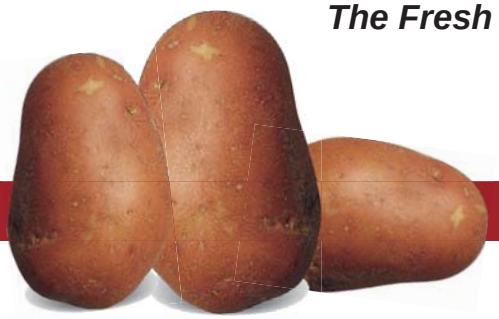
FRESH from the FARM



The Fresh from the Farm featured vegetable is

Potato

for educators

Healthy Kids Do Better in School

Participation in school meal programs can improve students' focus, attention, memory, energy level and test scores. Students who eat school meals are more likely to eat the recommended daily amounts of fruits and vegetables, which can also improve their attendance and overall health. Connect with core curricula and integrate **Fresh from the Farm** into the classroom, cafeteria, home and community. Involve students to help them understand the benefits of eating a colorful variety of fruits and vegetables and being physically active every day.

Cooking in Class: Herb Roasted Potatoes

Makes 36 tastes at 1/3 cup each

Ingredients:

- 4 lbs. potatoes (4-5 varieties)
- 4 tablespoons olive oil
- 1 teaspoon each dried thyme and rosemary
- 1½ teaspoons salt
- 1 head garlic (optional)
- Small plates and napkins

Preheat oven to 450 F. Remove rosemary or thyme from stems. Cut rinsed potatoes into quarters or smaller. In large bowl, toss potatoes with herbs, oil, salt and garlic cloves. Place in baking dish. Cover. Bake for 30 to 40 minutes or until done. Serve warm on plates.

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

Exploring Potatoes:

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

Tools:

- Minimum of three potato varieties*, raw
- One knife and cutting board
- Plastic gloves, one pair per student
- Hot plate and pans (or microwave); serving plate; small plates; serving spoons

**Refer to What's in a Name? on page 2 for varieties.*

Sensory Exploration Activity:

- Divide class into groups; distribute one potato variety to each group.
- Observe the external look, feel and smell of raw potato; record observations.
- Cut potato into cubes.
- Boil potato cubes in water or microwave; place cubes on plate at head table.
- Sample varieties; record taste differences/similarities; share observations.
- Take poll on classroom favorite variety and find a healthy recipe featuring it; share recipe with your family.

For more ideas, reference:
The Power of Choice, Team Nutrition, USDA, 2003

SMART CHOICES

How Much Do I Need?

A serving of potatoes is one-half cup cooked potato. Remind students to include a variety of fruits and vegetables from each color group to help them reach their total daily needs.

Recommended Daily Amounts of Fruits and Vegetables*

Ages 5 - 12	Ages 13 & older
2 ½ - 5 cups per day	3 ½ - 6 ½ cups per day

**Active people should eat the higher number of cups per day.*

Visit www.mypyramid.gov to learn more.

Nutrition Facts

Serving size 1/2 cup cooked (78g)

Amount per serving	
Calories 68	Calories from Fat 1g
	% Daily Value
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 3mg	**0%**
Total Carbohydrate 16g	**5%**
Dietary Fiber 1g	**6%**
Sugars 1g	
Protein 1g	

Vitamin A 0% Calcium 0%
Vitamin C 17% Iron 1%

Source: www.nutritiondata.com

Dakota County

Public Health
Prevent. Promote. Protect.
TO HEALTHY KIDS

Reasons to Eat Potatoes

One serving of potatoes provides:

- A good source of vitamin C and vitamin B6.
- A source of carbohydrates.
- A source of fiber, potassium, thiamin, niacin and magnesium.

What is Vitamin B6?

- A water-soluble vitamin of the vitamin B complex.
- A cofactor of a large number of essential enzymes in the body.
- It aids in the formation of red blood cells.

Visit www.nutrition.gov for more information.

Eat Your Colors

Fruits and vegetables come in a rainbow of colors — red, yellow/orange, white, green and blue/purple. Colorful vegetables contain ingredients that may lower the risk of some cancers. Potatoes are in the red, yellow/orange, white/tan/brown and blue/purple color groups.

Color Group	Health Benefits	Examples
Red	Help maintain heart health, memory function and urinary tract health	Red potatoes
Yellow/Orange	Help maintain heart health, vision health and healthy immune system	Red Gold potatoes, Yukon Gold potatoes
White/Tan/Brown	Help maintain heart health and cholesterol levels that are already healthy	White potatoes, Russet potatoes
Blue/Purple	Help maintain healthy aging, memory function and urinary tract health	Purple potatoes

For more information, visit:www.fruitsandveggiesmatter.gov

What's in a Name?

Pronunciation: p-ta¯'to¯
Spanish name: papa
Family: Solanaceae
Genus: *Solanum*
Species: *S. tuberosum*

Potatoes were first cultivated by the Incas and known as papas. When the potato traveled to Spain, the Spanish referred to this tuber as batata. (Today, they use the term patata.) The French came to call it pomme de terre ("apple of the earth"), while the English coined it potato. The potato has several English nicknames including taters, murphies and spuds, the latter in reference to a spadelike tool — a spudder — used for digging. Prior to the Industrial Revolution, people planted and harvested potatoes with spudders. Members of the nightshade family, potatoes come in more than 200 varieties. These are often categorized as first earlies, second earlies and main crop, based on when they are harvested. First earlies includes new potatoes, which are harvested before the sugars have fully converted to starch, resulting in a flesh that is crisp and waxy. Second earlies are larger and have a waxy and moist flesh (ideal for broiling and roasting). Main crop potatoes are harvested when fully developed and can store for long periods. The most common American main crop variety, the Russet Burbank potato, was named after horticulturist Luther Burbank.

Potato	Skin/Flesh Color	When Harvested (best used for)
Russet Burbank	Brown/white	Main crop (baking, processing)
Yellow Finn	Yellow/yellow	First early (salads, boiling)
Red Gold	Red/yellow	Second early (boiling, roasting, mashing)
German Butterball	Yellow/yellow	Main crop (baking, processing)
Yukon Gold	Yellow/yellow	First early (boiling, roasting, mashing)

Just the Facts

- The potato is America's number one vegetable crop (15% of vegetables farm sales receipts).
- In 2008, worldwide production of potatoes was 314 million metric tons.
- Easy to grow and adaptable to many climates, potatoes are grown in 35 states in the United States.
- Americans consume on average 130 pounds of fresh and processed potatoes annually.
- More than half of all potatoes are used for processing* (e.g., French fries, chips) while the remainder are sold fresh.
- The Russet potato is the predominant variety grown in Idaho, which also grows about one-third of the nation's potato supply.

*During potato commercial processing, the ratio of calories and fat to nutrients is altered significantly. The calories, fat and sodium content are increased.

Source: www.ers.usda.gov/briefing/potatoes

Home Grown Facts

Did you know that Minnesota ranks sixth in the nation in potato production? Red potatoes grown in the Red River Valley of Minnesota and North Dakota have a deeper red color and more robust flavor than potatoes grown anywhere else. This is because these potatoes are non-irrigated and grown in heavy black soil unique to the Red River Valley of the North. More than 146,000 acres of potatoes are planted here each year. The average yield per acre is 260 hundred-weight - that's 260 one-hundred-pound bags!

The three major types of potatoes grown in Minnesota are white, russet, and red potatoes. Russet potatoes have rough, brown skin whose appearance is netted when mature. Most russet potatoes are baked or processed to make French fries. White potatoes are slightly oblong in shape and have smooth, cream-colored skins. Their major use is in the production of potato chips. Red potatoes are mostly round in shape with very thin, smooth, red skin and most are distributed fresh.

Top five Minnesota Counties Reporting Potato Production in 2007: Sherburne, Morrison, Polk, Todd and Freeborn.

For more information:
www.MinnesotaGrown.com
www.mn-farmtoschool.umn.edu/potato_promos.html

From Minnesota Agriculture in the Classroom
www.mda.state.mn.us/maitc

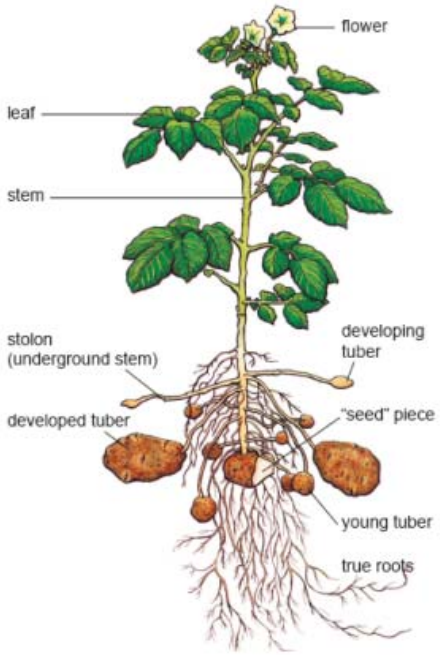
How Do Potatoes Grow?

The potato is a cool-weather, perennial plant grown for its starchy tuber. Commercial plants follow the life cycle of tuber to sprout to plant to tuber. Following rapid leaf growth, the plant grows yellow-green flowers above ground. Underground, stems called stolons branch out and swell. The leaves produce excess starch, which gets sent down through the roots and deposited at the stolon ends forming tubers. The tubers (potatoes) grow larger as more starch is produced.

Temperature	Grows best at 60 F
Exposure	Full sun
Soil	Sandy loam; loose, well-drained
Propagation	By potato seed (tuber with at least one eye)
Seed germination	2 to 3 weeks
Care	Steady water supply; till soil regularly
Time before harvest	3 to 4 months
Harvesting	By machine when mature

Blossoms

Potato plant blossoms are clustered 1 inch wide, five-petaled flowers. These flowers range in color including white, lavender, blue, yellow and purple. The green berries (fruit) form and develop after fertilization and turn yellow as they mature. Each berry may contain 200 or more seeds. These seeds are used by plant breeders, not for commercial production.



Potato Plant

The potato plant is bushy, sprawling and dark green. It consists of stems which grow to a length of 1 to 2 feet. The potato leaf is slightly hairy, and has one long (terminal) leaflet in the center with two to four pairs of leaflets, 1 to 3 inches in length.

Tubers

The tubers are the portion of the plant used for food and "seed." They are enlarged, fleshy stems which develop below the soil surface. Each tuber contains several "eyes" or buds. These are the small dimples on the surface of the tubers from which new plants can develop.

Adapted from: Buried Treasure: Roots & Tubers, Meredith Sayles Hughes, 1998.

Adventurous Activities

History Exploration:

- Research the history, uses and folklore associated with the potato in Ireland and Russia.
- Compare and contrast the Irish potato history with the Russian potato history. Discuss the significance and influence of the potato crop in these countries (e.g., culture, nutrition, economics, migration).
- Have students research the history of other crops that are or have been the primary food source of a nation's majority population.

For more ideas, visit: www.kidsgardening.com and www.harvestofthemonth.com

Student Advocates

List your favorite restaurants and places that serve French fries or hash browns.

- Research how these foods are prepared. Find out if they offer a substitute side dish. If no substitute dishes are offered, make a list of healthier substitute side dishes (e.g., baked potatoes, roasted potatoes, side salad, tomatoes with lowfat cottage cheese).
- Compile the nutrient data for all options.
- Conduct taste testing with peers and assess willingness to select healthier side dishes.
- Contact local food vendors for unit cost comparisons.
- Write a persuasive letter to the restaurant's manager/owner for making healthier side dishes available.

Physical Activity Corner

Children need at least 60 minutes of physical activity daily, even 10 minutes at a time throughout the day. Play a quick game of Hot Potato with students to keep their minds sharp and increase cardio/respiratory endurance.

Equipment:

- Upbeat music
- A soft object that is both durable and won't injure anyone when thrown. This is the "Hot Potato."

Activity:

Divide class into groups of 8-10. Each group receives a "Hot Potato" and stands in a circle. When the music starts, the Hot Potato is tossed around the circle. When the music stops, the person holding the Hot Potato leads their circle in 10 repetitions of a physical activity motion. The Hot Potato gets to choose what activity they will have their group do.

Examples:

1 Jump in place
2 Alternate knees to chest, like an exaggerated march
3 Student picks a dance move
4 Shoulder shrugs

Cafeteria Connections

Potatoes are the nation's leading vegetable crop. Fifty percent are processed, while the remaining are marketed as fresh. Work with a classroom or student group to create a bulletin board illustrating the nutritional differences between fresh and processed potato products.

- Make large-sized Nutrition Facts labels of potato products (cooked potatoes, chips, French fries, mashed). Use labels from packages or visit www.nutritiondata.com.
- Have students evaluate nutrient differences.
- Make a chart of health benefits/risks for each product.
- Conduct taste-testing session during lunch. Showcase the many healthy ways potatoes can be eaten — baked, boiled, roasted.

Literature Links

Elementary:

- **Potato: A Tale from the Great Depression** by Kate Lied
- **Potatoes on Tuesday** (bilingual) by Dee Lillegard
- **Two Old Potatoes** by John Coy.

Secondary:

- **Buried Treasure: Roots and Tubers** by Meredith Sayles Hughes and Tom Hughes
- **Potato: How the Humble Spud Rescued the Western World** by Larry Zuckerman.

For more ideas, visit: www.cfaitc.org/Bookshelf/Bookshelf.php

Smart Choices is funded by Blue Cross and Blue Shield of Minnesota through its Prevention Minnesota Initiative and the Minnesota Department of Health's Statewide Health Improvement Program (SHIP).

Permission to use and adapt this material was received from the California Department of Health, Network for a Healthy California. Original development funded by the USDA Supplemental Nutrition Assistance Program (formerly the Food Stamp Program).