

Maple Syruping



Audubon Center
of the North Woods

Purpose: The sap flows in the sugar maples from mid-March through mid-April. During this time, students can go to the sugar bush (maple woods) and learn about the natural and cultural history of making maple syrup. Students will identify and tap a maple tree, hang the bucket, collect sap, see how the sap is cooked in to maple syrup and taste some fresh maple syrup.

OBJECTIVES:

- Student will identify maple trees in the sugar bush.
- Students will name four types of maple trees used to make maple syrup.
- Students will describe the step by step process for making maple syrup.

GOALS:

- Students will understand that all trees are living organisms.
- Students will understand and appreciate the aesthetic as well as economic value of trees.
- Students will understand that maple syrup and sugar come from maple tree sap.
- Students will understand and experience the process of making maple syrup.

Minnesota Academic Standards:

STANDARDS:

Science:

- 4.2.1.2.2 Describe how the states of matter change as a result of heating and cooling.
- 6.2.1.2.2 Describe how mass is conserved during a physical change in a closed system.
- 7.4.2.2.1 Recognize that producers use the energy from sunlight to make sugars from carbon dioxide and water through a process called photosynthesis. This food can be used immediately, stored for later use, or used by other organisms.
- 8.2.1.2.1 Identify evidence of chemical changes, including color change, generation of a gas, solid formation and temperature change.
- 8.2.1.2.2 Distinguish between chemical and physical changes in matter.

Social Studies Standards:

I. U.S. HISTORY

A. Pre-history through 1607: The student will understand that large and diverse American Indian nations were the original inhabitants of North America.

II. MINNESOTA HISTORY

C. Early Settlement and Statehood 1810-1860: The student will know and understand the factors that led to rapid settlement of Minnesota in the 19th century and the changes the new Minnesotans brought with them.

V. GEOGRAPHY

A. Concepts of Location: The student will identify and locate major physical and cultural features that played an important role in the history of the United States.

REVISOR: JAIME SOUZA, 2008

CLASS LENGTH: 3 HOURS

AGES: K-6

SEASON: SP

GROUP SIZE: 10-15

SAFETY: The beginning of the syrup season, there may be snow on the ground so using snowshoes may be necessary. Some arm strength is necessary for drilling the holes in the trees during the tree tapping section, and for carrying pails of maple sap during the sap collection section of the lesson.

MATERIALS:

CLASS PREP: Set-up pictures and diagrams, write outline for class on white board, walk beaver trail, and gather props for class

CLASS OUTLINE

I. Pre-lesson preparation (15 min.)

II. Introduction (15 min.)

- A. The story of *Manabozho and the Maple Trees* from *Keepers of the Earth* (see appendix).
- B. Introductions
- C. Behavior guidelines.
- D. Lesson preview
- E. Assess learner levels

III. Class Experiences

- A. Tree Identification for Maples
- B. Geographic range of maple syruping
- C. Weather conditions needed for maple syruping
- D. Syrup Taste Test
- E. History of maple Syruping
- F. In the Woods
 - 1. Identify maples
 - 2. Tap a few maple trees
 - 3. Collect sap
 - 4. Learn about processing sap in to

syrup

IV. Optional activities (20 min.):

- A. Maple woods production plot survey

V. Conclusion (10 min.)

- A. Review
- B. Journal suggestions
- C. Answer questions and give positive feedback about session

VI. Cleanup (10min.)

VII. Adaptations for younger and older students

Younger – maple song
Older – maple woods production plot survey

VIII. Facts and Info

VIII. Appendix

- A. Equipment/Materials
- B. References.
- C. Activities
- D. Student sheets