.edu/plantanswers/vegetables/sweetpotato.html>

## Student Sleuths

- 1 What makes the flesh of a sweet potato so orange?
- 2 What health functions does Vitamin A provide for our bodies? Vitamin C? Vitamin B6? Iron?
- 3 What is the difference between a tuber and a root?
- 4 How are sweet potatoes similar to and different from yams? Include nutrition content, texture, skin and flesh colors, and geographic regions where each are found.

**For information, visit:**

[www.sweetpotato.org](http://www.sweetpotato.org)

[www.5aday.com/html/educators/insights\\_holder.php?columns=swpotatoes1](http://www.5aday.com/html/educators/insights_holder.php?columns=swpotatoes1)

## Students for Sweet Potatoes

Suggest that students design special sweet potato place mats with holiday designs and games to distribute to nursing homes and friends for holiday meals. Students may also want to include sweet potato nutrition facts, history and recipes on the place mats.



## How Do Sweet Potatoes Grow?

Sweet potatoes are tropical vegetables and are grown mostly in California and in the southern states (North Carolina, South Carolina, Louisiana, Mississippi, Alabama, Texas and Georgia). Hot days and warm nights are important for successful commercial production, which explains why they thrive in the long, hot summers of the South and the West Coast. However, sweet potatoes can be grown wherever there are 150 frost-free days for them to develop.

Sweet potatoes are propagated from sprouts or vine cuttings called slips. In California's San Joaquin Valley, sprout production begins around early March. Sprouts are grown from plant stock, of which approximately six to eight bushels are needed to produce enough sprouts to plant one acre of sweet potatoes.

Sandy, well-drained soil is generally best for sweet potato production. Roots will begin to form in 30 to 45 days and need nitrogen, phosphorus and potash for optimum growth. A mature sweet potato will have four to five roots of varying sizes, but the majority should have a 1¼-inch diameter and be three to nine inches in length. Maturity can be checked by gently lifting the sweet potatoes out of the ground with a shovel and making sure they do not become detached from the vine. If the sweet potato is not mature, then it is necessary to lower it back down and cover with soil.

Sweet potatoes can be easily grown at home, in the classroom or in the school garden. (See the *School Garden* section for details.)

**For more information, visit:**

[www.botany.org](http://www.botany.org)

## Home Grown Facts

California ranks third in sweet potato production behind North Carolina and Louisiana.

Almost 80 percent of California production takes place in Merced County, followed by Fresno and Stanislaus counties. All three counties are located in the San Joaquin Valley, one of the most productive agricultural regions in the world.

Most California grown sweet potatoes are marketed to the West Coast, Texas and Canada.

There are many varieties of sweet potatoes, but three main varieties found in California markets are Hanna or Golden Sweets, orange-fleshed Beauregard and Red “Yams.”



## Just the Facts

The Center for Science in the Public Interest (CSPI) ranks the sweet potato as the No.1 most nutritious vegetable.

The sweet potato is not a potato or even a distant cousin. Potatoes are tubers while sweet potatoes are roots.

Approximately 4.2 pounds of sweet potatoes per capita are consumed annually in the United States.

It would take 23 cups of broccoli to provide the same amount of Vitamin A as in one medium sweet potato.

Sweet potatoes are more nutritious when cooked with the skin.

## A Slice of Sweet Potato History

Sweet potatoes are believed to have been domesticated in Central and South America nearly 5,000 years ago. They then spread to Mexico, the Caribbean, the West Indies and parts of North America.

When Christopher Columbus landed on America's shores in 1492, the Native Americans were growing sweet potatoes. Columbus and his men loved the tasty sweet potatoes so much that they brought them back to Europe to grow their own, where they continued to increase in popularity.

The Spanish began cultivating sweet potatoes immediately. Soon they were profitably exporting sweet potatoes to England where they were included in spice pies to be devoured at the court of Henry VIII.

The French, not to be outdone, planted them at the request of Louis XV. After his death, the popularity of the sweet potato staggered for 30 years. Finally, the Portuguese carried sweet potatoes to Asia and Africa where they have become an important dietary staple. In the United States, the sweet potato was a main source of nourishment for early homesteaders and for soldiers during the American Revolution and Civil War. The Pilgrims and Native Americans even ate sweet potatoes at the first Thanksgiving feast.

## The Story of George Washington Carver

George Washington Carver was an African American who revolutionized Southern agriculture with the development of a crop rotation method. Born in Missouri in 1864, he studied farming and nutrition and soon began to think of new ways in which farmers could earn more money. He taught other farmers how to alternate the soil-depleting cotton crops with soil-enriching crops such as peanuts, peas, soybeans, sweet potatoes and pecans. By alternating crops, the soil is replenished with nutrients, allowing farmers to re-plant the same land again and again.

Carver also created new uses for sweet potatoes. He made about 100 new products from sweet potatoes including flour, ink, starch, synthetic rubber, tapioca, vinegar, a type of glue for postage stamps and 500 shades of textile dye.



## School Garden: Grow a Sweet Potato Houseplant

**Materials:** Sweet potato, toothpicks, quart-size jar or glass with wide mouth, bottled water (non-chlorinated).

**Methods:** Wash sweet potato thoroughly. Insert toothpicks into the sides of the sweet potato about one-third of the way down. Place the sweet potato into the jar. Fill the jar with water.

**Results:** In about 10 to 15 days, the sweet potato will begin to bud. For the next three to six months, vines will grow from the sweet potato. Train the vines to climb up or around classroom objects.

**Keeping It Green:** Always keep the jar filled with non-chlorinated water. Keep the sweet potato plant in moderate to full sunlight at room temperature or above 65 F.

**For more ideas, visit:**

[www.ncsweetpotatoes.com](http://www.ncsweetpotatoes.com)

[www.lifelab.org](http://www.lifelab.org)

## 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. Sweet potatoes are in the yellow/orange color group.

- 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 sweet potatoes, sweet corn, butternut squash, yellow peppers, pumpkins, oranges, tangerines, persimmons and yellow figs.

**For more information, visit:**

[www.fruitsandveggiesmatter.gov](http://www.fruitsandveggiesmatter.gov)

[www.harvestofthemonth.com](http://www.harvestofthemonth.com)

## What's in a Name?

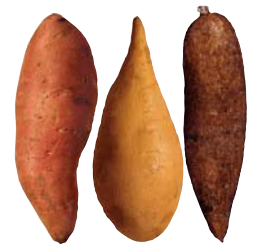
**Pronunciation:** swēt pə-tā'tō

**Spanish name:** camote

**Family:** Convolvulaceae

**Genus:** *Ipomoea*

**Species:** *I. batatas*



The sweet potato is a perennial plant of the genus *Ipomoea*, in the family Convolvulaceae (morning glory family). The sweet potato's tuberous roots are an important vegetable. Its botanical name, *Ipomoea batatas*, was derived from the Native Americans of Louisiana who were growing them as early as 1540 and referred to the roots as *batatas*.

Although the sweet potato shares its name, it is only distantly related to the potato (*Solanum tuberosum*). The sweet potato is commonly confused with the yam, which also belongs to another family. (For comparison information on sweet potatoes and yams, refer to the chart on page 2.)

The confusion began over 100 years ago when farmers and stores marketed sweet potatoes as "yams" and the name stuck. Despite recent branding regulations by the USDA, sweet potatoes are still widely known as "yams."

**For more information, visit:**

[www.urbanext.uiuc.edu/veggies/](http://www.urbanext.uiuc.edu/veggies/)

## Student Sleuths

- 1 Ask students to research some other products that George Washington Carver made using sweet potatoes. How have those products affected or revolutionized everyday life?
- 2 Which former U.S. President was a sweet potato farmer before taking office?

### For information, visit:

[www.cayam.com/index2.shtml](http://www.cayam.com/index2.shtml)

[www.sweetpotato.org/kids.php?display=facts](http://www.sweetpotato.org/kids.php?display=facts)

[www.ncsweetpotatoes.com](http://www.ncsweetpotatoes.com)

## Physical Activity Corner

Studies support a connection between regular physical activity and increased levels of alertness, memory function and learning. 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 December to playing a different game or activity every day. The following are some examples.

**Objective:** Develop memory, visual learning, locomotor skills

### Add-A-Move Memory Game:

- Stand in front of the room and do a specific movement (e.g., hop up and down once)
- Ask students to mimic the movement
- Repeat using a different movement, for up to 10 times
- Students act out the movements in same order as presented

### Go Farther:

- Ask students to do the movements in reverse

### Bring It Home:

- Encourage children to suggest playing *Add-A-Move Memory Game* with family members and explain how eating fruits and vegetables and doing physical activity can affect memory.

### Mathematical Jumping Jacks:

- Call out a math problem. If the answer is less than 20, ask students to give their answer in jumping jacks.

### Q&A Catch:

- Play a game of catch where a student catches the ball, calls out the answer to a question asked by the teacher, and quickly tosses the ball to someone else for the next answer.

### For more ideas, visit:

[www.sparkpe.org](http://www.sparkpe.org)

[www.cdc.gov/HealthyYouth/physicalactivity](http://www.cdc.gov/HealthyYouth/physicalactivity)

## Adventurous Activities

### History Exploration:

Ask students to research and write a report on the many medical and industrial uses that sweet potatoes have provided throughout history.

### Problem Solving:

Use the nutrient content of sweet potatoes in math problems.

- **Example:** In order to get the same amount of Vitamin A that is contained in one medium sweet potato, a person would have to consume 23 cups of broccoli. How many sweet potatoes would it take to fulfill the same requirements as 100 cups of broccoli? How much Vitamin A, Vitamin C and fiber would there be?

### For more ideas, reference:

[www.nal.usda.gov/kids](http://www.nal.usda.gov/kids)

[www.agclassroom.org](http://www.agclassroom.org)

## Cafeteria Connections

- Encourage students to take part in the *Students for Sweet Potatoes* activity by holding a Place Mat Contest between classrooms.
- Use categories to help create interest, such as Most Creative, Most Festive and Most Informational.
- Ask staff and older students to help judge the entries. Have student judges create a cafeteria bulletin board to display the place mats for a week.
- Consider awarding prizes in each category by grade level. Students can then donate the place mats to senior citizen centers or nursing homes for the holiday meals.

### For more ideas, reference:

*Fruits and Vegetables Galore*, USDA, 2004.

## Literature Links

- **Elementary:** *Farmer's Market* by Marcie Rendon and Cheryl Walsh Bellville and *Where Does it Come From?\** by Amy Cage and Pamela Emery.
- **Secondary:** *What Are You Eating?\** by Pamela Emery and Karen Traiger, *Starting All Over Again (The Cycles of Nature)* by Louis Bechely and Karen Traiger and *An Ag Interview\** by Pamela Emery.

\*Available through California Foundation for Agriculture in the Classroom.



Next Month: Oranges

