

Harvest of the Month



Health and Learning Success Go Hand-In-Hand

School breakfast programs increase learning and academic achievement, improve student attention to academic tasks, reduce visits to the school nurse, and decrease behavioral problems. Help promote the school breakfast and meals program to your students. Use Harvest of the Month to encourage students to eat healthfully and be active.

Exploring Washington Radishes: Taste Testing

What You Will Need:

- Three to five different radish varieties, whole and sliced*
- One of each variety per every four students
- Nutrition label for radishes
- Dry erase board, markers

*See "How do Radishes Grow" on page 2 for varieties



Activity:

- Examine radish noting color (skin and flesh), texture, sound, and smell.
- Chart observations on board.
- Analyze nutrition information.
- Chart three highest nutrient levels.
- Compare and contrast varieties.
- Discuss differences in flavor and how they may be related to characteristics like color.

Nutrition Facts

Serving Size 1/2 cup (58g)

Amount Per Serving

Calories 10 **Calories from Fat** 0

% Daily Value*

Total Fat 0g **0%**

Saturated Fat 0g **0%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 25mg **1%**

Total Carbohydrate 2g **1%**

Dietary Fiber 1g **4%**

Sugars 1g

Protein 0g

Vitamin A 0% • Vitamin C 15%

Calcium 2% • Iron 2%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4



Cooking in Class: Radish Salsa

Makes about 2 cups.

Prep Time: 30 minutes;

Ingredients:

- 1 pound radishes
- ½ English cucumber
- 1 scallion
- 1 clove garlic
- 1 tablespoon minced fresh chili (like jalapeno or serrano), to taste
- 2 tablespoons lemon juice
- ¼ cup chopped fresh cilantro leaves
- Salt and pepper, to taste

Directions:

- 1 Wash and chop radishes, cucumber, scallion, chili, and cilantro.
- 2 Add to bowl with garlic and lemon juice. Season with salt and pepper. Mix thoroughly.
- 3 Taste and add more chili, lemon, or salt as needed. Enjoy!

Recipe by Mark Bittman

Posted on Common Threads Farm:

www.commonthreadsfarm.org

Reasons to Eat Radishes

- An excellent source of vitamin C
- A good source of fiber
- A good source of phosphorus, potassium and zinc

Champion Sources of Vitamin C:

- Orange
- Sweet potato
- Bell Pepper
- Strawberries
- Cabbage

Source:

www.fruitsandveggiesmorematters.org/vitamin-c-in-fruits-and-vegetables



RADISHES

What is Vitamin C?

- Vitamin C, also known as ascorbic acid, is a water-soluble nutrient found in some foods.
- In the body, it acts as an antioxidant, helping to protect cells from the damage caused by free radicals. Free radicals are compounds formed when our bodies convert the food we eat into energy.
- The body also needs vitamin C to make collagen, a protein required to help wounds heal.
- Vitamin C improves the absorption of iron from plant-based foods and helps the immune system work properly to protect the body from disease.

Source :

<https://ods.od.nih.gov/factsheets/VitaminC-Consumer>



Radish Benefits

Radishes are a very nutritious root vegetable. The radish improves your health by regulating your body's blood pressure, preventing respiratory problems and easing digestion. The natural spice found in radishes is said to help eliminate excess mucus. Radishes are mostly made up of fiber and water, which helps to cleanse and hydrate the body.

Source :

<http://www.cityschoolyardgarden.org/wp-content/uploads/2015/03/Backpack-Flyer-March-radish-m3-1-e1426799016706.jpg>

How Much Do I Need?

Activity:

A ½ cup of radishes is about 6 radishes sliced. The amount of fruits and vegetables that each person needs depends on age, gender, and physical activity level. Have students visit www.mypyramid.gov/kids to find out how much they need to eat from each group in MyPyramid. Have them write down their goals and track them each week.

Source:

www.choosemyplate.gov/food-groups/dairy-amount.html

Recommended Daily Amount of Fruits and Vegetables*

	Kids, Ages 5-12	Teens and Adults, Ages 13 and up
Males	2 ½ - 5 cups per day	4 ½ -6 ½ cups per day
Females	2 ½ - 5 cups per day	3 ½ -5 cups per day

*If you are active, eat the higher number of cups per day. Visit www.mypyramid.gov to learn more.

How Do Radishes Grow?

Radishes are easy to sprout and grow. They only need four weeks to transform from a tiny seed to a round, juicy root bursting with flavor. Radishes grow best in loose, sandy soil of raised beds. The radish is a fast growing crop that does well germinating in cool temperatures, making it an ideal crop for spring and fall plantings.

Favorite varieties include the French Breakfast, Watermelon and Easter Egg (multicolored). Some varieties of radish can grow up to 3ft long, weighing 100lbs.!

All parts of the radish are edible (seed, root, and leaf), and there are even some varieties grown for their seed's oil producing capabilities. Although not popular for human consumption (the flavor is very strong), the seed oil has potential as a bio-fuel.

Sources:

<http://www.cityschoolyardgarden.org/wp-content/uploads/2015/03/Backpack-Flyer-March-radish-m3-1-e1426799016706.jpg>

<http://sierraharvest.org/harvest-of-the-month-features-radishes/>



Botanical Facts

Scientific name: *Raphanus Sativas*

Spanish name: *Rabano*

Latin name: "*Radix*", meaning Root

The radish is a root vegetable. It is a member of the Brassicacea or Cruciferacea family along with other vegetables such as kale, collards, broccoli, arugula, cauliflower, collards, cabbage, canola, turnips, horseradish and mustards. Just think- all of these varied cousins descended long ago from a single wild mustard.



Source:

sierraharvest.org/harvest-of-the-month-features-radishes/

The Roots of Radish History

- The first historical records of radishes come to us from Greek and Roman writings from the 3rd century B.C.
- It is thought that the radish was one of the first European crops to be brought to the Americas.
- Radishes, onions and garlic were paid as 'wages' to the Ancient Egyptian laborers who built the Pyramids.
- There aren't great archeological records of the history of radishes around the world, but there is some evidence that the center of origin for the radish is in Southeast Asia.
- Radish seeds were an important source of oil in Ancient Egypt before olive trees were introduced to the country.
- In Oaxaca in Mexico, December 23rd is known as "The Night of the Radishes" (Noche de Rabanos). The festival features depictions of all kinds of subjects, including nativity scenes – all carved from radishes!

Source:

<http://sierraharvest.org/harvest-of-the-month-features-radishes/>



Cooking and Eating

Radishes are usually eaten raw alone in salads, salsa or with dip. They can also be sautéed or roasted along with other root vegetables. Radishes are great for adding a bit of crunch and zest to any recipe.

Radishes are delicious when eaten thinly sliced:

- With a pinch of salt or a thin slice of cheese
- Dipped in a simple dressing
- On top of toast with a bit of butter

Source:

<http://www.cityschoolyardgarden.org/wp-content/uploads/2015/03/Backpack-Flyer-March-radish-m3-1-e1426799016706.jpg>



School Garden: From Seed to Life

If your school has a garden, here is an activity you may want to implement. Look for donations to cover the cost of seeds, tools, irrigation systems, electric pumps, and any salary incurred by garden educators or others.

Students who work directly with plants or in a garden are more likely to understand the important role plants and agriculture play in our lives. Discuss how plants contribute to our society and health. Students can then plant a "container garden" to give to a person or organization, such as a children's hospital, nursing home, neighbor, or take home to their family.

What You Will Need:

- Small plant containers
- Variety of radish seeds
- Bagged soil mix
- Basin for moistening soil

Note: Garden soil is too heavy for small containers and often contains weed seeds.

Activity:

- 1 Fill container with moistened soil mix.
- 2 Spread seeds out according to package directions.
- 3 Gently press seeds into soil and lightly cover with soil.
- 4 Gently water the soil and keep moist.
- 5 Place container in a sunny window spot.
- 6 Create plant labels and decorate note cards with care instructions to accompany each plant container.
- 7 Watch for plant growth and follow packet directions for transplanting to garden.

Adapted from:

www.kidsgardening.com/Dig/dig.asp?act=t

For more ideas, reference: Nutrition to Grow On, CDE, 2004.



Home Grown Facts

- Best time to plant is mid-March in Western Washington, making the radish a great first start to spring gardening.
- Because radish usually germinates in just 3 to 7 days, it is a good choice when introducing children to gardening.
- Radish comes in a wide variety of root colors, shapes, and sizes providing for a range of uses.
- If it's a long, hot summer, you get hotter radishes and when it's milder weather you get cooler radishes!

Source:

<http://ext100.wsu.edu/benton-franklin/wp-content/uploads/sites/22/2014/04/Radishes-FS127E.pdf>
 Refer to the Home Vegetable Gardening in Washington (Miles, et al. 2012) for valuable information



Student Sleuths

- 1 Name three specific functions that vitamin C provides for the body.
- 2 What are some of the sources of vitamin C?
- 3 The percent Daily Value (%DV) tells you how much of a nutrient you get in a serving of a food item and is based on a 2,000-calorie diet. Vitamin C is measured in milligrams (mg). Look up the mg for vitamin C that your body needs based on your gender and age. Compile a list of foods you eat and find the %DV for vitamin C in these foods. Determine if you are getting an adequate amount of vitamin C in your diet.
- 4 Map the different commercial radish-producing regions in the world.
- 5 Identify and compare the peak harvest times for radishes in each Washington region.



Cafeteria Connections

Work with school nutrition staff to find out which variety of radish students prefer.

Conduct taste tests during lunch.

Older students or a math class may be interested in conducting the taste test and determining cost, student preference, and nutrient analysis.

Students can taste test the various ways in which radishes may be served, such as whole, sliced, seasoned and shredded. Students can also test other parts of the radish.

After the taste tests, feature the students' top choice on the school lunch menu. On the same day, fill a jar with the "favorite radish choice" and ask students to guess how many radishes it took to fill the jar. Provide incentives and/or awards as appropriate for your school site.

For more ideas, reference:

Fruits and Vegetables Galore, USDA, 2004. www.schoolnutrition.org

