ALDO LEOPOLD NATURE CENTER
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Aldo Leopold Nature Center
Tree Identification Guide

Use this guide to identify and measure trees found at the Aldo Leopold Nature Center

White Pine: This tree can grow up to 150 feet tall. The bark on young trees is smooth with a greenish-gray color, and thicker with a grayish brown color on older trees. White pines are used for many purposes including matches, lumber, and construction.

Basswood: This tree grows from 60-100 feet tall and has a trunk diameter between 1 and 3 feet. The bark is gray with vertical ridges. Basswood trees are used to make paper pulp.

Red Maple: This tree grows from 40-65 feet tall with a trunk of about 1-2 feet in diameter. The bark is rough and shaggy with a dark gray color. The red maple leaves are easy to identify in the fall foliage.

Tamarack: This tree grows 30-60 feet tall with a trunk 1-1.5 feet in diameter. The bark is rough and reddish brown. During fall, the Tamarack is the only Wisconsin conifer to lose its leaves.

Sugar Maple: This tree can grow from 80-100 feet tall with a trunk 2-3 feet in diameter. The bark is smooth and light brown on younger trees and gray to black on older trees. When temperatures are below freezing, the sap flows from the Sugar Maple.

River Birch: This tree grows from 40-60 feet tall with a trunk diameter of 1-2 feet. The bark is shaggy and curly in a reddish brown color that becomes darker with age. River birch trees grow close to streams and rivers.

Weeping Willow: The weeping willow is an exotic species. The bark is rough and thick, and a dark grayish brown in color. The leaves are thin and green, but pale on the underside. The overall appearance of this tree is droopy.

Black Oak: This tree can grow from 40 to 60 feet tall. The bark is smooth and gray when young, and becomes darker, almost black, with reddish cracks. The leaves have sharp tips, and contain u-shaped indents to separate the 5-7 lobes. The tree produces acorns, which are green first, then become brown when mature.

Shagbark Hickory: This tree grows from 60-100 feet tall and 1-2 feet in diameter. The bark is very shaggy with a light gray color, and is only slightly attached to the trunk. The nut from the shagbark hickory is an important food source for animals.

Paper Birch: This tree grows to a height of 65-70 feet with a trunk diameter of 1-2 feet. On younger trees, the bark is reddish brown in color, thin and smooth. On older trees, the bark is white and can easily peel off the trunk. Paper birch trees are used for many purposes, and are easily identified by their bark.

Estimating tree height:

Proportional Method:

1) One partner stands at base of tree; other partner holds 30 cm ruler up vertically at arm's length, so ruler is parallel to tree
2) Ruler partner backs away until top of ruler lines up with top of tree, and bottom of ruler lines up with base of tree in line of sight
3) Ruler partner records how "tall" partner is (in cm) in line of sight
4) Divide cm height of partner into 30; this is equal to how many times partner could "fit" into the tree

EXAMPLE: if partner was 2 cm tall on ruler, 30/2 = 15 partners could "fit" into the tree

5) Measure height of partner in cm, then convert to meters (100 cm = 1 m)

EXAMPLE: if partner is 48" (4 ft), 48 x 2.5 = 120 cm, or 1.2 m tall.

6) Multiply height in meters by number of times partner "fit" into tree.

EXAMPLE 1.2 m x 15 times = 18 m

7) **Challenge**: convert m height into feet height (1 m = 3.3 ft.)

Ruler Method:

1) One partner holds 30 cm ruler up vertically at arm's length, so ruler is parallel to tree; other partner stands at base of tree
2) Ruler partner backs away until top of ruler lines up with top of tree and bottom of ruler lines up with base of tree in line of sight
3) Ruler partner tips ruler horizontally, still at arm's length, so the bottom of the ruler is still lined up with the base of the tree
4) Tree partner walks away from tree, parallel in the line of sight to the horizontally tipped ruler, until s/he reaches the end of the ruler
5) Tree partner freezes; ruler partner measures distance from base of tree to partner. This distance is equal to the height of the tree.

Estimating the age of a tree:

The most accurate way to determine a tree's age is to cut it down and count the rings inside, or to bore a hole into the trunk. But to estimate a tree's age without damaging it:

1) Find a spot on the trunk 54 inches above the ground.
2) Use a piece of string to measure the circumference around the outside. Use a ruler to measure the string in inches.
3) Calculate the *diameter* by dividing the circumference by 3.14 (or π pi).
4) Finally, calculate the age by multiplying the diameter in inches by the *species factor* listed below:

White Oak	5	Silver Maple	3
Red Oak	4	Red Maple	4.5
Pin Oak	3	Sugar Maple	5.5
Hickory	7.5	White Ash	5
Black Cherry	5	White Pine	5
Walnut	4.5	Red Pine	5.5