

# Tree Ecology at Home



### At a Glance:

Students investigate life in the trees from a bird's-eye view.

### Materials:

- Clipboard
- Pencil
- Colored pencils
- Magnifying glass (if you have one)

### Objectives:

- Students identify living and nonliving elements in an ecosystem.
- Students differentiate between living and non-living things.
- Students will explain how organisms depend on dead wood for survival.

### Resource:

Project Learning Tree  
[www.plt.org](http://www.plt.org)

### Background:

- Throughout a tree's life it collects nutrients from the environment and uses them to grow—building new bark, wood, leaves, etc.
- When a tree dies, a process called decomposition takes place and returns these nutrients back to the environment. Living organisms move in to facilitate the process of decomposition.
- Many creatures depend on dead logs as hideouts or shelters from larger animals.
- Some things that may be found in and on a decaying stump are:

**Plants** such as fungi, moss, and lichens grow on dead wood. As time passes, seeds may plant themselves into the soft bark and sprout.

**Insects** such as termites, carpenter ants, and bark beetles will eat the wood and turn it into a system of tunnels. Some insects such as beetles and wasps lay their eggs in the decomposing wood.

**Animals** such as centipedes and spiders will prey on smaller insects. They in turn become meals for birds, skunks, and others.

### Directions:

Visit a tree in your backyard to explore the unique ecosystem surrounding it. Take time to look and listen to all that is happening in and around the tree. Observe the living and nonliving things in this ecosystem.

**Record the living elements in the environment. (Hint: living things breathe, move, grow, take in nutrients, and give off waste).**

**Record the nonliving elements in the environment. (Hint: some of these elements cannot be seen).**

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Why is it important to have both living and nonliving elements in an ecosystem?

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Investigate a tree stump in your backyard or park area. Although this stump is considered “dead wood,” it is important to leave it so plants, insects and animals may use it. Take a closer look and see if you can identify any living things on or near the stump. List your findings here:

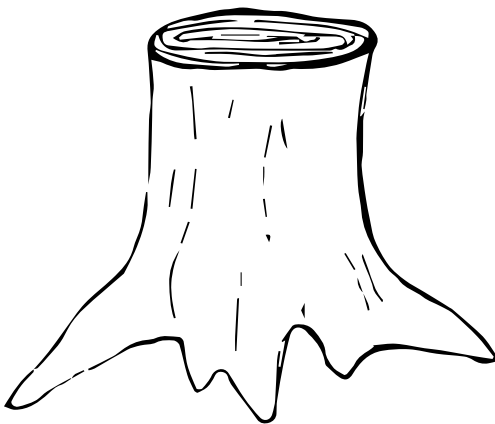
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Over time, what do you think will happen to this tree stump?

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