



Cambium Layer-All new horizontal growth takes place here. New sapwood and inner bark forms at this layer.

Sapwood-All wood in the trunk and branches starts out as sapwood and is alive. Sapwood is formed at the cambium layer and stores food and transports sap up the trunk to the branches and leaves. The cells are spindle shaped and aligned with the axis of the tree. Cellulose is the primary substance in wood. Sapwood is composed of earlywood and latewood (see definitions below).

Heartwood-When the tree has more sapwood than it needs to support itself, the is extra dies and becomes heartwood. Chemical changes take place when sapwood turns to heartwood. Extractives are formed and they typically give the heartwood a darker color and can sometimes make the wood decay or insect resistant (like Western Red Cedar-only the heartwood is decay resistant). The minerals in the soil have some affect the color of the heartwood.

Earlywood (Springwood)-Is formed in the spring when the tree starts growing again and water is abundant. This causes earlywood rings to be wider and less dense.

Latewood (Summerwood)-Is produced in the summer when water is less abundant. Making the rings narrower and denser.

Inner Bark-Is alive and transports food for the tree from the roots to the branches and leaves.

Outer Bark-Has died and acts as a shield protecting the tree from water and insects.

Pith-Is the primary growth when the truck or limbs grow in length.