

Cultural Standards

- 4.1.2: E-6 - Explain the importance of values and teachings (e.g. respect, humility, resilience, patience) in Native American cultures in Minnesota
- 4.1.2: F-6 - Identify ways in which local Native American communities maintain a connection to traditional values
- 4.1.1: C-8 - Give examples of various sites used for traditional Native practices in Minnesota
- 4.1.1: D-8 - Describe factors that have influenced changes in the diets of Native peoples
- 4.1.1: E-8 - Give examples of traditional Native American products still used today
- 4.2.3: B-6 - Explain how Native cultures have used available resources to meet their basic needs in different environments
- 4.2.3: D-6 - Compare Native and European approaches to natural resource use in early Minnesota

MN State Standards

- 5.1.1.3: Estimate solutions to arithmetic problems in order to assess the reasonableness of results
- Solve real-world and mathematical problems requiring addition, subtraction, multiplication and division of multi-digit whole numbers
- 6.1.1.3: Understand that percent represents parts out of 100 and ratios to 100
- 6.1.3.5: Estimate solutions to problems with whole numbers, fractions, and decimals and use the estimates to assess the reasonableness of results in the context of the problem
- 7.2.2.2: Solve multi-step problems involving proportional relationships in numerous contexts

Wild Rice

Native Foods #2

Integration: Science

Background Information

The species most commonly harvested as grain is the annual species *Zizania palustris*. Native Americans and others harvest wild rice by canoeing into a stand of plants, and bending the ripe grain heads with wooden sticks called knockers, so as to thresh the seeds into the canoe.

The size of the knockers, as well as other details, are prescribed in state and tribal law. By Minnesota statute, knockers must be at most 1 inch in diameter, 30 inches long, and one pound in weight. The plants are not beaten with the knockers but require only a gentle brushing to dislodge the mature grain. The Ojibwe people call this plant *manoomin*, meaning "harvesting berry" but common-

ly explained to mean "good berry". Some seeds fall to the muddy bottom and germinate later in the year.

Several Native American cultures, such as the Ojibwe, consider wild rice to be a sacred component in their culture. The rice is harvested with a canoe: one person "knocks" rice into the canoe with two small poles (called "knockers" or "flails") while the other paddles slowly or uses a push pole. For these groups, this harvest is an important cultural (and often economic) event. Named by the Ojibwe, the neighboring *Omanoominii* (the Menominee tribe, whose endonym is *Mamaceqtaw*, "the people") is named after this plant. Many places in Illinois,



Indiana, Manitoba, Michigan, Minnesota, Ontario, Saskatchewan and Wisconsin are named after this plant, including Mahanomen, Minnesota, Menomonia, Wisconsin and many lakes and streams bearing the name "Rice", "Wildrice", "Wild Rice" or "Zizania".

Lesson

Answer the following questions: Minnesota ranks 2nd nationally in production of wild rice; during 1994–1998, Minnesota contributed an average of 44% to the total U.S. production. California accounts for nearly all of the remaining national production **WHICH IS HOW MUCH?** (66% or 8.25 million processed pounds). During 1994–1998, Minnesota growers harvested an average of 5.5 million processed pounds of wild rice from an average of 18,715 acres annually; this

represents an average of **HOW MUCH PER ACRE?** (approximately 294 processed pounds per acre per year). **IF CALIFORNIA HAS THE SAME YIELD PER ACRE AS MINNESOTA, HOW MANY ACRES OF LAND DOES WILD RICE GROW ON IN CALIFORNIA?** (approximately 28,073 acres). Virtually all wild rice grown in Minnesota is grown for processing; only 1-2% of wild rice produced is used for seed. **HOW MUCH**

SEED IS ONE TO TWO PERCENT OF MINNESOTA'S TOTAL? (55,000 to 110,000 pounds). **IF WILD RICE SELLS FOR AN AVERAGE OF \$7 PER POUND, WHAT ARE THE GROSS EARNINGS OF EACH CROP?** (Minnesota's crop grosses \$38.5 million and California grosses \$57.75 million).

Materials:

- Paper and writing utensils
- Calculator for each student (optional)

Vocabulary:

Diameter

Flails

Germinate

Gross (earnings)

Knockers

Manoomin

Menominee

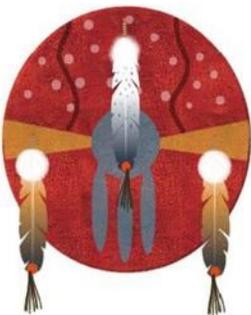
Net (earnings)

Species

Statue

Thresh

Zizania palustris



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Discussion Questions

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| <ol style="list-style-type: none">1. What is the difference between gross and net earnings?2. What other crops might Minnesota be known for?3. Do you think the amount of wild rice grown in Minnesota has increased or decreased since the 1990s? Explain your reasoning. | <ol style="list-style-type: none">4. How could we find out where most of the wild rice is grown in Minnesota? Who could we ask?5. What might be some risks to wild rice production?6. Does anyone in your family still harvest wild rice?7. Do you remember a time when it was a | <p>poor year for rice?
What happened during that year?</p> |
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Evaluation

Students can successfully complete multi-step problems

Students should begin to understand net versus gross earnings

Students will understand that wild rice is an important resource for Minnesotans

Enrichment Activities

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| <ol style="list-style-type: none">1. Map out Minnesota place names that refer to wild rice.2. The University of Minnesota is conducting research on wild rice (see attached). Discuss the pros and cons of this research. How might this research impact traditional ways?3. Cook a wild rice dish. (See attached for recipes). | <p><u>Friday Field Trip Ideas:</u></p> <ul style="list-style-type: none">• If possible, drive out of the Twin Cities to a more northern lake where wild rice grows.• Invite a University of Minnesota researcher in to discuss how they are working with wild rice.• Tour the University of Minnesota's wild rice research area.• Invite a traditional wild rice harvester into class to discuss the collection process. | |
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