Forest Habitat Assessment

Overview
Students will learn about mixed conifer forest habitat and conduct an assessment

California Science Standards
Grade 3: 3.b.c.d.-L.S.
Grade 4: 3.b.-L.S.
Grade 7: 7.c.-I&E

Oregon Science Standards
Grade 3: 04,05- L.S.
Grade 5: 05- L.S.
Grade 8: 04- L.S.

National Standards
Content Standard A: Scientific Inquiry

Materials Include
- Student Journal

Activity Time
Preparation: 20 min.
Activity Time: 35 min.

Best Season
All Season

Vocabulary
- Habitat
- Biodiversity
- Snags
- Bioregion

Grade Level: 3rd-8th (O.S.S 3rd-8th) (C.S.S: 3rd-7th)

Learner Objectives

Students will:

- Learn about mixed conifer forest habitat
- Learn about management issues associated with this habitat
- Conduct a mixed conifer forest habitat assessment

Background Information

Habitat is the arrangement of food, water, shelter, and space suitable to an animal or plant's needs. Different species have different habitat requirements. The mixed conifer forest habitat is found throughout southwestern Oregon and northern California in the Klamath Basin. Unlike the wetter climate typically found throughout the Pacific Northwest, the climate conditions here tend to be much milder and drier. This habitat type varies in elevation from sea level to approximately 6,000 feet. Environmental and plant diversity are both high. Some of the dominant tree species that comprise this habitat are douglas-fir, true firs, ponderosa pine, oaks, and pacific madrone.

This habitat has been found to support high coniferous forest bird biodiversity. The diversity and abundance of hardwood trees is a main reason for such a high number of different birds. In fact, douglas-fir forests that dominate the region support the highest bird densities when compared to coniferous forests found elsewhere in North America. It is important to maintain this habitat and rich bird species diversity as many other habitat types do not contain such unique habitat conditions for a variety of birds.

Today, only twenty-five percent of the original habitat remains in the Klamath-Siskiyou Bioregion (area of southern Oregon and northern California). Proper management of this forest habitat is crucial as it has been affected by habitat loss and conversion, salvage logging, harvest and thinning strategies, habitat fragmentation, fire suppression, and loss of habitat structure. There are several habitat aspects, that when found during a habitat assessment, can give scientists and citizens an idea of habitat health. The seven aspects which we will look at are snags (dead trees), fallen logs, tall pine or oak trees, thick native shrub-layer, forest edge habitat, small diameter trees, and post-fire evidence.

Lesson Plan

Background Information Continued…

Fire, snags and fallen logs have great value in a mixed conifer forest habitat. Snags and fallen logs provide habitat needs for a number of living things, such as, cavity nesting birds, insect larvae, black bears, amphibians and reptiles, small mammals, bats, slugs, mosses, lichen, fungi, and bacteria. Another habitat aspect that has a very important role to play is fire. Fire has had an historical presence in mixed conifer forest habitat for some time. Fire can put vital nutrients back into an area and begin the regeneration of a forest.

Getting Ready!

1. Read the background information.
2. Determine the site you plan to visit to conduct a habitat assessment.
3. Make copies of the *Student Journal: Forest Habitat Assessment.*

Discuss!

1. Ask the students if they know what a habitat is.
2. Give the students some background information on mixed conifer forest habitat.
3. Review some of the vocabulary associated with this lesson.
4. Ask them why they think habitat management is important and what could happen to a habitat if it is mismanaged.

Go Outside!

1. Go over the seven mixed conifer forest habitat aspects that give an indication of a healthy habitat.
2. Have the students walk around in a designated area within a mixed conifer forest habitat and point out examples of each habitat aspect.
3. Pick a location where students can walk around and observe the habitat to make a habitat assessment.
4. Pass out copies of the *Student Journal: Forest Habitat Assessment.*
5. Have the students walk around the habitat and make observations of any and all healthy habitat aspects and record them on their student journal.
6. When they have finished their assessments, gather the students together and go over their findings.

Follow-up!

1. Ask students 2-3 questions to re-cap the lesson (see right panel).

Some KBBT Sites with Mixed Conifer Forest Habitat

1. **Site 15**- Crystal Springs Wayside
2. **Site 16**– Upper Klamath National Wildlife Refuge and Malone Springs
3. **Site 17**– Rocky Point/Upper Klamath Canoe Trail
4. **Site 18**– Fourmile Lake
5. **Site 19**– Lake of the Woods/ Great Meadows
6. **Site 9**– Sevenmile Guard Station

Suggested Questions

What is the definition of a habitat?

What are two dominant tree species found in a mixed conifer forest habitat?

Why are snags and fallen logs important in mixed conifer forest habitat?