



Maple Syrup Science

Grades: PreK - 2nd

Standards

Michigan K-12 Standards in Science

Next Generation Science Standards

STEM Connection

Students will learn about complex environmental and biological factors that are involved in maple syrup production. Maple syruping is a STEM rich activity.

Take Home

Activity worksheets are available via email upon request.

Overview

Students will experience the exciting process of making maple syrup from tree sap. This naturalist-guided program will include an introduction to the techniques used to identify the proper trees for tapping, a walk to the “sugar bush” to see tapped trees and sap collection buckets, and a discussion of the sap collection process. The program will conclude by gathering as a group around the outdoor sap stove for a demonstration of how maple syrup is made. All participants will be offered a taste sample of syrup produced on site! During this program we will cover plant physiology, historical aspects, and the regional occurrence of maple syrup production.

Details

- This program lasts 1½ hour and can be adapted to suit your needs
- Offered from late-February through late-March depending on seasonal variability
- Appropriate for Grade Levels PreK-2nd

The Experience

In this program students will be engaged in a multifaceted program experience with activities that may include:

- Exploring a forest habitat where we tap maple trees to make maple syrup
- Learning and using techniques of tree identification
- Seeing sap from local trees being boiled down into maple syrup in an outdoor sap evaporator

Helpful Hints

This program will be held in the great outdoors. Please make sure students are dressed for the weather and potentially slippery, icy, snowy, and/or muddy conditions.

Standards

PreK

No standards set

Kindergarten

K-ESS2-1

Use and share observations of local weather conditions to describe weather patterns over time

- Students will learn why we tap trees at a very specific time of the year, correlating it to the seasonal changes around them.

1st Grade

1-ESSE1-2

Make observations at different times of year to relate the amount of daylight to the time of year.

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- Students will be prompted to discuss how the seasonal transition from winter to spring correlates with maple sap flow and maple tree tapping.

2nd Grade

2-LS4-1

Make observations of plants and animals to compare the diversity of life in different habitats.**

- Students will learn to distinguish sugar maple trees from other tree species based upon characteristics of bud, bark, and branch.

2-ESS2-3

Obtain information to identify where water is found on Earth and that it can be solid or liquid. **

- Students will use their knowledge about snow and water to learn about evaporation at the sap stove and about water to sugar ratios in tree sap.

* - Integrates traditional science content with engineering.

** - Allow for local, regional, or Michigan specific contexts or examples in teaching and assessment.