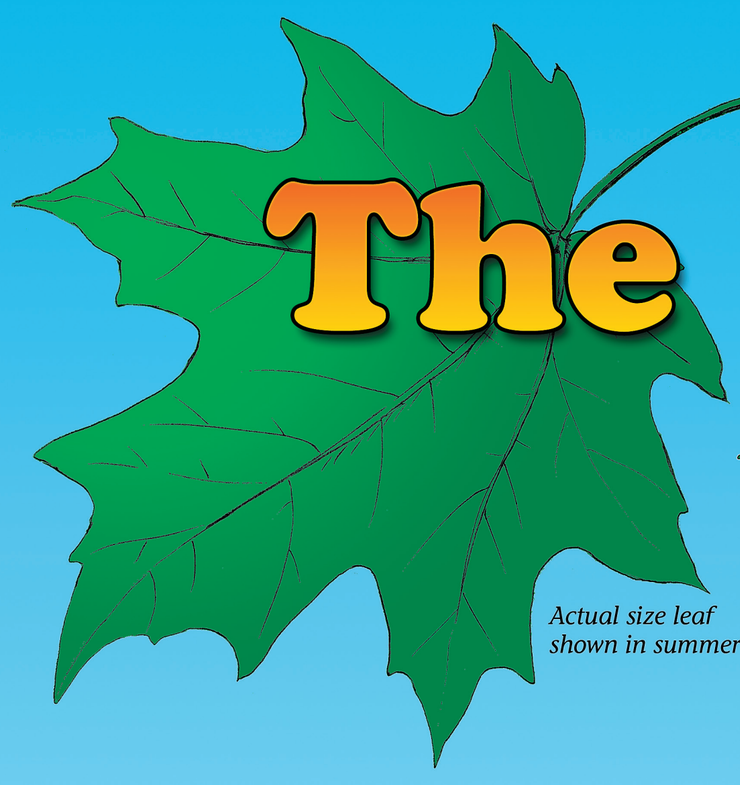
State Tree of Wisconsin

The Sugar Maple

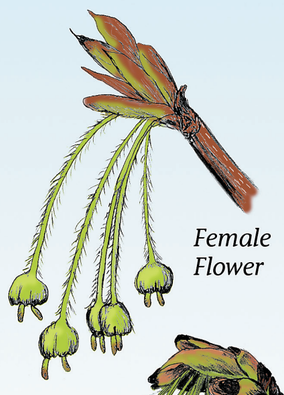
Acer saccharum



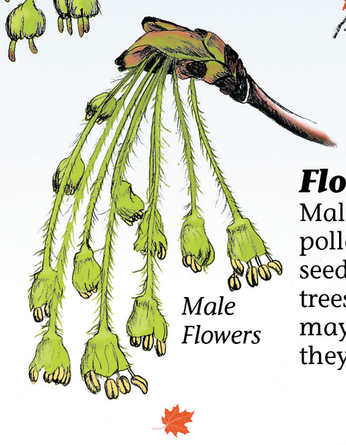
Actual size leaf shown in summer

Seedling

Seed (Fruit)
The winged seed, or fruit, is called a *samara*. It spins and floats to the ground and grows into a new tree.



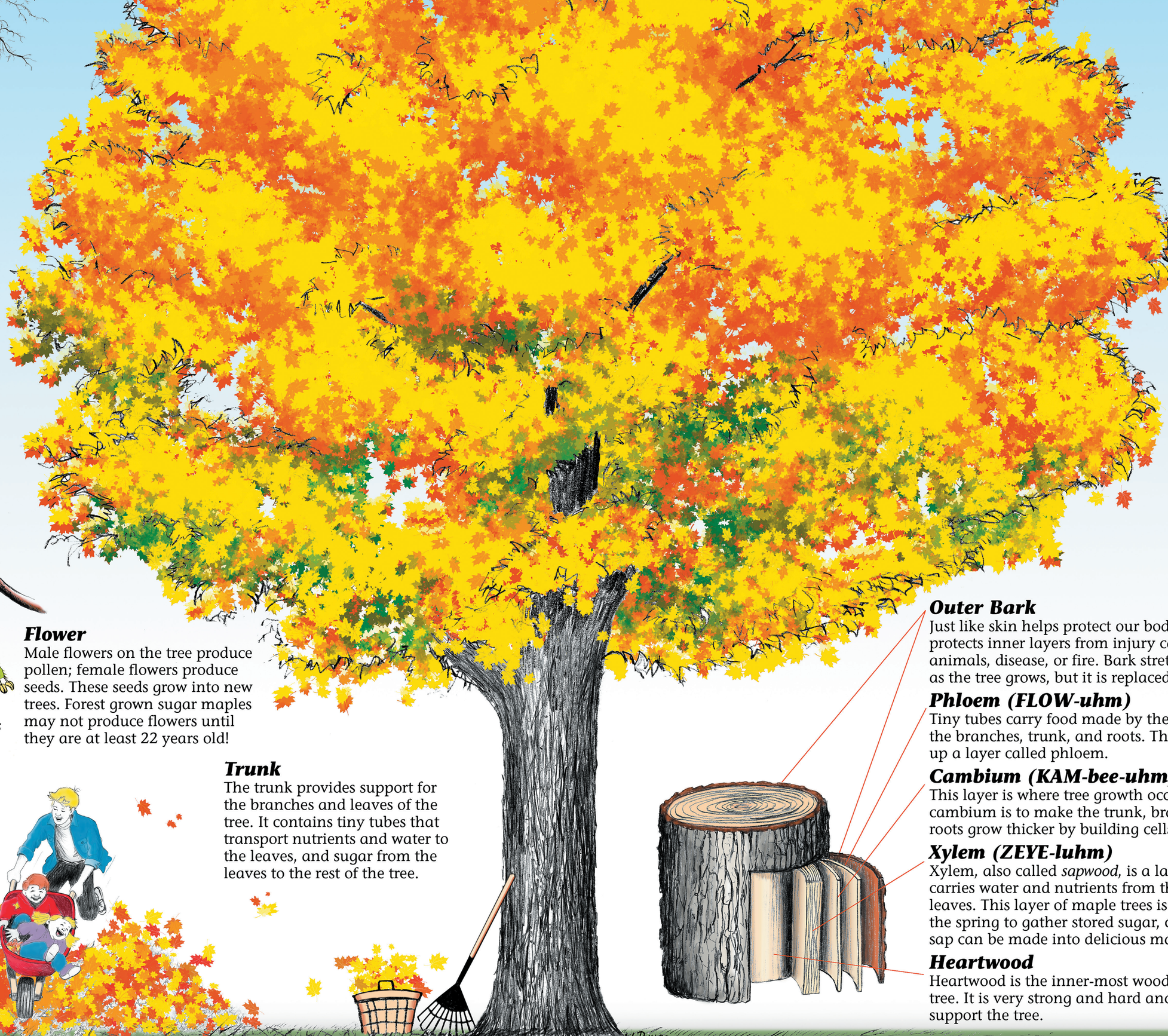
Female Flower



Male Flowers

Flower
Male flowers on the tree produce pollen; female flowers produce seeds. These seeds grow into new trees. Forest grown sugar maples may not produce flowers until they are at least 22 years old!

Crown/Leaves
The crown is the top branches and leaves of the tree. Using energy from the sun, leaves act like tiny factories that make food with water absorbed by the roots and carbon dioxide gathered from the air. This food is used by the branches, trunk, and roots to grow and stay strong. The process of making food is called *photosynthesis*.



Leaves in Fall

Trunk
The trunk provides support for the branches and leaves of the tree. It contains tiny tubes that transport nutrients and water to the leaves, and sugar from the leaves to the rest of the tree.

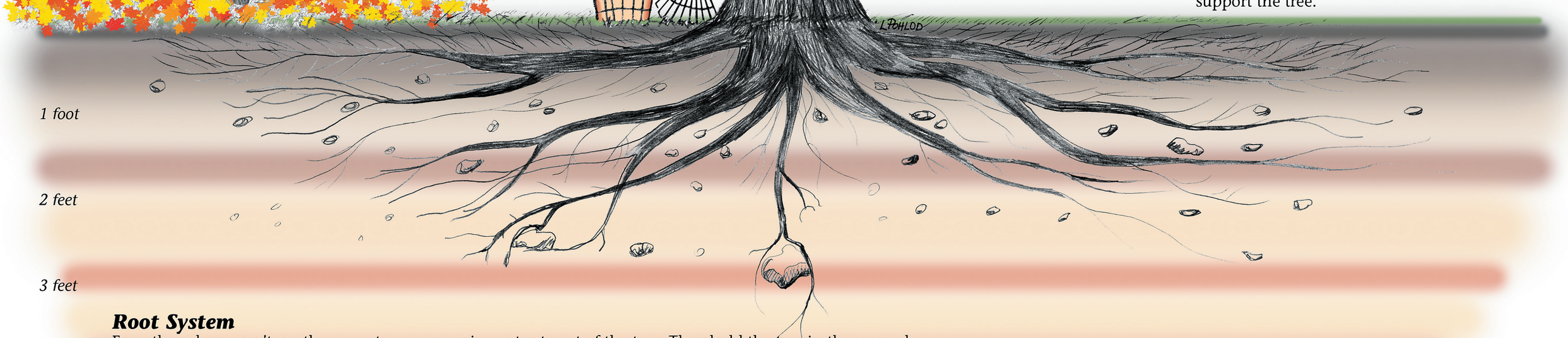
Outer Bark
Just like skin helps protect our bodies, tree bark protects inner layers from injury caused by animals, disease, or fire. Bark stretches and cracks as the tree grows, but it is replaced by new layers.

Phloem (FLOW-uhm)
Tiny tubes carry food made by the leaves down to the branches, trunk, and roots. These tubes make up a layer called phloem.

Cambium (KAM-bee-uhm)
This layer is where tree growth occurs. The job of cambium is to make the trunk, branches, and roots grow thicker by building cells and tissues.

Xylem (ZEYE-luhm)
Xylem, also called *sapwood*, is a layer of tubes that carries water and nutrients from the roots up to the leaves. This layer of maple trees is often tapped in the spring to gather stored sugar, called *sap*. The sap can be made into delicious maple syrup.

Heartwood
Heartwood is the inner-most woody core of the tree. It is very strong and hard and helps to support the tree.



1 foot

2 feet

3 feet

4 feet

Root System
Even though we can't see them, roots are a very important part of the tree. They hold the tree in the ground and help to keep it upright. Roots aid the tree in making food by absorbing water and nutrients from the soil. They also store food for the tree to use during winter months or in times of stress, such as a drought.

WISCONSIN DEPT. OF NATURAL RESOURCES

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Growing Together

A State of Symbols

On May 29, 1848 Wisconsin became recognized as the 30th state in the United States of America. Over the years State Legislature has selected a variety of symbols to represent the history and diversity of Wisconsin.

Year	Symbol
1949	Wisconsin Legislature designates the sugar maple as the state tree, the wood violet as the state flower, and the American robin as the state bird. (Schoolchildren had unofficially voted for the violet on Arbor Day 1909, the robin in 1926-27, and the sugar maple in 1948.)
1955	Muskellunge (Musky) is declared the state fish in a unanimous vote by Legislature.
1957	Two bills are passed to make the white-tailed deer the state wildlife animal and the badger the state animal. Wisconsin had been called "the badger state" since the lead mining boom in the 1830's. Instead of building homes, miners chose to live in mine shafts and underground burrows, much like badgers.
1959	Legislature designates On Wisconsin as the official state song. It was written in 1909.
1971	Organizations concerned with conservation and wildlife select the mourning dove to be the state symbol of peace. The dairy cow becomes the state domestic animal. The Secretary of the Department of Agriculture is asked to create an annual rotation among Wisconsin's purebred dairy cows to be announced on June 1st of each year. Galena is selected as the state mineral and red granite becomes the state rock. Both are chosen for their historical significance, abundance and economic value.
1977	The honeybee is chosen as the state insect by a third grade class in Marinette and the Wisconsin Honey Producers Association.
1983	Antigo silt loam is selected to be the state soil because of its productivity and glacial origins.
1985	The trilobite is designated as the state fossil to symbolize Wisconsin's unique geological heritage. The American water spaniel is officially named the state dog as the result of a New London eighth grade class project. The water spaniel is the only dog breed native to Wisconsin.
1987	Milk is chosen as the state drink to recognize its contribution to Wisconsin's economy.
1989	Corn becomes Wisconsin's state grain to recognize its many uses.
1993	Wisconsin Act 411 designates the polka as Wisconsin's state dance, reflecting the state's rich Czech-Polish and German heritage.

Learn more about Wisconsin's State Symbols by visiting the children's website EEK! – Environmental Education for Kids: https://www.eekwi.org/wisconsin-state-symbol

L.PEHLOD

State Tree of Wisconsin

The Sugar Maple

Acer saccharum

Large parts of Wisconsin are covered by dense forests made up of hardwood trees such as ash, maple, elm and oak, and softwood trees such as balsam fir, pine, spruce and hemlock. Within this treasured forest landscape, our state tree, the sugar maple (Acer saccharum) grows. It has long been admired by our state and was unofficially selected for State Tree status in 1893 by a vote of Wisconsin's schoolchildren. Although the sugar maple received the most votes, it was followed closely by oak, pine and elm.

During our state's centennial year, 1948, another vote was conducted among school children by the Youth Centennial Committee. In that election, the sugar maple once again received the most votes, followed by white pine and birch. The Legislature, in spite of efforts by white pine advocates, named the sugar maple the official State Tree in 1949 when they created a new statute to designate Wisconsin's official state symbols. Besides the sugar maple, the wood violet was named the State Flower and the American robin was named the State Bird during this centennial session.

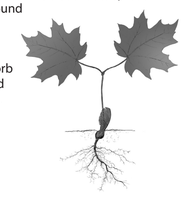
Sugar maples are known and loved for producing the best sap for making maple syrup. Genuine maple syrup is made by nature, from the sap of maple trees harvested in the late winter and early spring. Although many of us view the robin as the first sign of spring, Native Americans knew that it came much earlier, when sap flowed through maple tree trunks, awakening a season's growth. Today sap is collected and boiled or evaporated to make maple syrup. An average maple will produce about 20 gallons of sap in the spring, which amounts to about a ½ gallon of syrup.

The maple tree is important to people in many other ways. Its shade and brilliant fall colors make it a popular landscape tree for yards and parks. It also makes wonderful firewood – it splits easily, gives off a tremendous amount of heat and produces few sparks. Sugar maple wood is light brown, hard and strong, making it ideal for furniture, musical instruments, flooring, bowling pins, and even baseball bats. In fact, over one-half of Major League Baseball players choose to use bats made from maple wood!

The sugar maple is found throughout Wisconsin, making it a very important tree for our state's wildlife. Deer and snowshoe hare commonly browse, or feed, on sugar maple bark and twigs. Red, gray and flying squirrels feed on the seeds, buds, twigs and leaves or make their nests among the tree's branches. Porcupines may be seen chewing on bark or taking a midday nap high in the maple's crown. Sapsuckers frequently peck at the trunk and drink the maple tree's sweet, flowing sap.

Unfortunately, too much feeding can damage and weaken the tree, making it more sensitive to disease, drought or harmful insects. Girdling, which is an injury to the bark of trees, may destroy the trunk's vital layers. Girdling may be caused by animals, but it also occurs as a result of damage caused by lawnmowers, weed trimmers, and people carving or removing tree bark.

Sugar maple trees can grow to a height of 80 to 100 feet or more and have a diameter of two to three feet. The crown of the tree often forms an oval shape. Sugar maple leaves are three to five inches long and have five lobes. In autumn these deep green leaves turn brilliant shades of yellow, orange, and red. The fruit or seed is a pair of fused samaras, about one inch long, that mature in the fall. On young trees, bark is usually light gray to brown and fairly smooth. As trees grow older, the bark changes to dark gray and develops long, irregular scales that often loosen on the sides. The tree's roots spread and branch underground and cover a broad area. On the end of larger roots are tiny root hairs which absorb most of the water and nutrients for the tree.



Incorporate Wisconsin's Natural Resources into Your Classroom

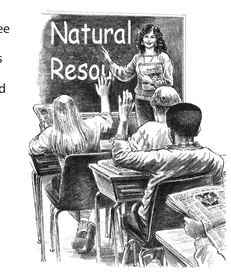
LEAF

Eager to teach your students the critical thinking skills they need using a topic that relates to the world right outside their door? If you are interested in helping K-12 students understand the incredible value of Wisconsin's forests – both urban and rural – LEAF is for you.

LEAF is Wisconsin's K-12 forestry education program. It offers teachers exceptional educational materials, professional development opportunities, and curriculum support. The LEAF website includes our popular on-line tree identification key. Also, you can access LEAF's Wisconsin K-12 Forestry Lesson guide, K-12 Urban Forest Lesson Guide, and K-12 Wildland Fire Lesson Guide. In addition, you'll find a host of forestry-related materials and links. Check out LEAF's list of local field experience providers waiting to help you with your next field trip.

Want to know how to grow your own school forest? LEAF can help with that too! Our Forestry and Outdoor Education Specialist is ready to assist you. Check it out at www.leafprogram.org for more information.

Project Learning Tree (PLT) uses the forest as a "window" on the world to increase students' understanding of our environment; stimulate students' critical thinking; develop students' ability to make informed decisions on environmental issues; and instill in students the commitment to take responsible action on behalf of the environment.



PLT Wisconsin

This award-winning environmental education activity guide (PreK-8) offers 96 activities covering the themes of Diversity, Interrelationships, Systems, Structure and Scale, and Patterns of Change. The guide underscores PLT's primary goal: to help children learn how to think, not what to think.

Highlights of the PLT activity guide include:

- Activities centered around the topics of forestry, land, air and water
- Lessons focused at a local, national and global scope
- Indoor and outdoor activities
- Complete teaching activities and resource materials to share with your students
- Correlations to Wisconsin's Model Academic Standards

PLT offers professional development training to educators across Wisconsin. Look for upcoming workshops at: https://www.plt.org/network/wisconsin