

FRESH from the FARM

The Fresh from the Farm featured item is

Wild Rice

for educators



Healthy Kids Do Better in School

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

Exploring Wild Rice and Other Rice Through Taste Testing*

Engaging students through taste-testing activities allows them to experience the featured produce item first-hand, helping to create increased interest in eating what might be unfamiliar food.

Tools:

- 3 cups each of cooked wild rice, white rice, and brown rice. Spoon three tablespoons each into small paper cups.
- Printed nutrition facts for each type of rice.

(Available at www.nutritiondata.com)

Activity for younger students:

Have students make a 5 by 6 grid. Label columns wild rice, white rice, brown rice. Examine each type of rice using the five senses. Describe findings in chart.

Activity for older students:

Have students make a 5 by 6 grid. Label rows: calories, fat, carbohydrates, protein, vitamins. Examine the nutrition labels and fill in the chart. Discuss the similarities and differences as a class.

*This item relates well to the Adventurous Activity project on a page 4.

Home Grown Facts

Wild Rice is the official state grain of Minnesota. Minnesota producers currently harvest 4-6.5 million pounds of cultivated wild rice per year. Global wild rice production, which includes both wild and cultivated varieties, is about 23 million finished pounds.

Minnesota was the world's first producer of cultivated wild rice, and remains one of the world's largest suppliers of hand-harvested and cultivated wild rice. Wild rice is mainly grown in northeastern Minnesota.

The first cultivated paddies were developed by Jim and Gerald Godward near Cross Lake in the 1950s. Wild rice used to be all hand-harvested, but combines are now used to harvest cultivated wild rice from drained paddies.

Native American communities in northeastern Minnesota still harvest most of their wild rice crop by hand.

Source: *Minnesota Cultivated Wild Rice Council* www.mnwildrice.org

How Much Do I Need?

One serving of wild rice is equal to ½ cup, or about one handful. The amount of fruits, vegetables, and whole grains you need each day depends on your age, gender, and physical activity level.

Set a good example by letting children see you eating fruits, vegetables and whole grains like wild rice. One serving is equal to one slice of whole grain bread, ½ cup of whole grain pasta or brown rice, or one cup of whole grain cereal.

Recommended Daily Amounts of Whole Grains

Ages 5 - 12	Ages 13 & older
2 ½ - 5 servings	5 - 7 servings

*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.



Nutrition Facts	
Serving size	1 Cup Cooked (164g)
Amount per serving	
Calories 166	Calories from Fat 5
% Daily Value	
Total Fat 1g	1%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 5mg	0%
Total Carbohydrate 35g	12%
Dietary Fiber 3g	12%
Sugars 1g	
Protein 7g	
Vitamin A 0%	Vitamin C 0%
Vitamin C 0%	Iron 5%
Source: www.nutritiondata.com	

Dakota
COUNTY



Just the Facts

Wild rice, named “manoomin” (pronounced mah-NO-min) by the Ojibwa people, has been harvested in lakes and rivers in the Great Lakes area for centuries. Wild rice is the only grain native to North America and it has been found in layers of the earth dating back 12,000 years. There are several species of wild rice, and *Zizania palustris* is the species grown in the Great Lakes area.

Natives of Minnesota, especially the Ojibwa, harvested wild rice as an important food staple, and continue to harvest wild rice by hand. The grain also provides habitat for fish and waterfowl in the Great Lakes.

When it ripens, the grain is harvested by hand using canoes and boats. Before it can be eaten, the wild rice is dried and roasted and the hull removed.

The harvesting of the rice was such an important part of the ancient Ojibwa culture that the people would move their villages to be closer to the rice during harvest time. When Europeans came to the Great Lakes area of North America, they learned about harvesting wild rice from the Natives living there.

Early French explorers called the grain “riz sauvage” (wild rice) or “folles avoines” (wild oats). The Ojibwa consider wild rice to be a gift from the Great Spirit, view the harvest as a sacred practice, and feel that the wild rice they harvest by hand is distinct from the cultivated varieties.

Sources: www.wildrice.org and www.mnwildrice.org

Wild Rice Harvesting

Wild rice grows in shallow water in small lakes and slow-flowing streams; often, only the flowering head of wild rice rises above the water.

In harvesting wild rice grains by hand, a boat or canoe is poled by one person through the wetlands where the wild rice grows. A second person bends the heads of the wild rice plant over the canoe with one stick, and strikes them with another stick so that the plump, ripe kernels fall into the boat. The unripe kernels will cling to the stem, and the harvesters must wait to harvest these. To harvest all the kernels, several trips must be made through the wetland area, sometimes days apart. Cultivated wild rice is grown in paddies and is harvested with combines. The water must be released from the paddies late in the summer to allow time for the ground to become firm, yet not impede the growth of the wild rice plants. Modified grain combines are then driven over the firm paddies to harvest the crop. After the harvest, the water is released back into the paddies. Seed used for cultivated wild rice is the same seed as the wild rice found in lakes and rivers.

Source: www.mnwildrice.org/facts.php



What's in a Name?

Ojibwa name: Manoomin (Good Berry or Good Seed)

Family: Gramineae (Poaceae)

Genus: *Solanum*

Species: *palustris*

Wild rice (also called Canada rice, Indian rice, and water oats) is four species of grasses forming the genus *Zizania*, and the grain which can be harvested from them. *Zizania palustris* is the species grown in Minnesota. The grain was historically gathered and eaten in both North America and China. While it is still eaten in North America, the grain is no longer eaten in China: only the plant's stem is eaten there as a vegetable. The popularity of wild rice in the United States is growing because it has become more widely cultivated in recent decades.

Despite its name, wild rice is not directly related to Asian rice, although they are both members of the grass family. Wild rice grows in shallow water in small lakes and slow-flowing streams. The grain is eaten by ducks and other aquatic wildlife.

Zizania palustris is an annual plant, native to the Great Lakes. In more recent years, other varieties (species) of wild rice have been cultivated in other parts of the United States, primarily California.

Science Corner: The Wild Rice Harvest, or Manoominikewin

There are many steps involved in traditional wild rice harvesting and finishing. Knocking, Drying, Parching, Hulling, and Winnowing. Read about the process at www.manoomin.com/Harvesting.html.

Lesson Plan

1. Separate students into 5 groups. Assign each group a step in the harvesting and finishing process.
2. Have them create a diagram or illustration of the assigned step and present to their classmates.
3. Incorporate physical activity into your lesson assessment by finishing with a game of "Wild Rice Charades." Put words associated with wild rice harvesting on separate pieces of paper and have a student (or pair of students) pick one out of a basket and act out the word or phrase. The other students must guess the words, and the action goes on until the words are guessed.

Suggested words:

- Paddling a canoe
- Knocking
- Spreading rice to dry
- Picking over the rice to remove leaves and insects
- Lighting the fire
- Parching
- Hulling/Dancing/Treading
- Winnowing

Student Sleuths



1. What were wild rice camps in Ojibwa history? What became of the camps?
2. Research traditional wild rice harvest techniques in Ojibwa history. Discuss which members of the community completed which tasks and why.
3. Research how wild rice became cultivated in 20th century Minnesota.
4. In addition to the Great Lakes region of the United States, where is wild rice cultivated today?
5. What are the different species of wild rice? How are they different?

Sources: *Minnesota Cultivated Wild Rice Council* www.mnwildrice.org and *International Wild Rice Association* www.wildrice.org



Physical Activity Corner

During the winter months, it is more important than ever to help students engage in at least one hour of physical activity every day to stay healthy and fit, both mentally and physically.

Dedicate the month of February to playing a different game or activity every day, in or out of the classroom.

Objective: Develop base endurance and flexibility; study pulse/heart rate and the benefits of cardiovascular exercise.

Authentic Graphing:

- Do different activities that require varying amounts of effort, like standing still, walking and running in place. After two minutes of each activity, students measure their heart rates by taking their pulses. Record the data.
- Graph the pulse rates and discuss results.
- Brainstorm ways to increase their heart rates throughout the day.

Fitness Breaks:

- Take a two-minute fitness break between lessons. Ask students to lead the break with stretches, then play a popular dance song and let the students dance.

For more ideas, visit: www.sparkpe.org

Literature Links

Elementary:

- **The Good Path: Ojibwa Learning and Activity Book for Kids** by Thomas Peacock and Marlene Wisuri (Minnesota Historical Society Press, 2002)
- **The Sacred Harvest** by Gordon Reguinti and Dale Kakak (Lerner Publications, 1992)

Secondary:

- **The Birch Bark House** by Louis Erdich (Hyperion Books, 2002)
- **The Ojibwa: Wild Rice Gatherers** by Therese DeAngelis (Blue Earth Books, 2003)
- **Wild Rice and the Ojibwa People** by Thomas Venum (Minnesota Historical Society Press, 1988)



Recipe Corner

Zucchini with Wild Rice Stuffing

Makes 10 servings, cut in half and serve



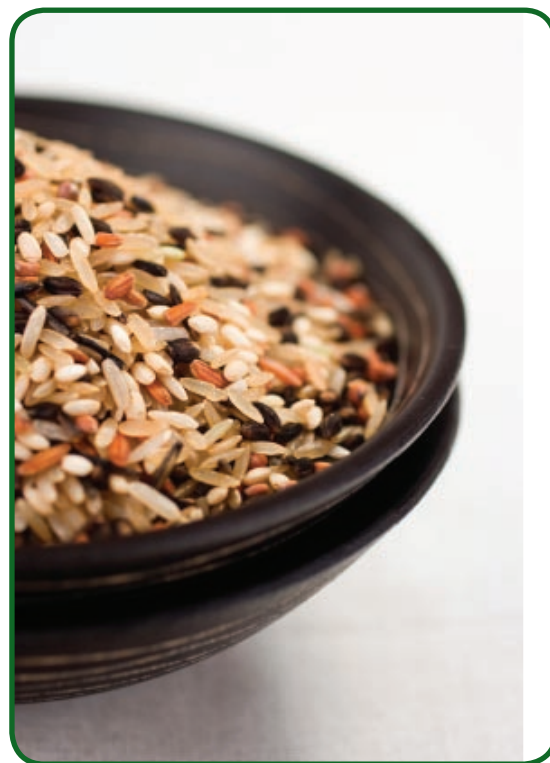
- 10 medium zucchini, halved lengthwise
- 1/2 cup minced onion
- 3 cloves garlic, minced
- 2 tbsp butter
- 1 1/2 lb minced (ground) beef
- 1 1/4 tsp salt
- 3/4 tsp ground pepper
- 4 1/2 cups cooked wild rice
- 2 large tomatoes, diced
- 5 cups grated cheese (e.g. Edam or Swiss)

Preheat oven to 375°F. Scoop out zucchini pulp and place shells on greased baking pan. Finely chop pulp; set aside. Sauté onion and garlic in butter. Add pulp, beef, salt and pepper; brown beef and drain. Add wild rice, tomatoes and half the cheese; mix well. Mound into shells. Cover; bake 25 minutes or until tender. Sprinkle with remaining cheese; bake 15 minutes uncovered.

Source: Minnesota Cultivated Wild Rice Council

Cafeteria Connections

- Discuss what makes a grain a whole grain. Whole grains contain the germ, endosperm, and bran from the grain. Refined grains contain only the endosperm. Common refined-grain products include: white rice, white flour, white bread hominy, pasta (non-whole wheat varieties).
- Team up with your school nutrition staff to develop a lunch recipe that features wild rice. Examine your cafeteria menu and pick out the other whole grain options.
- Discuss how students could get more whole grains into their diets.



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Adventurous Activities

Expanding Horizons with Rice

Needed:

1/2 cup each of uncooked wild rice, long grain rice, brown rice.

1. Count how many rice kernels are in each cup. Record.
2. Note how much water will be added to each variety of rice during cooking.
3. Predict how much each type of rice will expand after cooking.
4. Cook as directed. (Most rice has instructions for cooking in the microwave, if this is easier for the classroom.)
5. Measure final volume and weight.

Answer the following questions:

- Where did the water go?
- Which rice variety expanded to the greatest volume?
- Which variety had the most final weight?
- Did the number of kernels per 1/2 cup affect the final outcomes for volume and weight?
- Compare the nutritional information of the three rice varieties.

(Nutrition information available at Nutritiondata.com)

Hint: Coordinate with Exploring Wild Rice activity on page 1.