

# THE NATURE OF TREES



**ReForest London**  
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\*\*adapted from The Forest Foundation's "Forests Today, Tomorrow & Forever"

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

This activity focus on learn about the different parts of a tree and the function each part serves.

We are going to learn about the relationship between the function and parts of a tree and those of humans.

List 5 benefits that trees provide us. Think about how trees affect your time in your backyard, in your schoolyard, here does some of your favorite fruit grow?

**ANSWERS:** shade and cool places to hang out, they release oxygen into the air, they clean the air by taking in carbon dioxide and store it in their trunk, roots keep dirt from washing into streams, fallen leaves decompose and enrich soil, trees provide food like apples or nuts for both us and wildlife, provide homes for wildlife, trees provide products which we use everyday to make life better and more enjoyable.



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## What does the word photosynthesis mean?

Lets break the word down, 'photo' is the Greek word for **light** and "synthesis" is the Greek word for **to put together**.

How do you think trees and humans are perfect partners? How do we help each other survive?

People and animals breathe in oxygen and exhale carbon dioxide. Plants take in carbon dioxide and exhale oxygen. It's the perfect recycling cycle and benefits both the trees, humans and animals.

### VOCABULARY

**Bark:** the protective outside covering of a woody stem or root.

**Phloem:** layer of inner bark cells that transport food made by photosynthesis in the leaves to the rest of the plant.

**Cambium:** thin layer of living cells that produce a new layer of wood each year, forming tree rings, which we can count to tell the age of a tree. The cambium lies between the xylem and phloem layers.

**Cellular Respiration:** the chemical breakdown of glucose to produce energy. this process is the opposite of photosynthesis

**Sapwood:** newly formed wood cells that lie just inside the cambium. It acts as a major conductor of water and minerals for the tree; also known as xylem

**Heartwood:** the hard, inactive wood at the center of the tree

**Roots:** the network below ground that anchors the tree in the soil. Root hairs push their way through the soil and absorb moisture and minerals from the soil.

**Chlorophyll:** the green substance found in leaves and needles that captures the sun's energy

**Photosynthesis:** the process of channeling energy from the sun by means of chlorophyll and converting the carbon dioxide in the air to produce nutrients for the tree and oxygen.

**Oxygen:** an element found freely in nature that is needed for humans and animals to be able to breathe

**Carbon Dioxide:** colorless, odorless gas that is formed during respiration, and organic decomposition

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What do people and trees share in common? Think about how different parts of trees serve different functions, as different parts of our bodies serve different functions for us. Use the word bank above to help answer the next 4 questions

1. If the needles and leaves take in and get rid of carbon dioxide and oxygen, what part of the human body are they like?

2. Our human skeletons support our bodies. What supports a tree?

3. What system handles nutrients (food) and water for a tree? How does the tree make its own food?

4. What system handles food and water supplies for humans?

**Answers:** 1. the lungs 2. its trunk (heartwood) 3. needles and leaves produce food through photosynthesis, xylem transports water, phloem transports food, and the roots absorb water and sends it up the tree 4. our digestive system breaks down nutrients and our circulatory system moves nutrients and water to cells in our body