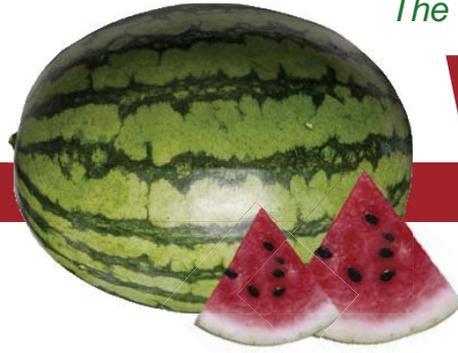


FRESH from the FARM



The Fresh from the Farm featured vegetable is

Watermelon

for educators



Healthy kids do better in school

Studies report improved test scores and memory function among students who eat a variety of colorful fruits and vegetables and get physical activity every day. The goal of Smart Choices is to help students eat healthy and be active.

Exploring Watermelons

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

Tools:

- Two or three different varieties of watermelons*
- Knives, cutting boards and serving plates (one for each group)
- Plastic food service gloves (one pair per student)
- Small plates or bowls
- Paper and pencils

*Seeded watermelon, seedless watermelon, yellow or orange mini watermelon.

Sensory Exploration Activity:*



- Divide class into student groups; distribute one melon variety to each group
- Observe the external look, feel and smell of melon; record observations
- Cut open fruit and note color and smell of inside; record observations
- Cube fruit; place on serving plate at head table
- Sample each watermelon variety; record taste differences and similarities among melons
- Share observations with class; make a graph showing the classroom favorite

(*Coordinate this activity with Melon Math on page 4)

Cooking in Class: Water Color Fun

Ingredients:

Makes 35 tastes at $\frac{1}{8}$ cup each

- 6 cups red, seedless watermelon balls
- 6 cups yellow, mini watermelon balls
- Small plates and napkins

Use a melon baller to scoop watermelon.

Serve a taste of each to each student.



How Much I Do Need?

A serving of watermelon is one cup cubed watermelon. Remind 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*

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 cup cubed (150g)
Amount per serving	
Calories 48	Calories from Fat 1g
% Daily Value	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 2mg	0%
Total Carbohydrate 12g	4%
Dietary Fiber 2g	9%
Sugars 10g	
Protein 0g	
Vitamin A 18%	Calcium 2%
Vitamin C 24%	Iron 2%
Source: www.nutritiondata.com	

Dakota
COUNTY



Just the Facts

- Watermelons originated in Africa, and watermelon harvests are recorded in hieroglyphics painted on ancient Egyptian walls.
- Watermelons were brought to China around the 10th century. China is currently the largest producer of watermelons.
- Watermelons were brought to the Western Hemisphere with European explorers and African slaves.
- By weight, the watermelon is the most common melon consumed in the United States, followed by the cantaloupe and the honeydew melon.
- Besides the fruit, other edible parts of the watermelon include the seeds and the rind. In Asian countries, roasted watermelon seeds are seasoned and eaten as a snack, or ground into a cereal to bake into bread. In Southern American cooking, the rind is marinated, pickled or candied.

Source: National Watermelon Promotion Board,
<http://www.watermelon.org>

What's in a Name?

Pronunciation: wô'ter-mêl'ən
Family: Cucurbitaceae
Genus: *Citrullus*
Species: *lanatus*

Watermelon belongs to the Cucurbitaceae family and is related to the cantaloupe, squash and pumpkin, which also grow on vines on the ground. Watermelons can have a round or oblong shape.



They all have thick, green rinds that are spotted or striped. Watermelons can be as small as a few pounds (mini watermelon) or more than 100 pounds. Most of the watermelons we eat have deep reddish pink flesh, but there are varieties that have orange, yellow, or white flesh. About 200-300 varieties of watermelon are grown in North America, but only 50 are very popular.

The most common in Minnesota are:

Seeded Watermelon:

Oblong in shape, pink or red in color
Weight: 15-45 pounds
Small brown or black seeds

Seedless Watermelon:

Round shape, pink or red in color
Weight: 10-20 pounds
No seeds or small, soft, white seeds

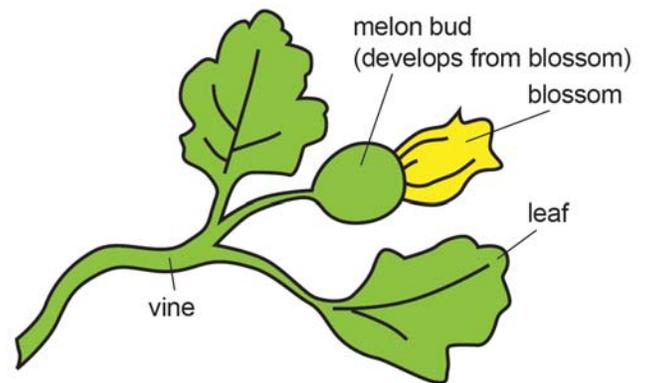
Mini or Personal Watermelon:

Round in shape, Red or yellow in color
Weight: 1-7 pounds
Seeded or seedless

How Does Watermelon Grow?

- Farmers grow watermelons in rows of raised beds, 8-12 feet apart. The raised beds are 4-12 inches high. The best soil for watermelons is fertilized sand or sandy loam.
- The plants are grown from seeds in green houses, and transplanted to the fields as tiny plants. Honeybees must pollinate yellow watermelon blossoms for the fruit to grow. It can take several honeybee visits for proper pollination.
- In one month, a vine may spread as much as eight feet. In two months, the vine shows its first watermelons, and the crop is ready to harvest in three months.
- The rind of a watermelon looks strong and hardy, but it is actually quite fragile. For this reason, watermelons must be hand-picked. Farmers look for a pale, buttery-yellow spot on the bottom of the melon, indicating ripeness.

Soil	Loam or clay-loam; well-drained
Optimal Temperature	85 to 95 F
Exposure	Full sun
Irrigation	Minimal; keep tops of bed dry to minimize fruit contact with moist soil
Reproduction	Bee pollination
Days to harvest	75 to 100



Watermelon Production Information

The leading commercial growers of watermelon in the world today include China, Russia, Turkey, Iran and the United States. China is the world's number one producer of watermelons. In the United States, the states that produce the most watermelon are Florida, Georgia, Texas, and California.



Sources: National Watermelon Promotion Board www.watermelon.org, and FAOSTAT (Food and Agricultural Organization of the United Nation)

Physical Activity Corner

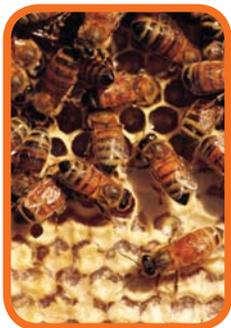
Studies support a connection between regular physical activity and increased levels of alertness, memory function, and learning. Children should engage in at least one hour of physical activity every day. Here's an example of a flexibility exercise.

Yoga Pose: Watermelon Wedge Stretch (downward facing dog yoga pose)

1. Students begin on their hands and knees. They should keep legs about hip width apart and arms shoulder width apart. Fingers should be parallel, pointing straight ahead.
2. Inhale and curl toes under, as if they are getting ready to stand on toes. Straighten and stretch arms so that elbows are fully open, inside of elbow facing forward.
3. Exhale and straighten legs; push upward with arms. The goal is to lengthen the spine while keeping legs straight and feet flat on the ground. (It's okay for less flexible students to bend the knees a bit and to keep heels raised.) Weight should be evenly distributed between your hands and feet.
4. Take several deep breaths, return to hands and knees, and stand.

For yoga poses with pictures, visit:
www.cdph.ca.gov/programs/cpns/Documents/Network-ShapeofYoga.pdf
(See My Pyramid on page 10 in "Shape of Yoga")

Honey Bee Science Activity



Honey bees must pollinate the yellow blossoms of the watermelon plant in order for the plant to produce fruit. Have students research the fascinating life of the honey bee to learn more about this useful insect.

Tell students that there are three kinds of honey bees within the hive (queen, worker, drone). Explain

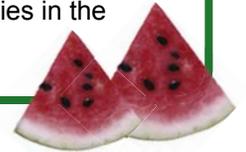
that all of the honey bees in the colony have different types of jobs.

Make a chart with a column for the queen bee, the drone, and the various worker bees including the guard bee, nurse bee, and harvest bee. Encourage students to research characteristics of each of these kinds of bees including gender, function, life span/age, appearance. Have students create honey bee illustrations and discuss the anatomy of the honey bee.

Sources: www.pbs.org/wgbh/nova/bees and the Arizona Department of Education <http://ag.arizona.edu/pubs/insects>

Cafeteria Connections

- Set aside time each day to discuss the lunch menu with students.
- Ask how many times watermelon is included on the menu.
- Does each meal include both a fruit and a vegetable?
- Learn about the different varieties of watermelon available in Minnesota grocery stores and farmers markets.
- Find as many varieties as possible at local stores and farmers markets
- Set up a display of watermelon varieties in the cafeteria.



Student Sleuths

- Watermelons are members of the gourd family. Make a list of other members of this family. Is the watermelon a fruit or a vegetable? Write a persuasive argument for your statement.
- Watermelons originated in Africa and were first cultivated in Egypt. Locate Egypt on a map and research how the watermelon is used in other parts of the world.
- Can you grow a watermelon from the white seed coats found in Seedless Watermelons? How do farmers grow Seedless Watermelons? Research this recent invention, explaining the genetic process.
- Pink watermelon is a good source of lycopene, a powerful carotenoid antioxidant. Research lycopene and its cancer-fighting properties. Give an oral report on recent findings about lycopene and how antioxidants work.

For information, visit:
National Watermelon Promotion Board www.watermelon.org;
Worlds Healthy Foods www.whfoods.com

Unusual Ways to Eat a Watermelon

- Puree watermelon, cantaloupe and kiwi together. Swirl in a little plain yogurt and serve as a cold soup.
- Roast watermelon seeds, season and eat as a snack.
- Mix watermelon with thinly sliced onion, add salt and black pepper for a great summer salad.
- Pickle or candy watermelon rinds and eat as a substitute for pickles.



Recipe Corner

Watermelon Citrus Cooler

Ingredients:

- 6 bamboo skewers
- 3 cups watermelon juice*
- 2 cups grapefruit juice
- 1 cup orange juice
- 2 tablespoons sugar

Instructions:

Thread watermelon balls on skewers and freeze. In pitcher, blend watermelon juice, grapefruit juice, orange juice and sugar until sugar is dissolved. Chill thoroughly. Place frozen watermelon balls on skewer in each glass; fill with watermelon mixture.

**In blender or food processor, process chunks of seeded watermelon until liquefied.*

Servings: Makes 6 servings. Per serving: 107 calories; 0.7g fat; 2g protein; 25g carbohydrates; 4mg sodium; 0mg cholesterol; 0.6g dietary fiber; vitamin A: 510 IU; vitamin C: 53mg

Source: www.watermelon.org



Adventurous Activities

Melon Math:

Hint: Coordinate with Exploring Melons activity on page 1.

- Estimate the weight of each watermelon variety; measure weight and record.
- Estimate the circumference, surface area and volume of each variety; measure and record.
- Compare weight and size measurements for each variety. Determine if there is a correlation between weight and size. Why or why not?
- Determine the edible portion of each melon variety and weigh, if possible.
- Compare the ratio of fruit to rind for each melon variety.
- Estimate and record number of seeds in each variety.
- Determine which variety has the most number of seeds.

For more ideas, visit: www.harvestofthemonth.com



Student Advocates

- Support local growers by promoting farmers' markets. Introduce yourself to the local growers and ask if you can help promote sales.
 - Make a schedule of farmers' markets in your area. If none are nearby, find out how to get one in your neighborhood.
 - Develop a promotional flyer inviting students, friends and families to visit these markets.
 - Distribute flyers on school campus and local neighbors.
- For information, visit:** www.mda.state.mn.us

Literature Links

Primary

- **Melvin's Melons** by Sherry T. Vaughn, (Overmountain Press, 1995)
- **Watermelon Day** by Kathi Appelt, (Henry Holt and Company, 1996)
- **Watermelon Wishes** by Lisa Moser (Clarion, 2006)
- **Peter Spit a Seed at Sue** by Jackie French Koller (Viking, 2008)

Secondary

- **Essential Gardening for Teens** by Ruth Chasek (Cahners Business Information, Inc. 2001)
- **Melons for the Passionate Grower** by Amy Goldman (Artisan, 2002)

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