



The Need for Trees

Trees are an essential part of our environment! They are important to plants, fungi, wildlife, and people and provide countless benefits, like oxygen, shelter, and food. In this adventure, you'll learn to identify six of the most common trees found at the North Carolina Arboretum.

For your safety, stay on the trail and be aware of your surroundings. Poison ivy can climb up the trunks of trees too so if you see a hairy vine, don't hug that tree!

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All trees start out as seeds that will sprout into seedlings.

A sapling is the next stage of a tree's life. Seedlings become saplings when they reach four feet tall.

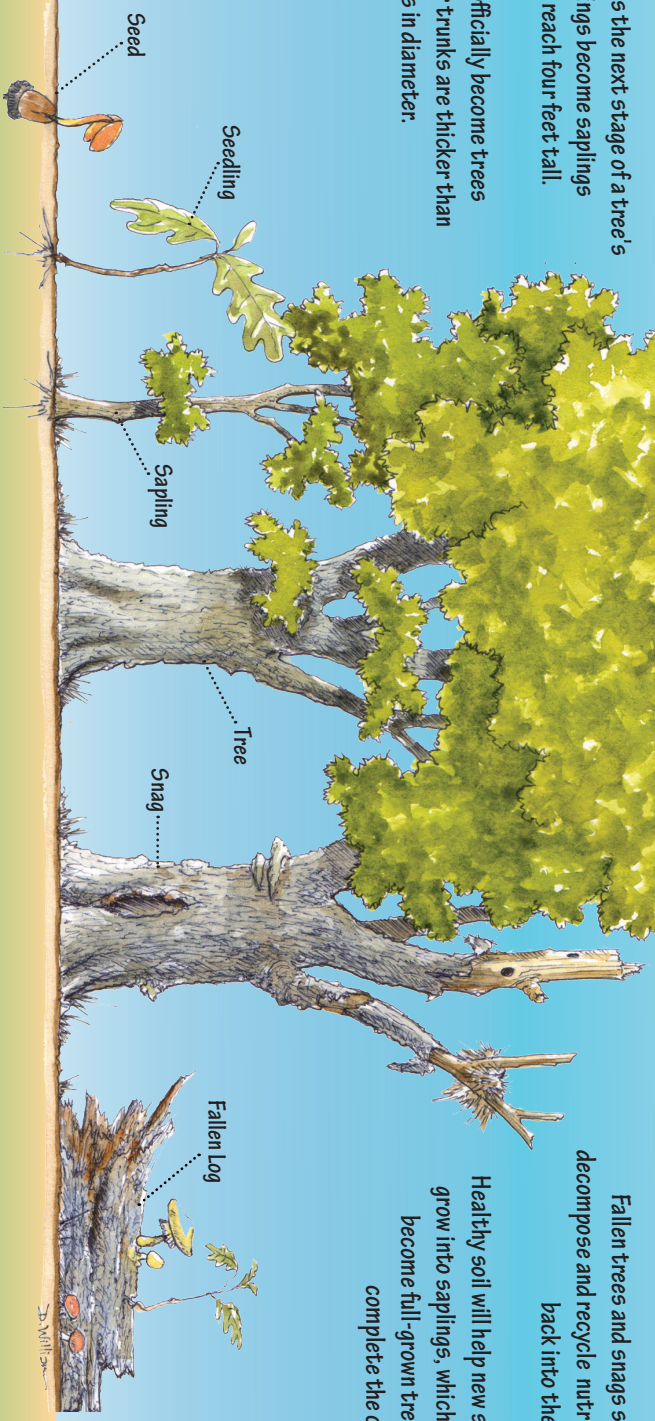
Saplings officially become trees when their trunks are thicker than four inches in diameter.

Tree Life Cycle

When a tree dies, it sometimes becomes a snag, which is a dead tree that hasn't fallen.

Fallen trees and snags slowly decompose and recycle nutrients back into the soil.

Healthy soil will help new seeds grow into saplings, which then become full-grown trees to complete the cycle.



Can you find a... Seed? ___ Seedling? ___ Sapling? ___ Tree? ___ Snag? ___ Fallen Log? ___

● **Tulip Tree** (*Liriodendron tulipifera*)



The tulip tree is easy to find in the woods given its straight, gray trunk that can span over 100 feet and its large, broad leaf that resemble a cat's face. Due to its large size and straight growth, this tree provides a variety of useful lumber. The tulip tree is very important for pollinators, and in the spring, bees collect nectar from the large and plentiful yellow-orange flowers to make a rich, dark honey.

● **Red Maple** (*Acer rubrum*)



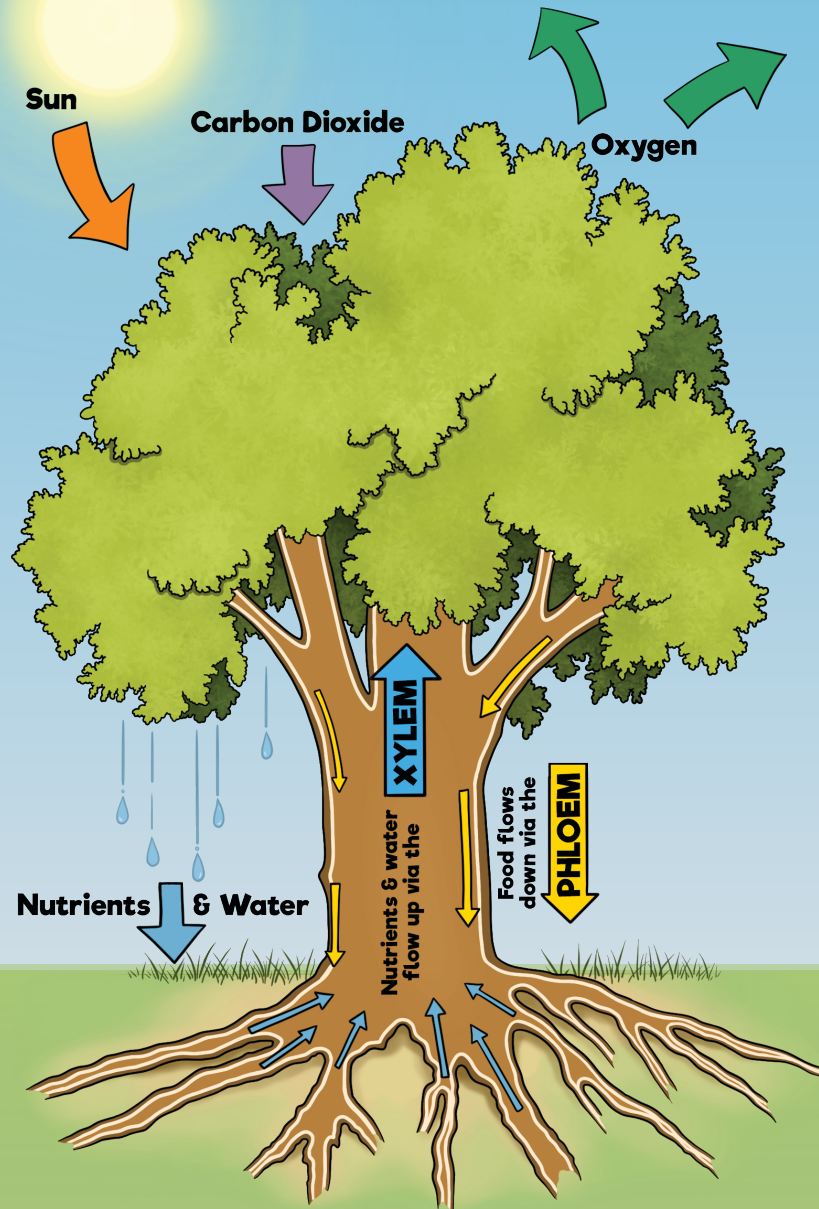
Able to grow in almost any soil condition, the red maple is one of the most abundant and widespread trees in eastern North America. With red twigs, buds, flowers, and seeds, it's easy to see how the red maple got its name. Red maple is favored for its flexible, sturdy, and beautiful wood, and it is often used to make musical instruments, such as guitars, banjos, and drums.

● **White Oak** (*Quercus alba*)



The white oak has leaves with rounded lobes and bark that is light gray and scaly as it ages. The acorns are long with a shallow cup and loved by squirrels, deer, wild turkeys, bears, and other wildlife. Because of its tight, water resistant wood, white oak was valued for shipbuilding and is still used today to make barrels!

The Need to Know How Trees Grow



Most plants make their own food through a process known as **photosynthesis**. This occurs when nutrients and water flow up from the roots via the xylem and combine with carbon dioxide and sunlight absorbed in the leaves. This chemical reaction produces **oxygen**, which is released into the air, and **glucose**, a type of sugar, that is dispersed throughout the rest of the tree via the phloem.

● **Sassafras** (*Sassafras albidum*)



Sassafras is a small tree distinguished by three different leaf shapes (entire, mitten, and three-lobed). Although the soft, brittle wood is of little value commercially, its resistance to rot makes it good for outdoor furniture and fence posts. For generations, people have used the sap and roots to make candies, tea, and root beer! Though not edible to us, the fruits are enjoyed by many birds.

● **Sourwood** (*Oxydendrum arboreum*)



Given its deeply furrowed, chunky bark and the way it grows crooked toward the sun, the sourwood can be easily spotted in the woods! In the spring, small, white flowers hang in clusters from the branch tips, and in the fall, the leaves turn crimson red. Sourwood is an importance source for pollinators, and bees create a tasty, light-colored honey that is prized in the mountains.

● **Eastern White Pine** (*Pinus strobus*)



The eastern white pine has an extremely straight trunk, needles in **fascicles** (bundles) of five, and long skinny cones. White pine is a valuable lumber tree, but the needles are also rich in vitamin C and used to make tisane - a type of herbal tea. Wildlife, like deer, rabbits, and mice, graze on the foliage and seeds.