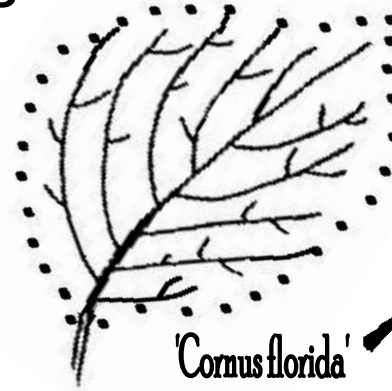


Why do leaves change color in the Fall?



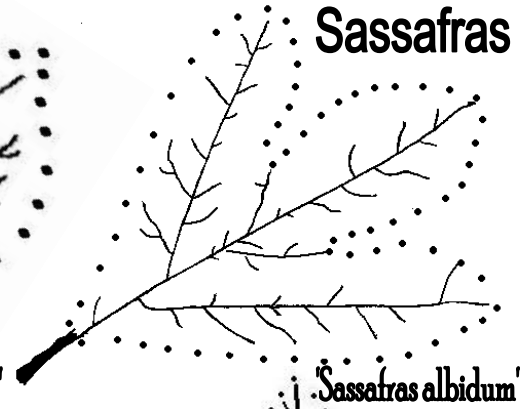
DeSoto State Park

Dogwood



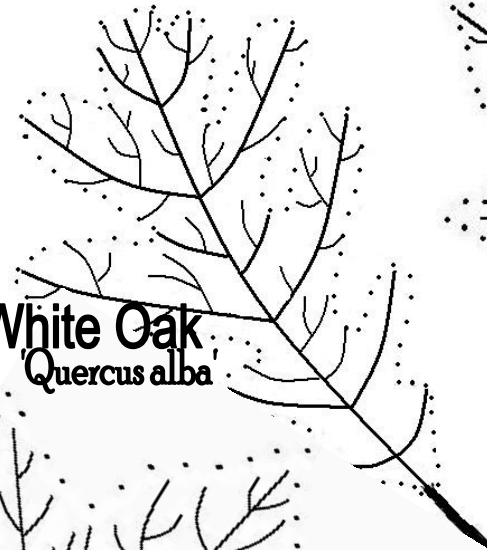
Cornus florida

Sassafras

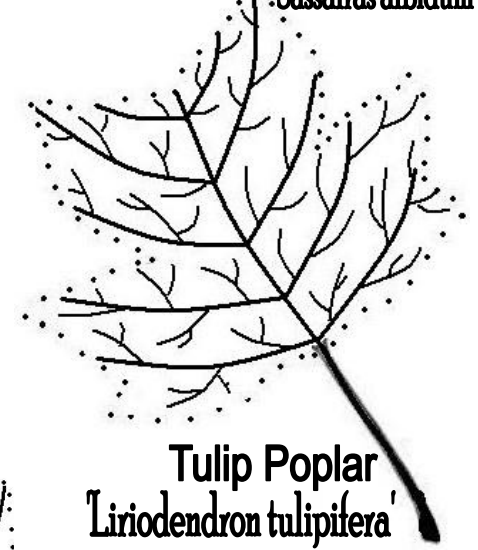


Sassafras albidum

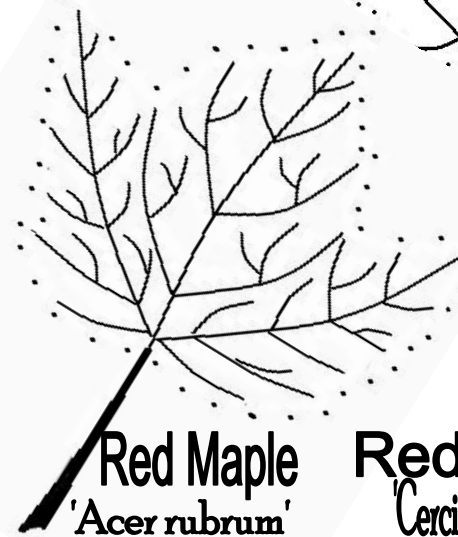
White Oak
Quercus alba



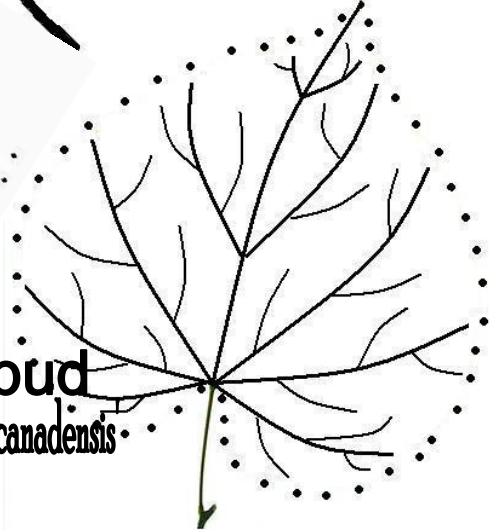
Tulip Poplar
Liriodendron tulipifera



Red Maple
Acer rubrum



Redbud
Cercis canadensis



How bout' them leaves?

DeSoto State Park is located on Lookout Mountain & is widely known for the beautiful color of the leaves in the Autumn of the year. But a common question is, 'WHY do the leaves change color?'



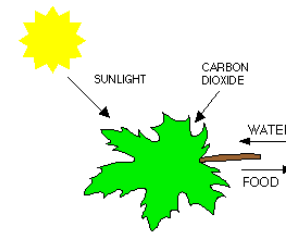
While you were playing in the hot sun during summer vacation, the trees on the streets, in DeSoto State Park, & even around your house were working hard to keep you cool. To feed the shiny green leaves that make shade, trees use sunlight to convert water and carbon dioxide into sugar. This is called *photosynthesis*.

Now that it's autumn, & you're back in school, those hardworking trees, on the other hand, need to take a break from all that photosynthesizing. When leaves change color, from green to yellow, bright orange or red, you'll know trees are beginning their long winter's rest.

As summer ends and autumn comes, the days get shorter and shorter. This is how the trees "know" to begin getting ready for winter. During winter, there is not enough light or water for photosynthesis. The trees will rest and live off the food they stored during the summer. They begin to shut down their food-making factories. The green chlorophyll disappears from the leaves. As the bright green fades away, we begin to see yellow and orange colors. Small amounts of these colors have been in the leaves all along. We just can't see them in the summer, because they are covered up by the green chlorophyll.



How it works:



Leaves are nature's food factories. Plants take water from the ground through their roots. They take a gas called carbon dioxide from the air. Plants use sunlight to turn water and carbon dioxide into glucose. Glucose is a kind of sugar. Plants use glucose as food for energy and as a building block for growing. The way plants turn water and carbon dioxide into sugar is called photosynthesis. That means "putting together with light." A chemical called chlorophyll helps make photosynthesis happen. Chlorophyll is what gives plants their green color. The bright reds and purples we see in leaves are made mostly in the fall. In some trees, like maples, glucose is trapped in the leaves after photosynthesis stops.

Sunlight and the cool nights of autumn cause the leaves turn this glucose into a red color. The brown color of trees like oaks is made from wastes left in the leaves. It is the combination of all these things that make the beautiful colors we enjoy in the fall.