

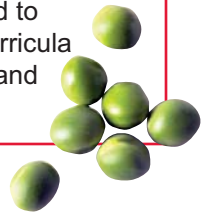
# Harvest of the Month



Network for a Healthy California

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

It's true – breakfast *is* the most important meal of the day. Classroom attention, attendance and achievement improve with eating breakfast. Eating school breakfast provides students with the nutrients and energy they need to grow and learn. Use **Harvest of the Month** to connect with core curricula and teach students lifelong healthy habits that include eating fruits and vegetables and being active every day.



## Exploring California Peas

By offering activities that allow students to experience peas using their senses, it engages them in the learning process and creates increased interest, awareness and support for eating more fruits and vegetables.

### Tools:

- Green peas: fresh (harvest from school garden), frozen and canned
- Samples of fresh, frozen and canned peas per group of students
- Nutrition Facts labels for each ½ cup sample (available at [www.nutritiondata.com](http://www.nutritiondata.com))
- Paper and pencils

### Sensory Exploration Activity:

- Divide class into groups and distribute samples
- Make chart labeling columns as fresh, frozen and canned; rows as tastes, colors, textures and shapes
- Observe, feel and smell each sample; record data in chart
- Review Nutrition Facts labels; discuss similarities and differences in nutrient values
- Take a poll to determine classroom favorite

*Optional: Do Adventurous Activities on page 4 for more analysis*

### For more ideas, reference:

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

## Cooking in Class: Pea Salad with Fresh Herbs

### Ingredients:

Makes 35 tastes at ¼ cup each

- 1 lb. sugar snap peas
- 1 lb. snow peas
- 1 lb. fresh green peas, shelled
- 1 bunch mint
- 1 bunch cilantro
- 1 bunch Italian parsley
- 2 tablespoons light olive oil
- ¼ cup rice vinegar
- ⅓ teaspoon salt

Wash peas. Remove any stems. Blanch peas in boiling water (blanch pod peas separately from shelled peas). When tender, scoop peas out with strainer and lay out to cool on baking sheet covered with towel. Combine peas in large bowl. Blend herbs, oil, vinegar and salt until smooth. Pour over peas and serve.

Adapted from: *Kids Cook Farm-Fresh Food, CDE, 2002.*

### For more ideas, visit:

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



## Nutrition Facts

Serving Size: ½ cup green peas, cooked (80g)	
Calories 62	Calories from Fat 2
% Daily Value	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 58mg	2%
Total Carbohydrate 11g	4%
Dietary Fiber 4g	18%
Sugars 4g	
Protein 4g	
Vitamin A 34% Vitamin C 13% Calcium 2% Iron 7%	

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

For nutrition information in bar graph format, visit the *Educators' Corner* at [www.harvestofthemonth.com](http://www.harvestofthemonth.com).

**PEAS**  
March

## How Much Do I Need?

A serving of peas is one-half cup cooked green or edible-pod peas. This is about one cupped handful. Encourage students to eat a variety of colorful fruits and vegetables throughout the day to reach their total daily needs.

### Recommended Daily Amounts of Fruits and Vegetables\*

Kids, Ages 5-12	Teens, Ages 13-18	Adults, 19+
2½ - 5 cups per day	3½ - 6½ cups per day	3½ - 6½ cups per day

\*Ranges take into account three activity levels: sedentary, moderately active and active. For example, active individuals should aim to eat the higher number of cups per day. Visit [www.mypyramid.gov](http://www.mypyramid.gov) to learn more.

## March Events

- National School Breakfast Week
- National Nutrition Month
- National Agriculture Day and Week

## Reasons to Eat Peas

Green Peas		Edible-Pod Peas	
Serving Size: ½ cup, cooked (80g)		Serving Size: ½ cup, cooked (80g)	
Calories 62	Calories from Fat 2	Calories 42	Calories from Fat 3
% Daily Value		% Daily Value	
Total Fat 0g	0%	Total Fat 0g	0%
Saturated Fat 0g	0%	Saturated Fat 0g	0%
Trans Fat 0g		Trans Fat 0g	
Cholesterol 0mg	0%	Cholesterol 0mg	0%
Sodium 58mg	2%	Sodium 4mg	0%
Total Carbohydrate 11g	4%	Total Carbohydrate 7g	2%
Dietary Fiber 4g	18%	Dietary Fiber 2g	10%
Sugars 4g		Sugars 4g	
Protein 4g		Protein 3g	
Vitamin A 34%	Calcium 2%	Vitamin A 21%	Calcium 5%
Vitamin C 13%	Iron 7%	Vitamin C 29%	Iron 11%

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

### One serving of cooked green peas provides:

- An excellent source of Vitamin A and Vitamin K.
- A good source of Vitamin C, fiber, thiamin and folate.
- More than four grams of protein.

### One serving of cooked edible-pod peas provides:

- An excellent source of Vitamin A, Vitamin C and Vitamin K.
- A good source of fiber and iron.

**Vitamin K is a fat-soluble vitamin that helps transport calcium throughout the body. It is necessary for proper bone growth and also aids in the clotting of blood.**

## What's in a Name?

**Pronunciation:** 'pēz  
**Spanish name:** chícharos  
**Family:** Fabaceae  
**Genus:** *Pisum*  
**Species:** *P. sativum*

Peas are a member of the Fabaceae or legume family, which includes plants that bear pods enclosing fleshy seeds. There are two main kinds of peas: green and edible-pod. Green peas have inedible pods and sweet, full-sized seeds. Most edible-pod peas have seeds that are not yet fully developed.

Throughout much of the world, edible-pod peas are referred to as *mange tout*, a French term meaning "eat all." They are also nicknamed *snapping peas* for how they can be "snapped" and eaten like green beans.

Pea Variety	Other Names and Specific Varieties
Green peas	Shelling peas, garden peas, English peas
Edible-pod peas	Snow peas, Chinese peas, Oriental or Asian peas, sugar snap peas

### For more information, visit:

<http://plants.usda.gov>  
<http://ucce.ucdavis.edu>



## 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. These may lower the risk of some cancers. Peas are in the green color group.

Color Group	Health Benefits	Examples of Fruits and Vegetables
Green	Help maintain vision health and strong bones and teeth	Green peas, sugar snap peas, snow peas, kohlrabi, asparagus, seaweed, parsley, turnip greens, cactus leaf, honeydew melons, kiwis

### For more information, visit:

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

## Just the Facts

- The sugar snap pea is actually a hybrid of green and snow peas. It was developed in 1979 to make an edible-pod variety with sweeter, full-sized peas.
- Edible-pod peas were specifically bred so that the pods' fibers go in one direction, allowing them to be chewed.
- Today only 5 percent of all peas grown are sold fresh; over half are canned and most of the rest are frozen.
- One of Thomas Jefferson's favorite vegetables was the English pea. He planted more than 30 varieties of it in his garden at Monticello.

Sources:

[www.fruitsandveggiesmatter.gov/month/peas.html](http://www.fruitsandveggiesmatter.gov/month/peas.html)  
[www.monticello.org](http://www.monticello.org)  
[www.ag.uidaho.edu/cereals/nidaho/reports/2006/2006Peas.pdf](http://www.ag.uidaho.edu/cereals/nidaho/reports/2006/2006Peas.pdf)

## Student Sleuths

- 1 List vegetables included in the legume family. Research the nutrient data of at least five legumes, including the three different forms of peas (use Nutrition Facts labels from the *Sensory Exploration* activity on page 1).
  - a. What are the key nutrients common among legumes?
  - b. What health benefits do these nutrients provide to the body?
  - c. What nutrient is comparatively higher in legumes than in other vegetables?
  - d. Develop a plan to eat at least three legumes each week.
- 2 Lutein and zeaxanthin are two carotenoids found in peas. What are carotenoids and in which fruit and vegetable color groups are they found? What role do these carotenoids play in vision health? Draw a diagram of an eye and label the parts. Highlight the eye parts that benefit most from carotenoids. Share findings with peers.
- 3 What impact do leguminous plants have on soil? What is nitrogen-fixing? Describe its role in agriculture.

### For information, visit:

<http://food.oregonstate.edu>  
<http://aggie-horticulture.tamu.edu>

## A Pod in Pea History

- Three possible origins of peas include:
  - Middle Asia (Thailand, Burma) with expansion to India through Afghanistan
  - Near East (eastern rim of the Mediterranean)
  - Ethiopia (in plateau and mountain ranges)
- Carbonized pea seeds found in the Near East and Switzerland date back as far as 10,000 years.
- Domesticated pea cultivars appeared shortly after domestication of wheat and barley crops around 7,800 B.C.E. Early pea varieties have been found among the ruins of Troy and in tombs of Egypt.
- By 2,000 B.C.E., the cultivation of peas spread throughout Europe, India and China.
- Peas were a dietary winter staple of both peasants and royalty in medieval Europe.
- In 1492, Christopher Columbus planted peas in Santo Domingo, where they were quickly adopted by indigenous peoples.
- Easy to grow, peas were commonly planted by early American colonists and later by pioneers traveling west.

### For more information, reference:

*Spill the Beans and Pass the Peanuts: Legumes*,  
Meredith Sayles Hughes, 1999.

## Home Grown Facts

- Green peas are among the top ten most commonly eaten vegetables (fresh, frozen, or canned) by California children.
- California leads the nation's production of Chinese peas (an edible-pod variety).
- Edible-pod peas are grown year-round in San Luis Obispo and Santa Barbara counties.
- Over 5,000 acres are harvested for green and edible-pod peas.
- Santa Barbara, San Luis Obispo, Monterey and Stanislaus counties produce more than 85 percent of the State's 19,000 tons of peas valued at about \$29 million.

2004 Data

### For more information, visit:

<http://anrcatalog.ucdavis.edu/pdf/7233.pdf>  
[www.nass.usda.gov](http://www.nass.usda.gov)

## Cafeteria Connections

- Organize a poster contest to promote a monthly theme, campaign or event, such as:
  - *National School Breakfast Week, National Nutrition Month, National Agriculture Week and/or Read Across America.*
- Work with an upper grade class to help promote contest.
- Create different categories for artwork (e.g., grade levels, themes, advertisements).
- Display poster artwork in cafeteria throughout month.
- Facilitate judging of posters at end of month.

### For more ideas, visit:

[www.fns.usda.gov/eatsmartplayhard/collection/main.html](http://www.fns.usda.gov/eatsmartplayhard/collection/main.html)

## How Do Peas Grow?

Peas are a low-maintenance, cool weather crop requiring full sunlight and little water. Depending on the variety, pods are harvested five to eight days after flowering.

- **Soil:** 5.5–6.8 pH (slightly acidic), well-drained
- **Temperature:** 55–65 F
- **Planting:** 1–2 inches deep, spaced 2 inches apart
- **Watering:** 1–2 inches per week
- **Harvesting:** by hand, every 2–4 days

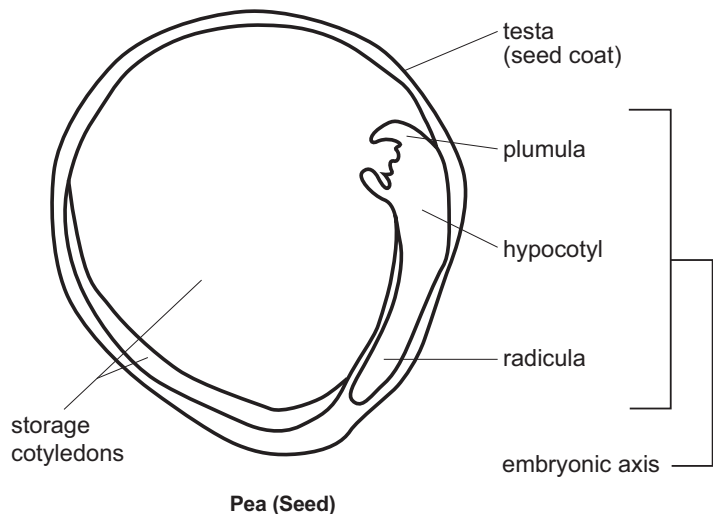
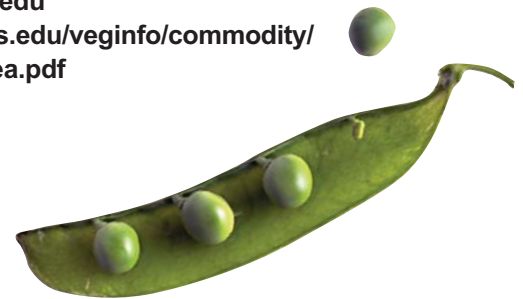
Pea plants were originally all vines or climbers (indeterminate), but recent breeding efforts have resulted in dwarf or bush (determinate) plants. The following chart outlines the two types of pea plants.

	Bush-type	Vine-type
Size	12 - 24" tall	12 - 60" tall
Matures in	40 - 60 days	60 - 80 days
Cropping period	1 - 3 weeks	3 - 5 weeks
Grows best in	Most areas in California	Along the coast
Support needed	Little fencing, if any	Extensive trellising
Yield	Lower	Higher
Pod to vine ratio	Higher	Lower

### For more information, visit:

<http://casfs.ucsc.edu>

<http://vric.ucdavis.edu/veginfo/commodity/garden/crops/pea.pdf>



Pea (Seed)

Botanical illustration adapted from [www.seedbiology.de/hormones.asp](http://www.seedbiology.de/hormones.asp).

To download reproducible botanical images, visit the *Educators' Corner* at [www.harvestofthemonth.com](http://www.harvestofthemonth.com).

## Physical Activity Corner

Eating breakfast and being active for at least one hour every day are two habits that students can practice to help improve their test scores. Encourage students to jumpstart their day by eating breakfast either at home or school. Then start the school day by doing an activity as a class. If students appear restless during lessons, take an activity break to help students re-focus.

### Musical Morning:

- Play upbeat music
- Students stretch and move/dance around desks
- Continue for five to 10 minutes
- Begin lesson plan with students focused on work

### Other Sample Class Exercises:

- Indoor: jumping jacks, stretches, balancing poses
- Outdoor: red rover, kick ball, hopscotch, jump-rope

### For more ideas, visit:

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

## Adventurous Activities

### Math Solutions:

- Measure length and width of green and edible-pod peas.
- Weigh whole green and edible-pod peas.
- Use a minimum of five pods to calculate averages.
- Take metric measurements.
- Convert to standard measurements.
- Shell peas and calculate average number in one pod.
- Guess how many peas are in one-half cup. Shell peas to find answer.
- Weigh shelled peas (grams) to calculate number of peas in one pound.

### For more ideas, visit:

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

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

## Literature Links

- **Elementary:** *Eat Your Peas, Louise!* by Pegreen Snow, *Farming & Food* by Jane Shuter, *The Pea Blossom* by Amy L. Poole, *Pick, Pull, Snap!* by Lola Schaefer and *The Very Smart Pea and the Princess-to-Be* by Mini Grey.
- **Secondary:** *The Garden and Farm Books of Thomas Jefferson* by Robert Baron, *The Garden-Fresh Vegetable Cookbook* by Andrea Chesman and *Spill the Beans and Pass the Peanuts: Legumes* by Meredith Sayles Hughes.

### For more ideas, visit:

[www.cfaitc.org/Bookshelf/Bookshelf.php](http://www.cfaitc.org/Bookshelf/Bookshelf.php)

## School Garden: Peas in a Pod

### Materials:

- Variety of pea seeds (e.g., snow, sugar snap, shelling)
- Garden supports (e.g., poles, netting, stakes, wire fencing)

### Garden Area:

- Well-drained, clay or sandy loam soil, full sun
- Seeds spaced about two inches apart

### Activity:

- Sow seeds in cooler weather
- Plant seed 1–2 inches deep
- Design supports for pea plants
- As shoots emerge, twine tendrils onto supports
- Grades K–5: Observe pea flowers and study how parts change as they turn into pea pods
- Grades 6–12: Study *thigmatropism*\*

\*Thigmatropism is the plant tendency to grab onto nearby supports.

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

### For more ideas, visit:

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

## Student Advocates

National School Breakfast Week takes place in March — which is also National Nutrition Month. Promote these events at your school and encourage your classmates to start the day with a nutritious breakfast.

- Invite classmates or another classroom to a breakfast challenge.
- Each morning, record in journals what you ate for breakfast.
- Graph daily how many students in class ate breakfast.
- At end of school day, record in journals how you felt during the day.
- Record entries for one week.
- Analyze the breakfast meals (either by food groups or by nutrients consumed). Compare with the journal entries describing how you felt.

### For more ideas, visit:

<http://docs.schoolnutrition.org/>

[meetingsandevents/nsbw/index.asp](http://meetingsandevents/nsbw/index.asp)

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



**Next Month: Asparagus**

