

## **Trees And The Environment**

Trees are nature's soldiers in the fight against global warming. As they feed themselves, they absorb carbon dioxide from the atmosphere and store it in the form of carbohydrates. The stored carbon remains locked inside the body of tree, keeping it out of the atmosphere. Since carbon dioxide is one of the most common greenhouse gases, planting trees can help put the brakes on the greenhouse effect. One mature tree can absorb approximately 22 kilos (or 48 pounds) of carbon dioxide each year... so, when our forest is complete and the trees have matured, it will soak up approximately 1,010,000 kilos (or 2,400,000 pounds) of carbon dioxide annually! This will be enough to offset the carbon that our business produces. Coal is a fossil fuel, and burning it releases carbon dioxide into the atmosphere, so there's something satisfying about planting trees on top of an old coal mine. A place that used to be dedicated to the production of greenhouse gases will soon be dedicated to cleaning them out of the atmosphere.

Additionally, the canopy of the new forest will help improve the air we breathe. Trees not only soak up carbon dioxide, they also absorb other harmful gases, such as carbon monoxide, sulfur dioxide and nitrogen dioxide. The leaves and tiny twigs of the canopy catch larger particulates as well, much like a giant air filter. When it rains, these particles are washed down to the ground. In urban areas, trees have been shown to reduce ozone pollution significantly. Ozone is fine when it's in the ozone layer of the atmosphere, but at ground level it is a respiratory irritant as well as a key component of smog. New York City experienced a reduction of 4 parts per billion in ozone layers after increasing their tree cover by only 10 percent! All of this is excellent news for people with asthma and other respiratory conditions, as pollutants particles, and smog in the air can worsen these ailments.

Trees also improve air quality by producing oxygen as a byproduct of photosynthesis. One full-grown tree puts out enough oxygen each year for two human beings. In time, our forest will produce enough oxygen to fill the lungs of 100,000 people on an annual basis!

In addition to cleaning up the air, trees also clean up the soil and surrounding groundwater. There is even a scientific term for using trees to clean contaminated land-phytoremediation. The roots help clean and filter the rainwater that eventually runs off into our waterways. They also absorb unwanted chemicals from the surrounding soil. Trees can help clean up farm wastes, heavy metals, and sewage, among other waste products. Our trees will help absorb waste products left in the soil as a result of the coal mining process.

Trees also provide a source of food and shelter for a variety of wildlife. Many different types of animals live in or around trees- for example, birds and squirrels nest in the branches, and burrowing animals such as rabbits sometimes live amongst the roots. The type of tree, as well as its age, size and physical characteristics, determines what kind of wildlife it can support. Trees are also an

invaluable food source, providing fruit, nuts, leaves, berries and insects to many different types of creatures.

Trees provide all of these benefits, and then some. It's easy to see why they are intrinsic to the health of our planet!