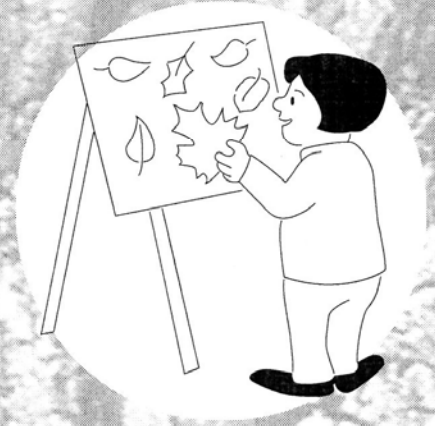


The Wonderful Workings of Wood



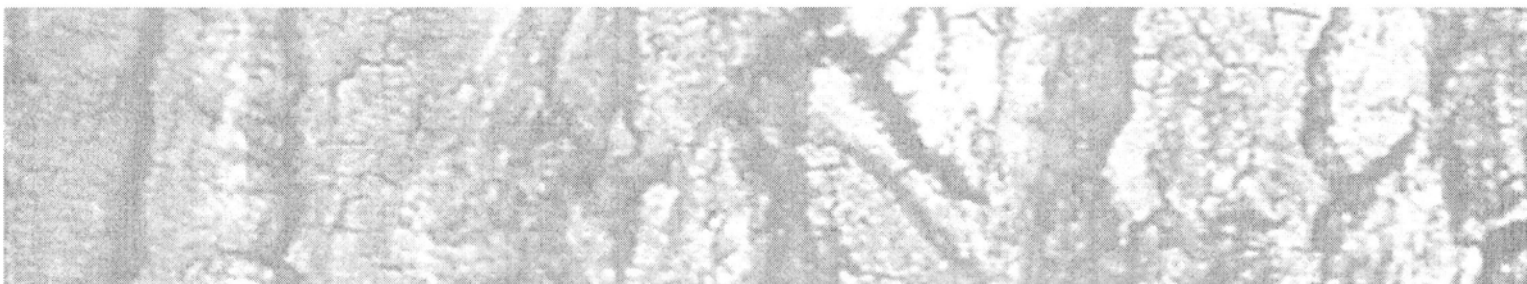
Most people think that wood is just one thing. Actually, wood is made up of different parts, each with its own job. Use this numbered guide to discover what the parts of a tree are called and what job each part does. The guide will also act as your legend for the texture picture that you will find on the next page.


- 1. OUTER BARK** is like your skin. It protects the tree from outside damage.
- 2. INNER BARK** brings the food that is produced in the leaves to the rest of the tree, where it is used for growing or is stored.
- 3. CAMBIUM** is made from clusters of cells that produce new layers of bark each year. These layers are called rings. Starting with the heartwood, we count the dark rings to tell the age of the tree.
- 4. SAPWOOD** is the highway that carries minerals and water to all parts of the tree. The chemicals in the sap are what determine the color that leaves turn in the fall.
- 5. HEARTWOOD** acts as our spine does. It gives strength to a tree and helps it to stand straight.

When we look at a slice of wood, it not only helps us tell the age of a tree, it also tells us about its history. We can see when and where insects invaded and made holes and tunnels in it. We can see when and where fire scarred it. We can even tell which years have been wet years and which ones were drought years. Thick rings show plenty of moisture; narrow rings show little moisture.

What do foresters do if they want to know the age of a tree that has not been harvested? They often use a tool called an increment borer. It looks a little bit like a narrow flute. Foresters use it to pull a small plug of wood from the tree, somewhat the way we use a corkscrew to remove a cork from a bottle. They can then read the rings from the tree plug just the way they might with a wafer of wood from a limb or from a tree stump. Do they put the plug back into the tree? No. The tree will send its sap to plug the hole and protect the tree from possible invasion by insects or disease. If the plug is put back in, the tree will be fooled into thinking that there is no hole, and it will not send sap to seal that opening. The plug will not make a good seal. It will leave the tree open to insects and disease.

The next time you see a tree stump, read the rings. What history does it have to tell?



 **Name** _____

