

## Tree Identification Activity – Answer Sheet

All trees planted are either deciduous or coniferous trees. Deciduous trees lose their leaves all at once usually in autumn. Coniferous trees produce cones and lose leaves all year long while looking green. In the table below, identify whether the species is deciduous or coniferous. Use Treepedia to help you (<http://www.acer-acre.ca/treepedia>).

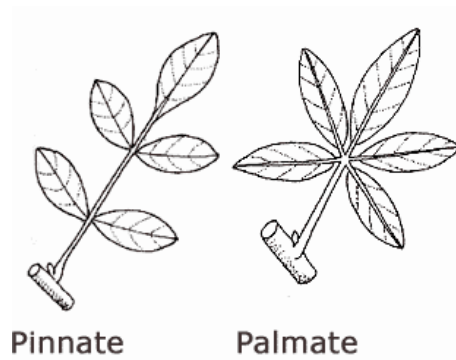
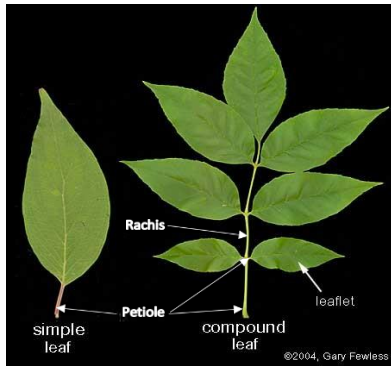
ACER's Planting for Change program involves five indicator species and a commemorative Red Maple. White Spruce represents the northern tree range, while Hop Tree represents the most southern range in Ontario. Sugar Maple, Basswood, and Bur Oak are representatives of deciduous species in temperate Ontario.

Species	Deciduous or Coniferous
White Spruce	Coniferous
Sugar Maple	Deciduous
Hop Tree	Deciduous
Basswood	Deciduous
Bur Oak	Deciduous
Red Maple	Deciduous

Coniferous trees with needles can have single needles or bundles attached to a twig.



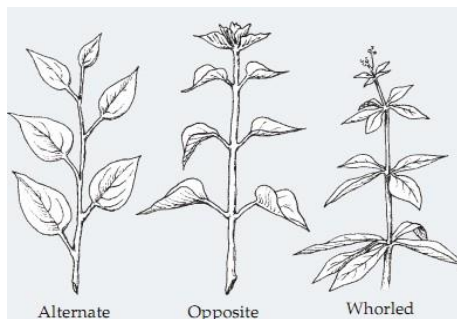
Deciduous trees have simple or compound leaves. A simple leaf is a single leaf attached by one tiny leaf stem or petiole. A compound leaf has leaflets. Pinnately compound leaflets have a separate stalk attached to the stem. Palmately compound plants have three or more leaves attached to the stem at the same point.



In the table below identify whether the leaves of each species is simple or compound. If it is compound, specify whether it is pinnate or palmate. Use Treepedia for help.

Species	Simple or Compound / Single or Bundle
White Spruce	Single Needles
Sugar Maple	Simple
Hop Tree	Pinnately Compound
Basswood	Simple
Bur Oak	Simple
Red Maple	Simple

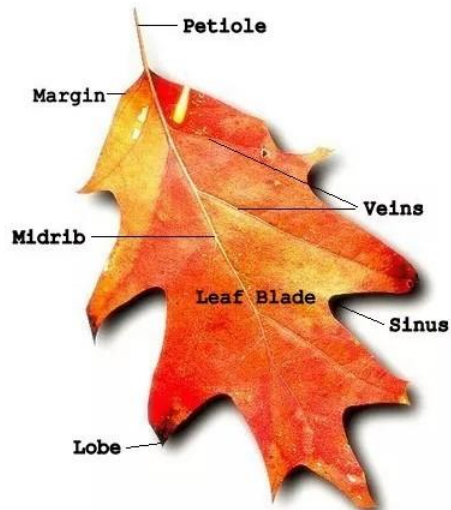
To determine leaf arrangement or how they are attached to the stem. Leaf arrangement can be alternate, opposite, or whorled. Opposite leaves are attached in pairs opposite each other. Alternate leaves are not. Whorled has the three or more leaves attached at the same point, like a circle around the stem. Use Treepedia for help.



In the table below, identify each species leaf arrangement as alternate, opposite or whorled.

Species	Alternate, Opposite or Whorled
Sugar Maple	Opposite
Hop Tree	Alternate
Basswood	Alternate
Bur Oak	Alternate
Red Maple	Opposite

The different parts of a leaf can help you identify trees. Look for dead leaves on the ground under the tree to help you. If there are no leaves, the ACER Trees in Winter (TIW) cards will help you identify trees by bark, twig or silhouette.



**Petiole:** The stalk that attaches a leaf to the stem.

**Margin:** The edge of the leaf.

**Veins:** Tissue that transport water and mineral and offer support to the leaf.

**Midrib:** One large central vein running across the center of the leaf.

**Leaf Blade:** The flat part of the leaf where photosynthesis occurs.

**Lobe:** Sections of the leaf that never reach the midrib.

**Sinus:** The space in between lobes.

**Dichotomous keys** are a method to identify organisms with their most general characteristics. There are always two choices. Hence the name **dichotomous** or **2**.

Each choice your make has more detailed characteristics and eventually leads to a “dead end” with the name of your tree. This method is used to identify all organisms – fossils or living.

Fill in the identification key below. The six species planted in the Planting for Change program are White Spruce, Sugar Maple, Hop Tree, Basswood, Bur Oak, and Red Maple. Use Treepedia for help.

