Our American Trees

by Robert C. Birkby

The largest and oldest living things on earth are trees. Over a thousand kinds grow in the United States, and thousands more flourish in other parts of the world. Trees play a very important role in the health of the environment and in the lives of people. The following are a few of the benefits we enjoy from trees:

- Trees pump oxygen into the air. The great forests of the world are essential for purifying the air and maintaining the right balance of oxygen in the atmosphere.

- Leaves on branches and on the ground slow falling rain so that it can seep into the earth. Roots keep dirt from washing away. Fallen leaves decay in the soil and enrich it.

- Trees provide shelter and food for wildlife. A forest is a complicated web of relationships among hundreds of types of plants and animals. That diversity helps all species survive. Strong forests increase the stability of the environment.

- Trees provide shelter and food for humans, too. Lumber goes into homes. Fruits, berries, nuts, and oils feed us. Other products of trees include paper, rubber, spices, and medicines.

- Shaded yards and city parks offer us places close to home where we can relax and play. Hiking and camping let us explore vast forests and wilderness areas.

Parts of a Tree

Roots. Much of a tree is out of sight beneath the ground. Growing very quickly, thousands of tiny root hairs push through the earth, absorbing moisture and sending it up into the tree. A root system is also the anchor holding a tree upright even in storms and high winds.

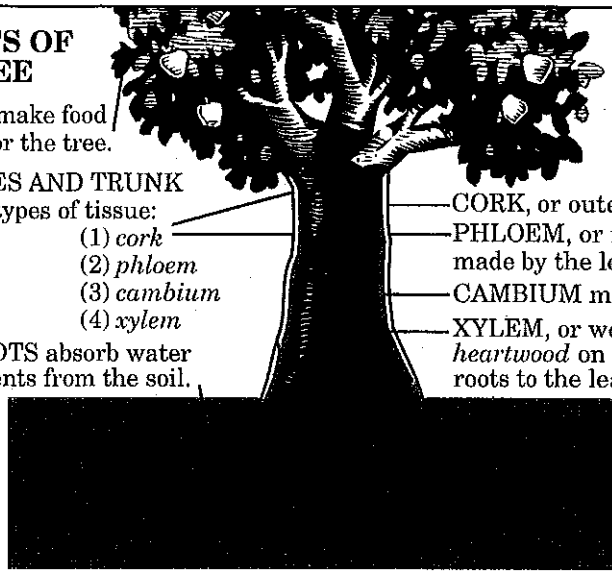
Trunks. The *bark* on a tree trunk gives the plant a tough outer armor. *Sapwood* underneath the bark transports moisture from the roots up to the leaves. Between the sapwood and bark is a thin layer of tissue called the *cambium* layer. It channels food produced by the leaves down into the tree trunk and the roots. In the center of the trunk is hardened sapwood called *heartwood* that gives the tree strength. Each year the cambium builds a new layer of sapwood around the trunk. Count the rings formed by the layers and you'll know how many years a tree was alive.

Leaves. The green chlorophyll in the leaves draws power from sunlight and converts carbon dioxide in the air into nutrients for the tree. Called *photosynthesis*, this process returns oxygen to the atmosphere. It is an important way for the air to be cleaned and refreshed with oxygen.

The two large groups of American trees are *conifer* trees and *broadleaf* trees. Conifers, also known as *evergreens*, have needlelike or scalelike leaves that usually stay on the trees for several years. Broadleaf trees have flat leaves that generally fall off in the autumn.

1

PARTS OF A TREE



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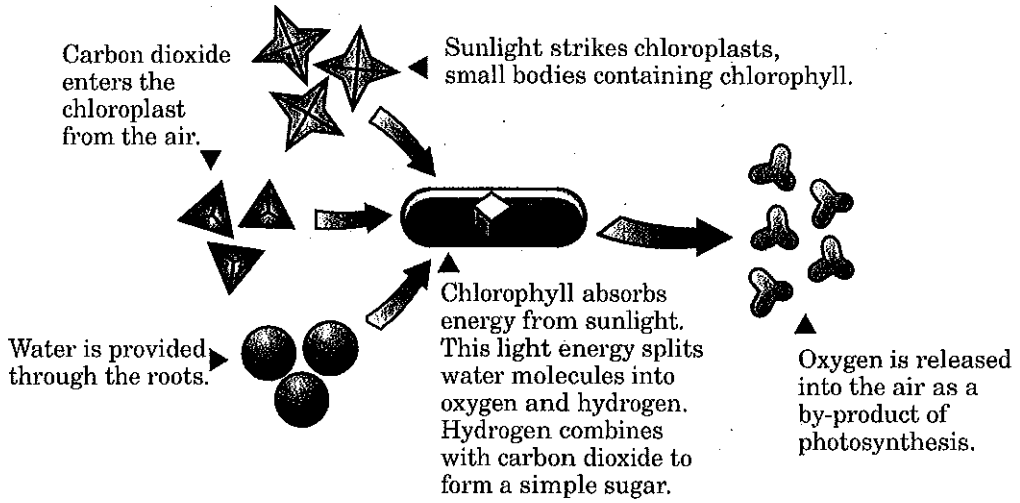

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1. What is the purpose of describing the benefits of trees?

   A to show that trees are pretty

   B to encourage people to not cut down trees

   C to show how people can make money with trees

   D to show why trees are important

2. The selection states that the great forests of the world are essential for purifying the air. What does *purifying* mean?

   A cleaning

   B cooling

   C increasing

   D warming

3. What part of the human body is ***most like*** the bark of a tree?

   A heart

   B skin

   C stomach

   D arm

4. How do leaves play an important role in the life of a tree?

   A They help make food for the tree.

   B They help anchor a tree to the ground.

   C They help absorb water from the soil.

   D They help protect the tree from injury.

5. In October people are raking the leaves in their yards. Based on the selection, from what type of tree did the leaves ***most likely*** fall?

   A cambium

   B conifer

   C broadleaf

   D evergreen

6. How are the roots and leaves of trees ***most similar***?

A They help to give trees nutrients.

B They will eventually become heartwood.

C They pump oxygen into the air.

D They are only present on broadleaf trees.

7. Which ***best*** describes what is shown in diagram 2?

A how trees help people

B how sapwood is made

C how chlorophyll makes food

D how roots absorb water

End of Set

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