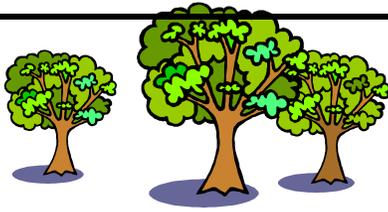


Student Fact Sheet A-3

Trees Please!



Tree Houses



Trees are not only beautiful plants, they are also home to many creatures! Think of a colobus monkey swinging on tree branches deep in the rainforests of Kenya. Or picture a koala bear sitting in a eucalyptus tree in Australia, munching its tasty leaves. Or imagine a spotted owl nesting in the trunk of a giant redwood tree in California. Without trees, and the forests that contain them, our planet wouldn't be able to support all the different living things, or **organisms**, that depend on them. As a matter of fact, more than 90% of all species living on land make their homes in trees and forests! Without trees and forests, many animal species will become **extinct**, or disappear forever like the dinosaur.

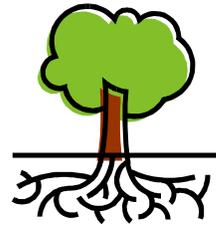
Lungs of the Earth



Human beings need lungs to breathe in **oxygen** and breathe out **carbon dioxide**. Without our lungs, we couldn't survive. Trees act like the lungs of the earth. Trees help the planet breathe by turning carbon dioxide into clean, pure oxygen.

Trees and forests around the world also act like the planet's air conditioning system and keep the planet cool. They help stop **global warming**. Global warming happens when we burn too much oil or gasoline and when we cut down too many forests. Global warming makes the weather change in serious ways, which is why it's important to stop it from happening. Protecting forests keeps our planet cool.

Parts of a Tree



A plant is usually considered a tree if it has one woody stem and branches. The woody stem is called a **trunk**. Tree trunks move water and **nutrients**, or vitamins and minerals, up and down the tree. The trunk is covered in a protective layer called **bark**, and each tree has **roots**. Roots are a big underground system of thin stems that **anchor**, or hold, the tree to the earth. Roots can reach deep down to find the water and nutrients the tree needs to grow. **Chlorophyll** is what makes leaves green, and allows plants to gather energy from the sun through a process called **photosynthesis**. Photosynthesis happens when green leaves use sunlight to turn water and carbon dioxide into sugars that the plant needs to grow. It is also how plants make oxygen.

Fruits and Flowers



Through the magic of nature, flowers turn into fruit. Flowers produce **pollen**, a yellowish dust that helps plants grow. Pollen is blown by the wind, or carried on the antennae of bees into other flowers. This is called **pollination**. When flowers are pollinated they turn into fruit. Fruit acts as a shield, protecting the tree's seeds while they grow. Once the seeds are fully-grown, the fruit is ripe and ready to eat. Different animals like bats, birds and bears, eat these fruits and help spread the seeds to other areas where they can grow into new trees. Some seeds are not protected inside fruits,

so they find other ways of being spread like being blown in the wind or attaching to fur and clothing.

Chocolate and Maple Syrup



Every day we use many things that come from trees. Fruits and nuts like apples, peaches, plums and almonds all come from living trees, as does the cocoa bean that makes chocolate! Living trees also provide spices like cinnamon, nutmeg and black pepper, and the sap from the maple tree makes maple syrup!

Many medicines come from trees and other plants. As a matter of fact, aspirin comes from the bark of a willow tree. Scientists are still searching for new medicines in trees, which is another reason why it's so important to protect our forests. They could provide us a cure for cancer!

Threatened Forests



While living trees provide us with many things, trees that are cut down also provide us with things. When a tree is **logged**, or cut down, it is usually made into **lumber**, or cut wood, for building homes and furniture. Some trees are **pulped**, or ground up, to make paper products such as office paper, cardboard boxes, magazines and newspapers.

While it is okay to cut down trees for the things we need, often too many trees are cut down in one forest. **Clear-cutting** is when every tree in an area is cut down, and it destroys that forest and the home of all the wildlife that lived there. Clear-cutting also makes it easier for floods to happen in logged areas, because the tree roots can no longer soak up water when it rains. While some lumber companies replant trees in

areas they have cut, they only replant one or two kinds of trees, which means they are planting a tree farm, or **plantation**, not a forest. Remember, a forest is more than just trees. It is the collection of thousands of different plant, animal and insect species that have been living there for hundreds and thousands of years. It is possible to cut down trees without clear-cutting an entire area and some lumber companies are starting to do this. One thing we can do to help forests is to use less paper and recycle the paper we do use.

Let's Make it Tree Free!



Another way we can protect forests is by using other plants instead! For instance, members of the grass family such as bamboo can be used to build homes and make furniture.

Bamboo is a plant that grows very quickly and can be turned into many different forms and materials for building or making floors. We can also use plants like kenaf, hemp, sugarcane, and cotton to make **tree-free** paper. Farmers around the world can grow these crops to make paper. Farmers can also provide **agricultural waste**, or farm leftovers, like corn stalks and wheat straw to make tree-free paper. Rather than burning or burying this waste, farmers can sell these plant leftovers so that others can make paper without using trees.

Web of Life



All of life is connected like the strands of a spider web. If one part of nature is destroyed, other parts will be affected by it.

Trees are a very important part of this web which is called the **web of life**, so let's do what we can to protect our trees and forests!