



TAPPING INTO MAPLE TRADITION

Lesson Title: Find The Sugar Maple (Maple Tree ID)

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Grade Level:

- Early Elementary (K – 2nd)
- Upper Elementary (3rd – 5th)
- Middle School (6th – 8th)
- High School (9th – 12th)

What National Agriculture Literacy Outcomes does your lesson address?

<http://www.agclassroom.org/get/doc/NALObooklet.pdf>

T1.3-5e

T5.K-2d

What Common Core Standards does your lesson address?

CCSS.ELA-LITERACY.W.K.2

CCSS.ELA-LITERACY.W.1.2

CCSS.ELA-LITERACY.W.2.2

CCSS.ELA-LITERACY.W.3.2

CCSS.ELA-LITERACY.W.4.2

CCSS.ELA-LITERACY.W.5.2

Brief description of your lesson plan:

In this activity, students will learn about how to identify the different kinds of maple trees native to New Hampshire. Then they will make a flipbook with pictures or photos of the different trees and explain their own tips for identifying trees.

Time: One to two hours

Materials:

- Colored Pencils/Markers/Crayons
- Notebook Paper
- Pictures or Samples of maple tree branches, leaves, and bark.

Vocabulary:

Branch: a division or subdivision of the stem or axis of a tree, shrub, or other plant

Background:

Identifying maple trees is easier than it appears at first, even without the classic maple leaf. Your first step in identifying the tree is looking at the branches. In general trees have three types of leaf attachments,



alternating, opposite, or whorled depending on the placement of the leaves on the branches of the tree. Maples are one of only a handful of trees that have opposite leaf attachments, as can be seen in the picture (Credit: Becca MacDonald, Sault College, Bugwood.org). However that only narrows it down so far and doesn't help us to determine what kind of maple we are looking at.

The next step is to look at the leaves, if there are any. If the leaves are small with rough saw-like edges, you are most likely looking at a red maple. If the leaf has a fuzzy and soft underside, then it is most likely a silver maple. If the leaf has few saw-like edges and a rounded shape between the lobes, it is likely a sugar maple or a Norway maple. To determine whether it is a sugar or Norway maple, break the leaf in two. If the leaf oozes a white sap it is a Norway maple, if not it is sugar maple. Note: Norway maple are considered an invasive species and are prohibited in New Hampshire.

If it is the winter and there are no leaves you can look at the bark for another identification feature. The sugar maple has dark grayish-brown bark with wide, vertical strips that curl outward at the edges. Red maple's bark is normally dark brown, whereas Norway maple bark is more grayish. Silver maple bark is scaly, gray, and flaky.

(Process and information adapted)¹

Interest Approach – Engagement:

Discuss with students how they identify other items in their life, what tools do they use?

Procedures:

Show students the examples of the different kinds of maples trees. Ask them why it would be useful for farmers to be able to tell the difference if they want to make maple syrup.

1. Set up stations with the different pictures or specimens. One per group.
2. Break the class into different groups and put each group at a maple station.
3. Give students five to ten minutes to draw and/or write their observations of each specie. What does the leaf look like? What does the bark look like? What does the bark feel like? What does the branch look like?
4. Repeat until students have seen all the trees.
5. Have students share what they have learned with the class. How were the methods students devised the same or different? What can you come up with for general rules of identification for each type of tree.
6. Take the students out into the school yard and see if you have any maple trees. Encourage students to use their flipbooks and their five senses to help identify trees.

Did you know? (Ag Facts):

The maple leaf on the Canadian flag is a generic maple leaf, intended to represent all the maples that grow in Canada.²

Enriching Activities:

Have students research how to identify other plants or tree families. How is it the same or different than analyzing maple trees?

Sources/Credits:

1. Arbor Day Foundation Tree ID <https://www.arborday.org/trees/whattree>
2. https://en.wikipedia.org/wiki/Maple_leaf
- 3.