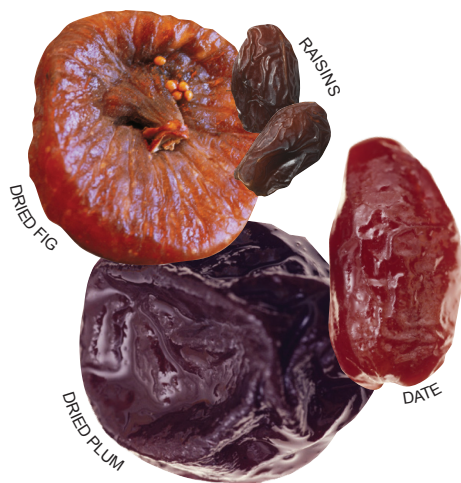


Harvest of the Month

Network for a Healthy California



Nutrition Facts

Serving Size: ¼ cup raisins (40g)

Calories 130

Calories from Fat 0

% Daily Value

Total Fat 0g 0%

Saturated Fat 0g 0%

Trans Fat 0g

Cholesterol 0mg 0%

Sodium 10mg 0%

Total Carbohydrate 31g 10%

Dietary Fiber 2g 8%

Sugars 29g

Protein 1g

Vitamin A <2% Vitamin C <2% Calcium 2% Iron 6%

Source: www.calraisins.org

For nutrition information in bar graph format, visit the *Educators' Corner* at .

DRIED FRUITS
December

Health and Learning Success Go Hand-in-Hand

National Youth Health Day takes place in December. Nearly half of all school-aged children fall short in consuming many of the key micronutrients the body needs for healthy growth and development. Fruits and vegetables are sources of many of these micronutrients. Support your students in developing healthy behaviors with **Harvest of the Month** and teach them about the benefits of eating a variety of colorful fruits and vegetables and getting at least one hour of physical activity every day.

Exploring California Dried Fruits

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

Tools:

- Minimum of five different dried fruit varieties (e.g., raisins, figs, dates, plums, apricots, apples, currants)
- One cup of each dried fruit variety per student group
- Paper and pencils

Optional: Fresh fruit samples of selected dried fruit

Sensory Exploration Activity:

- Divide class into groups of four to six
- Observe, feel, smell and taste each dried fruit
- Record observations of different colors, textures, shapes, smells and tastes
- Discuss similarities and differences among the varieties
- Discuss seasonal availability of fresh versus dried; identify advantages of dried fruits
- Poll students to determine preference for fresh or dried variety of each fruit; chart results on board; determine class favorite(s)

Optional: Compare and contrast dried fruits versus fresh fruits using a Venn diagram

For more ideas, reference:

Power Play! School Idea & Resource Kit, Network for a Healthy California – Power Play! Campaign, 2005.

Cooking in Class: Trail Mix

Ingredients:

Makes 32 tastes at 1 tablespoon each

- 4 cups dried fruits (at least 5 varieties*)
- 1½ cups mixed nuts
- 4 cups small pretzels
- 2½ cups whole grain cereal
- 2 tablespoons (for measurement)
- Bowls (to hold ingredients)
- Small bowls and spoons
- Paper and pencils

Set up ingredients on large table. Let students make their own trail mix using the tablespoon measures. Have them record what and how much of each ingredient they use in their recipe.

*Raisins, dates, figs, plums, bananas, apricots, apples, cranberries, cherries

Source: CDE, 2006.

For more ideas, visit:

www.harvestofthemonth.com

Reasons to Eat Dried Fruits

One serving of most dried fruits provides:

- A source of dietary fiber (e.g., dates, dried figs, dried plums, raisins).
- Potassium, which the body needs to maintain muscle contractions and a healthy nervous system (e.g., dried plums, raisins).
- Iron, an essential mineral for maintaining the delivery of oxygen throughout the body (e.g., dried figs, raisins).
- A source of calcium, Vitamin A, Vitamin C, B-complex vitamins and magnesium (e.g., dates, dried figs, dried plums, raisins).

December Events

- National Youth Health Day
- National Hand Washing Awareness Week
- California Kiwifruit Day

Just the Facts

Raisins

Serving Size: ¼ cup (40g)

Calories 130 Calories from Fat 0

	% Daily Value
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 10mg	0%
Total Carbohydrate 31g	10%
Dietary Fiber 2g	8%
Sugars 29g	

Protein 1g

Vitamin A <2% Calcium 2%
Vitamin C <2% Iron 6%

Source: www.calraisins.org

Dates

Serving Size: ¼ cup (40g)

Calories 120 Calories from Fat 0

	% Daily Value
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 31g	10%
Dietary Fiber 3g	14%
Sugars 29g	

Protein 1g

Vitamin A 0% Calcium 2%
Vitamin C 0% Iron 2%

Source: www.datesaregreat.com

Dried Figs

Serving Size: ¼ cup (40g)

Calories 113 Calories from Fat 2

	% Daily Value
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 5mg	0%
Total Carbohydrate 26g	9%
Dietary Fiber 5g	20%
Sugars 20g	

Protein 1g

Vitamin A <2% Calcium 6%
Vitamin C <2% Iron 6%

Source: www.californiafigs.com

Dried Plums

Serving Size: ¼ cup (40g)

Calories 110 Calories from Fat 0

	% Daily Value
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 5mg	0%
Total Carbohydrate 26g	9%
Dietary Fiber 2g	10%
Sugars 13g	

Protein 1g

Vitamin A 5% Calcium 2%
Vitamin C 4% Iron 3%

Source: www.californiadriedplums.org

There are about 250,000 date palm trees in the United States, most of which are on 5,000 acres in the Coachella Valley. In comparison, Iraq — which is only slightly larger in size than California — has nearly 22 million date palm trees.

The fig is actually an inverted flower while the seeds are the drupes, or real fruit.

The fiber and sorbitol found in dried plums can help retain moisture in leaner cuts of red meat and poultry. On average, Americans consume about two pounds of raisins per year, slightly ahead of fresh grape consumption.

For more facts, visit:
www.harvestofthemonth.com



Photograph by Lisa Cambi.

Cafeteria Connections

- Fill four transparent containers of the same size with a different dried fruit (e.g., dates, figs, plums and raisins).
- Have students estimate the number of dried fruit pieces and number of cups in each container.
- Promote the contest in classrooms and provide a place for entries.
- Obtain or make prizes and set a contest end date.
- Award classroom(s) with the most correct guesses with the jars of dried fruits or make trail mix.

What's in a Name?

	Date	Dried Fig	Dried Plum	Raisin
Spanish	dátil	higo	ciruela pasa	pasa
Family	Arecaceae (Palm)	Moraceae (Mulberry)	Rosaceae (Rose)	Vitaceae (Grape)
Genus	<i>Phoenix</i>	<i>Ficus</i>	<i>Prunus</i>	<i>Vitis</i>
Species	<i>Phoenix dactylifera</i>	<i>Ficus carica</i>	<i>Prunus domestica</i>	<i>Vitis vinifera</i>
Varieties	Deglet Noor, Medjool, Zahidi, Khadrawy, Halawy; also grouped as soft, semi-soft and dry	Calimyrna and common type (Mission, Adriatic, Kadota)	California plum (graft of La Petite d'Agen and wild American plum)	Dark/purple raisin, golden raisin, dipped seedless, Muscat, Zante currant

How Much Do I Need?

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 to learn more.

Dried Fruit History

- Athenians, including Plato, referred to themselves as “philosykos,” which translates to “friend of the fig.”
- After his failed gold mining venture, Frenchman Louis Pellier introduced Californians to dried plums at his Santa Clara Valley nursery in 1856.
- Raisins are noted in ancient writings as far back as 1490 B.C.E., but it wasn't until 1876 when Scottish immigrant William Thompson developed a seedless grape variety in the San Joaquin Valley that the raisin industry was launched.
- Early USDA explorer Bernard Johnson became the “father of the California date industry” when he established a research station near the desert town of Mecca in the late 1880s.

For historical timelines, visit:
www.harvestofthemonth.com

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. Dried fruits can be found in each of the color groups.

Color Group	Health Benefits	Examples of Fruits and Vegetables
Red	Help maintain heart health, memory function and urinary tract health	Dried apples, beets, dried cranberries, red currants, pomegranates, rhubarb, red peppers
Yellow/Orange	Help maintain heart health, vision health and healthy immune system	Golden raisins, yellow figs, dried apricots, mandarins, sweet potatoes, yellow squash
White/Tan/Brown	Help maintain heart health and cholesterol levels that are already healthy	Dates, dried figs, bananas, Asian pears, leeks, onions, garlic, cauliflower, jicama, quince, mushrooms
Green	Help maintain vision health and strong bones and teeth	Dried kiwi, dried green apples, bok choy, mustard greens, turnips
Blue/Purple	Help maintain healthy aging, memory function and urinary tract health	Dried plums, raisins, Zante currants, dried blueberries, eggplants, purple cabbage

For more information, visit:
www.fruitsandveggiesmatter.gov

Mulching the Garden

As the rain season begins in California, help out the garden with a layer of mulch. Mulching is the process of spreading material on garden paths and around plants and trees. It helps stop weeds, erosion and mud. As mulch decomposes, it breaks down into organic material that feeds the soil.

Helpful Hints:

- Weed paths and garden beds before laying down mulch
- Most mulch is made from organic by-products (bark chips, wood chips, composted leaves, straw, newspaper, cardboard)
- Lay mulch down in layers two to four inches thick
- If mulch decomposes before summer, add another layer around plants to help retain soil moisture
- Free sources of mulch include tree trimmers, farmers, local waste districts or the California Materials Exchange (www.ciwmb.ca.gov/calmax)

Source: www.lifelab.org

For more information, visit:
www.csgn.org
www.garden.org



Home Grown Facts

- Ninety-five percent of the 30 million pounds of dates grown in the United States come from the Coachella and Salt River Valleys in Southern California.
- The Deglet Noor accounts for 90 percent of California's date crop.
- California's San Joaquin Valley grows 20 percent of the world's figs and 99 percent of the nation's crop.
- Two-thirds of California's fig crop consists of the Mission (black) and Calimyrna (golden) varieties.
- The three top fig-producing counties are Fresno, Madera and Merced.
- California is the world's leader of dried plums, producing about 65 percent of the world's supply and almost 99 percent of the nation's supply.
- Since 2001, California's dried plum crop has had an average annual value of about \$130 million.
- The top dried plum-producing counties are Sutter, Butte, Yuba, Tehama, Glenn and Tulare.
- In 2002, California produced about 174,000 tons of dried plums, 75,000 of which were exported to 50 countries.
- In the United States, raisins are produced almost exclusively in California's Central Valley (mostly in Fresno County) and represent nearly half of the world's supply.
- Ninety percent of raisin production comes from the Thompson seedless grape variety.

For more information, visit:
www.ers.usda.gov
www.cdfa.ca.gov

Student Advocates

- Dried fruits are rich with unusual and interesting facts from history. Have students develop a poster or student worksheet with brain teasers, clues or fill-in-the-blanks about the "Ancient History of Dried Fruits." **Example:**
 - In the 14th century, Roman physicians prescribed what dried fruit to cure mushroom poisoning and old age?
- Have students add messages promoting the health benefits of dried fruits. Display posters on campus or distribute to local grocery stores.
- In lieu of posters, students may develop advertising jingles to promote a dried fruit, such as figs or dates. Run the ads during school announcements.

Adventurous Activities

Geography Exploration:

California leads the nation in total fruit and vegetable production. Have students explore California's geography to learn why California is able to grow a diverse variety of fruits and vegetables. Topics to study may include:

- State and regional climates
- Land features and general topography
- Annual and monthly precipitation
- Types of soil

For more activities, visit:
www.harvestofthemoonth.com

How Do Fruits Dry?

Fruits become dry when their moisture content drops below 20 percent. Dried fruits are the result of either natural or mechanical processes. California's grape growers happened upon raisins accidentally when an early heat wave dried the grapes on the vine. California plums, by comparison, are dehydrated by machines that lower the moisture content to about 15 percent.*

California has strict standards for dried fruit crops that involve sampling, washing, sizing and processing. Dried fruits are often treated with potassium sorbate to inhibit yeast and mold growth; sulfur dioxide is also added to preserve color. Before being sent to market, most dried fruits undergo a process — usually by boiling or steaming — to bring their moisture content up to about 30 percent. This added moisture usually makes the fruit more plump and tasty.

Fruit	Drying Process	Fruit Yield (Per Tree/ Vine Per Season)
Dates	Ripen in three stages (khalal, rutab and tamar); hand harvested when tree-ripe, then mechanically dried	200 lbs.
Figs	Fully-ripen and semi-dry on tree	40-50 lbs.
Plums	Mechanically harvested, then mechanically dried	Fresh: 150-300 lbs. Dried: 50-100 lbs.
Raisins (Grapes)	Hand harvested when vine-ripened, then sun-dried**	Varies

*Not all plum varieties can be dried. The California plum variety is unique. See the *Adventurous Activities* on page 3 to learn more.

**Most raisin varieties are sun-dried. The golden and dipped seedless raisin varieties are mechanically dried.

For more information, visit:

www.californiadriedplums.org

www.californiafigs.com

www.calraisins.org

www.datesaregreat.com

Literature Links

- **Elementary:** *First Day in Grapes* by L. King Perez, *Making Raisins* by Marvin Buckley and *The Reason for a Flower* by Ruth Heller.
- **Secondary:** *The Vineyard* by Idwal Jones, *Four Seasons in Five Senses: Things Worth Savoring* by David Masumoto and *The Fig Can Teach You A Lot About Nutrition* by the California Fig Advisory Board.

For more ideas, visit:

www.cfaitc.org/Bookshelf/Bookshelf.php

Physical Activity Corner

Warm Up for Power:

Cooler weather is an ideal time for students to learn about the benefits of warming up the body. In addition to raising core body temperature and making muscles more flexible, warming up can also help the body work more efficiently, prevent injury and stimulate brain activity. Have a class discussion about the importance of warming up before starting activity. Then do a few warm-up exercises together.* Remind students that warming up can count toward their daily one hour of physical activity.

Sample Warm Up for Power Activities:

- Head circles
- Arm circles
- Trunk twist
- Knees up (marching)
- Low squat

*Warming up can be done indoors and outdoors.

Adapted from: *Community Youth Organization Idea & Resource Kit, Network for a Healthy California – Power Play! Campaign*, California Department of Health Services, 2005, p. 23.

Student Sleuths

- 1 Dates, dried plums, figs and raisins are all sources of fiber. What are the benefits of consuming fiber? What is the difference between soluble and insoluble fiber?
- 2 Complete a nutrient analysis of your trail mix recipe (from the *Cooking in Class* activity). Develop a Nutrition Facts label for your product. (Hint: Use the analysis tools available on www.nutritiondata.com.)
- 3 What is a *Blastophaga psenes*? What is its role in the propagation of figs? Describe the pollination process called capricification.
- 4 Develop a Venn diagram to compare and contrast various characteristics of grapes and raisins, including nutrient values. Give a presentation that explains the changes in nutrient composition when grapes are dried.
- 5 What is potassium and what does it do for the body? When playing sports, what other minerals are needed for hydration? Develop an advertisement for dried fruits promoting the benefits of potassium.

For information, visit:

www.datesaregreat.com

www.fruitsandveggiesmatter.gov

www.calraisins.org

www.tablegrape.com

Next Month: Mandarins

