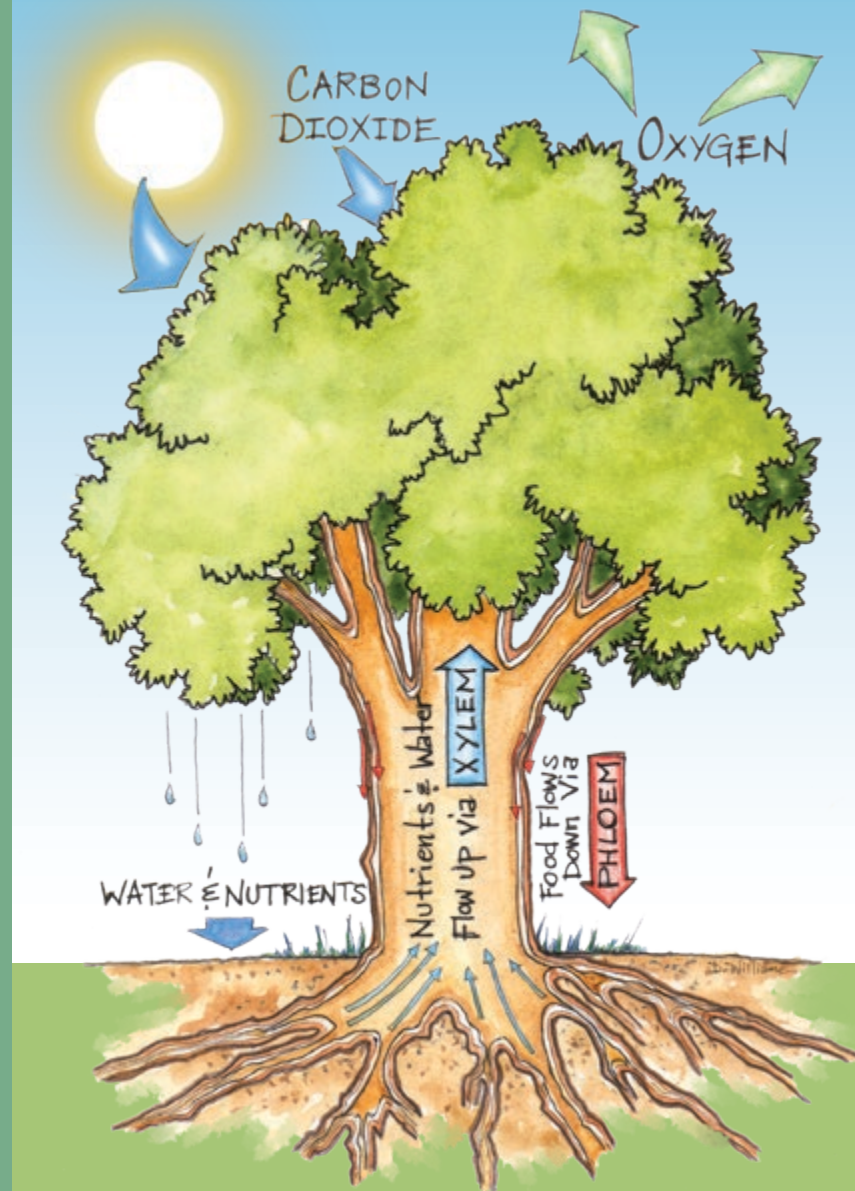


The Need to Know: How Trees Grow



Illustrations by David Williams, Wingin' it Works

Plants and trees have the ability to make their own food in a process known as **photosynthesis**. They do this by sucking water and nutrients from the soil up through their xylem and into their leaves. The water and nutrients are combined with carbon dioxide and sunlight to make a sugary food called **glucose**. This food then travels down through the phloem to the rest of the tree, so it can grow.

● Slash Pine (Pinus elliottii)



The slash pine has 6-12 inch needles that usually grow in bundles of 2. Its bark is loose and flaky with a warm cinnamon color beneath the flakes. Closed cones are long and slender, but are wide ovals when they open. Slash pines grow in areas where many other pines have trouble growing like wet or salty soils. Today, slash pine is used for its strong lumber but its resin was used for turpentine and waterproofing ships through history.

● Longleaf Pine (Pinus palustris)



With needles up to 18 inches long, it's easy to see how the longleaf pine got its name. You can often find the longleaf in its "grass stage", where it appears as a short, clump of needles growing closer to the ground. It has coarse, rectangular bark, and its six to ten inch cones are somewhat cylindrical. The longleaf was once a major source for turpentine and resin, as well as lumber for shipbuilding.

● Loblolly Pine (Pinus taeda)



Loblolly pines have clusters of needles that grow in groups of three. The bark is thick, scaly and grey with layers of brown underneath, and their pinecones are brown and prickly. The loblolly can grow very quickly in either wet or dry soil. Because of how fast it grows, people plant them in huge numbers to later be used for lumber and paper. People also plant them to create shade and to stop erosion.

● Mockernut Hickory (Carya tomentosa)



Hickory trees have **compound leaves** (many leaflets on one stem). The mockernut hickory nut is a rich food source for birds, squirrels, and other wildlife but is rarely eaten by people because the nuts are smaller than other hickory species and it has a bitter flavor. The wood of the mockernut hickory is dense and hard, making it ideal for furniture, tool handle, baseball bats, and anything that needs to resist breaking in tough environments.

● Southern Red Oak (Quercus falcata)



The southern red oak tree has dark brown bark with wide gray ridges. The leaves are shiny green and variable in shape, but usually have long pointed lobes and a distinctive bell shape at the base. The acorns are an important food source for squirrels, deer, turkeys, and many songbirds. Because of its large size and strong wood, southern red oak has long been used by humans for lumber and fuel.

● Turkey Oak (Quercus laevis)



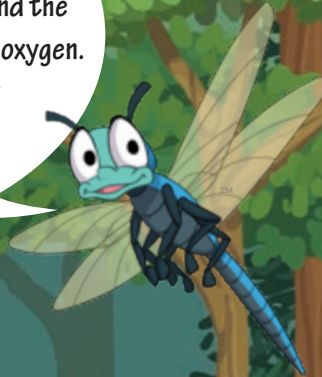
Turkey oak gets its name from the "turkey foot" shaped leaves that hang on its branches. It grows well in sandy soil but is much smaller than many oak species. The irregular furrowed bark, stunted shrubby trunk, and wooly acorns give the tree a very rough appearance. Though people don't use turkey oak very often, the acorns are a fantastic food source for deer, squirrels, bears, and even wild turkey!



The Need for Trees

Trees are very important to people, animals, insects, fungi, and even other trees. This is because trees provide so many things for people and the forest, including shelter, habitat, food and oxygen. This adventure will help you identify six of the most common trees found along this trail

For your safety, stay on the trail and be aware of your surroundings. Poison ivy climbs 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 then 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? ___

