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Like all living things, trees are made up of different "body parts" that help them survive. Use this brochure to learn about the different parts of a tree, as well as the different stages of a tree's life.

What's inside?

Some parts of the tree you can see from the outside. Other parts are on the inside or too tiny to see without a microsope. Let's look at some of these different parts.

Inside the Trunk Heartwood Xylem Cambium Phloem Bark

Heartwood: Dead wood in the center of the tree that gives the tree its strength.

Xylem: Transports water and nutrients up from the roots to other parts of the tree.

Cambium: The growing part of the trunk that creates new xylem and phloem. When the cambium hibernates each year, it forms the rings you'd find on a tree stump. Counting the rings can tell us a tree's age.

Phloem: Transports sugars and proteins (sap) from the leaves downward through the rest of the tree.

Bark: Protects the tree from fire and insects, and insulates it from extreme heat or cold.

Crown

The crown is made up of the tree's leaves and branches. The leaves are the tree's"food factory," using sunlight to create energy for the tree and convert carbon dioxide into oxygen.

Trunk

The trunk supports the crown, and gives the tree its shape and strength. Within the trunk are different layers that contain a network of tubes that transport nutrients all over the tree.

Roots

Roots anchor the tree to the ground. They also absorb water and nutrients from the soil to feed the tree.

Inside a Leaf

Epidermis: The outermost, protective layer of cells that surround the leaf.

Mesophyll: The tissue of a leaf where photosynthesis occurs. Photosynthesis is the process of how a leaf turns sunlight Epidermis into sugars to feed the tree.

Vein: Contains the leaf's xylem, which transports water and nutrients to the leaf from the roots. And the Mesophyl phloem, which transports the sugar made in the leaf.

Leaf Shape Tic-Tac-Toe

Keep an eye out for these leaf shapes as you explore the trail. Mark the leaves you find with an X. Or play with a friend and take turns marking X's and O's. Whoever finds and marks three leaves in a row wins!

Dogwood	Cea







Tulip Poplar



White Oak

Spruce