Parts of a Tree

Trees have three main parts—crowns (canopies), trunks, and roots. Each part has a special job to keep the tree healthy and growing.

Crown (Canopy)

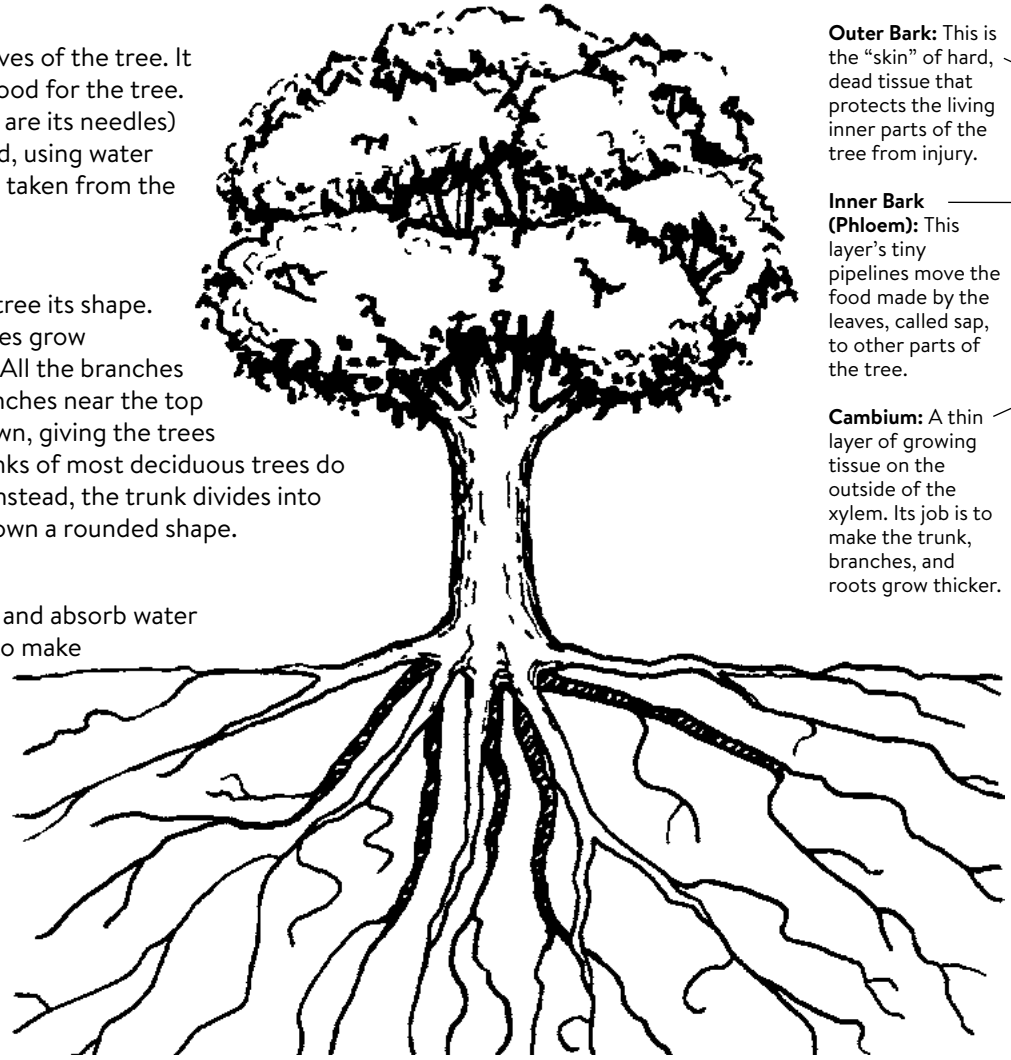
The crown is the branches and leaves of the tree. It has the important job of making food for the tree. The leaves (the leaves of a conifer are its needles) are tiny "factories" that make food, using water absorbed by the roots and carbon taken from the carbon dioxide in the air.

Trunk

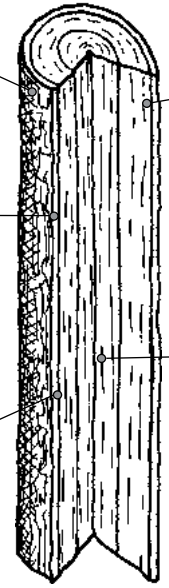
The trunk and its branches give a tree its shape. The trunks of most coniferous trees grow straight up to the top of the tree. All the branches grow out from the trunk. The branches near the top are shorter than those farther down, giving the trees a "Christmas tree" shape. The trunks of most deciduous trees do not reach to the top of the tree. Instead, the trunk divides into spreading branches, giving the crown a rounded shape.

Roots

Roots hold the tree in the ground and absorb water and minerals that the tree needs to make food. Roots often spread much farther than the crown of the tree. Large, woody roots grow horizontally (side to side), mainly in the top 12 inches of the soil and usually no deeper than 3 to 7 feet. They often stretch out from the trunk to take up a space four to seven times larger than the crown! These roots spread across an area that can be twice the height of the tree.



Tree trunks are made of five layers.



Outer Bark: This is the "skin" of hard, dead tissue that protects the living inner parts of the tree from injury.

Inner Bark (Phloem): This layer's tiny pipelines move the food made by the leaves, called sap, to other parts of the tree.

Cambium: A thin layer of growing tissue on the outside of the xylem. Its job is to make the trunk, branches, and roots grow thicker.

Sapwood (Xylem): A narrow band of cells at the out-most edge of the inner wood that conducts water and minerals throughout the tree, from the root system toward the leaves.

Heartwood: This is woody, nonconducting tissues in the center of the tree made up of dead xylem. It stores growing compounds and sugars and supports the tree.

Fun Fact

Tree roots come in many different sizes. Some are so tiny you can only see them with a microscope. Others may be up to 12 inches or more across.