

What Would We Do Without Trees?

Have you ever wondered how life would be if we didn't have trees? Worldwide, there are 60,065 different species of trees, according to the British Broadcasting Corporation. In Kentucky, we have more than 120 native tree species, all of which serve a purpose in our environment. Forests make up 48 percent of land in the state, which adds up to 12.4 million acres. These trees are a very important part of our day to day life, and we couldn't live without them.

It is truly amazing to think about all the products we use everyday made directly from trees. Some of the most common things we think about are furniture, paper, building materials, and pencils. Another major thing Kentuckians think about is the iconic bourbon barrel. The art of bourbon making has been made possible by the creation of special charred white oak barrels that help turn raw alcohol into the trademark Kentucky bourbon. These barrels are so high quality that they are transported to other places for the making of other beverages. In addition to all these products made from wood, there are some other products made from wood that we do not really think about having wood in them. Some of these products are tape (made from cellophanes), citrus flavored soft drinks (made from chemicals from trees called esters), and even toothpaste (made using cellulose gum derived from wood). But, let's not forget the really important things like cookies (made using cocoa from seeds from the cacao tree) and instant hot chocolate (made with methylcellulose which thickens and binds the ingredients together)! Without these and other products made using trees and their products, we could not survive in our day to day life.

The benefits of trees are amazing, especially the environmental benefits they provide. One of the biggest, that we could not live without, is oxygen. Humans inhale oxygen, and exhale carbon dioxide. Plants, like trees, through the process of photosynthesis, take in carbon dioxide and produce oxygen as a bi-product of the energy process. Without trees, we could not survive. Trees provide food and habitat for animals. Some animals that make their homes in and around trees are birds, the koala, owls, and even chameleons. An example of an animal who gains food and shelter from a tree is the squirrel. Squirrels are known for enjoying acorns from oak trees, especially the nuts off of white oaks. When squirrels bury their acorns for winter, they sometimes forget about them and the acorns sprout into small oak trees. This relationship between the oak tree and the squirrel is an example of mutualism, a form of symbiosis in which both organisms positively benefit. Trees do many other things for the environment, including helping keep water we drink and use clean. Trees' canopies slow the acceleration of rain drops as they fall, so that the drops hit the ground with less force. This helps keep our waterways cleaner by reducing the amount of pollutants that enter the water. The roots of trees are just as important as the parts of the tree that we can see. The roots help prevent soil erosion. Through preventing erosion, the roots also prevent dirt and mud from polluting the waterways that we

drink out of and use. The environmental benefits of trees are very numerous and show that we could not live without the help of trees.

Trees are already amazing, but we can't forget about the economic benefits they provide. Trees provide jobs for many Kentuckians. The total 2019 estimate of jobs created from the forest industry was 53,000, according to the University of Kentucky's Department of Forestry and Natural Resources. And, in 2016, the state's forest industries accounted for \$13.3 billion in economic contribution. Trees are a renewable resource, unlike fossil fuels such as coal, oil, and natural gas. Tree products can also be recycled and used again. Trees also temper the climate and keep areas where they are planted cooler. Many big cities plant trees outside of buildings and on sidewalks because they provide shade and can also cool areas up to 5 degrees Celsius. Trees can also help boost property value by reducing summer cooling and winter heating costs. Trees have also been proven to improve mental health. Without trees, our economy would not thrive as it does now.

Trees are awesome! We would live in a very different world without trees and all the products and benefits they provide for us. But, you may be wondering how you can help protect trees for future years. Some companies have figured this out already, like Subaru. The Subaru Forester Project Plants Trees in areas where tragedy has hit. This year, Subaru planted 500,000 trees in wildfire ravaged California. In Kentucky, we have a lot of dedicated people who are willing to take initiative and help for a greater cause. Reforest Northern Kentucky is an annual, all-volunteer project organized in order to restore native Kentucky woodlands. The reforestation project is responsible for planting thousands of tree seedlings in areas of Northern Kentucky. You don't have to be part of an organization or project to plant trees, though. You can plant and conserve trees in your own backyard for a very minimal amount of money and resources. If you have to cut down a tree for lumber, plant a sapling in its place. It will one day take the place of the tree you cut and will be there for you again one day. Take care of the trees you have on your property. Learn how you can help protect and help trees in your community. Recycle paper and cardboard products that your recycling center will accept. Make sure we don't have to live a life without trees, because life would be very different without them.

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