

Snag a Home



Section 4 FOREST ACTIVITIES

Grade Level: 5 - 12

NGSS: 5-LS2-1, MS-LS2-2., MS-LS2-3.,HS-LS2-4

Subjects: Science, social studies

Skills: Observing, inferring, predicting

Duration: 50-100 minutes

Group Size: Small or individuals

Setting: Outdoors & indoors

Vocabulary: Detritivores, food webs, habitat, photosynthesis, predator, prey, snags

Objective:

Students will look for evidence that dead trees are habitat for forest wildlife.

Complementary Activities:

OUTDOOR: “Fungi,” “Detritivores,” “Bird Signs,” and “Animal Signs,” all in Section 2, *Ecosystems*; “Bird Song Tag” in Section 3, *Forest Learning Trail*. **INDOOR:** “Forest Food Web Game” in Section 2, *Ecosystems*; and “Animal Adaptations for Succession” in this section.

Materials:

Clipboards and writing paper or field note books, pencils or pens for each student. Hand lens; field guide such as *Peterson Field Guides: Ecology of Western Forests*. Copies of “Snag a Home Science Card” (following).

Background:

See **INSIGHTS**, Section 2, *Ecosystems – Community Connections*; and Section 4, *Succession*.

Procedure:

IN ADVANCE, locate forest site with a standing dead tree and a fallen dead tree, preferably one that fell several years ago and pulled up its roots when it fell.

1. **IN CLASS**, discuss the concept of **habitat** and remind students that forests can provide habitat even when some trees are dead. At what stages in forest succession are snags present? (*Coastal rainforest — in regrowth after floods, avalanches, timber harvest, beetle kills, or other disturbance; also in old-growth stage. Boreal forest – in regrowth after fire, shrub thicket stage, and in old growth stage.*)

2. Students will use their detective skills to find as many signs as possible of wildlife living in **snags** and fallen trees. Ask them to be on the lookout for links in the forest food web.

3. Give each student or group the “Snag a Home Science Card.”

Classroom Follow-Up:

1. From their collective field observations, students compile a master list of wildlife that use dead trees. Students may need to identify evidence of organisms drawn earlier in their notebooks by using a field guide or other reference.

2. Using the list, students build at least 3 forest food chains that include dead trees.



3. Discuss how the removal of all dead trees might affect a forest? *Students should think carefully about which living things use dead trees, and how minerals are cycled.*

Curriculum Connections:

(See appendix for full citations)

Books:

Ancient Forests (Siy)

Ancient Ones, The World of the Old-Growth Douglas Fir (Bash)

Journey Through the Northern Rainforest (Pandell)

A North American Rain Forest Scrapbook (Wright-Frierson)

Teacher Resources:

(See appendix)

SCIENCE CARD

Snag a Home

1. Turn to a page in your field notebook and label it “Snag a Home.” Record your notes and answers to the questions below on this page.

2. Standing dead trees are called **snags**. Look carefully at the snag at this site and see if you can find evidence that living things are using it, or have used it in the past (*see “Signs of Life...” for hints*). List in your notebook, under the heading, “Life on a Snag,” evidence of organisms that you find. If you don’t know the name of the evidence you find, draw its picture in your notebook so that you can identify it later.

3. Look at the fallen dead tree at this site and try to discover what living things are using or have used it. List evidences you find in your notebook under the heading “Life on a Fallen Tree.” If you don’t know the name of the evidence, draw its picture in your notebook so you can identify it later.

4. Much of the sunlight energy which a tree stores through **photosynthesis** is stored in the wood of the tree trunk. Is this energy lost, or is it used by other living things after the tree dies?

5. Many of the minerals that a tree takes up from the soil are stored in its trunk. Look at the fallen dead trees in this area carefully. What evidence do you see that suggests the minerals in tree trunks are returned to the soil?

6. Nurses are people who help other people. Why do you think fallen dead trees are often called “nurse trees”?

Signs of Life on a Dead Tree

MICROSCOPIC ORGANISMS: Look for rotten and crumbly wood or slimy coatings on any part of the tree.

FUNGI: Examine mushrooms, shelf fungi, fuzz or furry coatings on any part of the tree.

PLANTS: Are any small plants growing in cracks?

ANIMALS:

Invertebrates: Look closely at any crumbly wood, in the cracks and crevices of the wood, and at any reddish brown sawdust. Carefully remove a few pieces of loose bark or crumbly wood to see if anything is underneath them. Use a hand lens so you won’t miss tiny invertebrates. Be sure to replace the wood pieces so that any animals that live there will still have a home.

Mammals: Look for hair, droppings, tooth and claw marks on the tree. Look in hollow places where an animal might hide.

Birds: Look for drill holes in the bark or a round hole into the trunk. These were likely made by woodpeckers. These birds feed on beetles that eat wood. Look for feathers, whitish droppings, or raptor pellets on or beneath the tree.

