Handout M12-1: Tree Parts and Kinds of Fire

Study this page to prepare for the “Working Trees” Jeopardy-style game.

**Bark:** the outside covering on a tree's trunk and branches, the tree's "skin." Thick bark can protect the tree from surface fire.

**Branch:** limb of a tree or shrub that grows out from the trunk and holds leaves up in the light. Some trees drop their low branches as they age, which helps prevent surface fires from damaging the cambium or climbing into the treetops.

**Bud:** The cells that will grow next year’s leaves and branches. Located at the tree’s top and the tips of branches. Similar cells occur at the tips of roots.

**Cambium:** the layer of living cells under a tree's bark that produces the xylem and phloem layers

**Catkin:** lightweight, fluffy package of seeds. The “fluff” helps the seeds float a long way on the wind sometimes many miles.

**Cone:** the package in which a conifer stores its seeds. If cones are sealed tight with resin, the seeds inside may survive crown fire and be released soon afterward.

**Crown:** a tree's top, which holds most of its leaves and buds

**Crown fire:** fire that spreads through the crowns of trees and shrubs. Crown fires are usually ignited by surface fire. They are common in conifer forests and chaparral-type shrublands.

**Duff:** the layer of soil that is made up of dead, rotted plant parts. Duff is below litter and above mineral soil.

**Ground fire:** fire that burns in the duff and other organic material in the soil. Ground fires usually burn slowly, with lots of smoldering instead of long flames. They produce lots of heat.

**Heartwood:** inner wood of a tree, which helps it stand strong and resist decay

**Leaf:** the green part of a plant that uses sunlight, water, carbon dioxide, and minerals to make “food”

**Litter:** the layer of dead leaves and other plant matter, not yet decayed, at the top of the forest floor

**Mineral soil:** soil that has no plant or animal parts so it cannot burn

**Phloem:** the layer of living cells under a tree’s bark that moves nutrients from one place to another, especially from leaves to other parts of the tree

**Root:** the part of a plant that lives underground, collects water and minerals from the soil, and keeps it firmly planted in the soil. If the roots are buried deep in mineral soil, they may be able to survive a ground fire.

**Seed:** a very tiny, living plant—just waiting to grow—plus a package of nutrients and a protective covering.

  If seeds are sealed tight inside a cone, they may survive crown fire. If they’re embedded in moist duff, they may survive surface fire. If they’re buried in mineral soil, they may survive ground fire.

**Seed wing:** part of a conifer seed that helps it float away from the parent tree when it falls

**Snag:** a dead tree, often with a broken top

**Sprouter:** a kind of plant that can grow from underground parts if its top is killed off

**Surface fire:** a fire that burns the litter, grasses, shrubs, and wildflowers on the forest floor but does not burn the crowns of trees or the duff layer.

**Trunk:** the stem of a tree. The faster the trunk grows, the sooner it its crown will be out of reach from surface fires.

**Xylem:** the layer of hollow wood cells that carry water from roots to leaves. Also called sapwood.