

A Forest of Many Uses



Privately and publicly owned forests are often managed to provide many different resources. In this activity, students will learn how forests are managed to meet a variety of human and environmental needs.

Activity 32

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Levels

Part A: Grades 1-4
Part B: Grades 5-8

Subjects

Science, Social Studies, Math, Visual Arts

Concepts

- Resource management technologies interact and influence environmental quality; the acquisition, extraction and transportation of natural resources; all life forms; and each other. (2.4)
- All humans consume products and thereby affect the availability of renewable and nonrenewable natural resources. (2.11)
- The structure and scale of the natural resources in a given area shape the economy upon which the society and its culture are based. (4.8)

Skills

Classifying and Categorizing, Analyzing, Discussing, Evaluating

Materials

Pictures of various forest animals and forest-related activities, art supplies

Time Considerations

Preparation: 20 minutes
Activity: One to two 50-minute periods

Related Activities

The Forest of S.T. Shrew, We All Need Trees, Forest Consequences, 400-Acre Wood, Who Works in this Forest?, Loving It Too Much

OBJECTIVES

- Students will identify ways that people use forest resources.
- Students will explore how forests are managed to satisfy a variety of human and environmental needs.

ASSESSMENT OPPORTUNITIES

- After visiting a local forest, have the students compile information on how that specific forest provides recreation, products, and wildlife habitat.
- Have the students research ways that a forest from another geographic area may be different from the local forest in how it provides recreation, products, and wildlife habitat.

BACKGROUND

The United States has 749 million acres (303 million hectares or ha) of forestland that make up about one-third of the total land base. Canada has 1,032 million acres (418 million ha). To be classified as forestland, the area must be at least one acre (.4 ha) and contain about 10 percent tree cover.

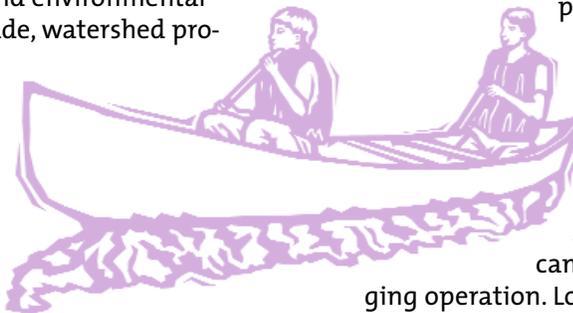
About 504 million acres (204 million ha), or two-thirds, of U.S. forestlands are also classified as commercial timberland (forests capable of growing commercial crops of trees). In the United States, commercial timberlands are owned by three sectors of society: private individuals own 58 percent; public agencies (federal, state, county) own 29 percent; and forest and paper industries own 13 percent. To varying degrees, those forests are managed to provide several resources at the same time, such as timber, wildlife habitat, recreational areas, and environmental benefits (such as shade, watershed protection, and carbon storage). This strategy is called multiple use management.

Law mandates that the U.S. Forest Service will manage its commercial

forests for multiple uses. Those forests are managed for timber harvest, but also to protect watersheds, conserve soil and wildlife habitat, and provide public recreation and ecosystem services.

Private and family forests can also be managed for multiple use. For example, forests owned by a forest product company can be used for hiking, fishing, and camping, while being managed for timber production and ecosystem protection as well. In addition, the nearly 80,000 family forest owners certified by the American Tree Farm System are committed to sustainably managing their forests for wood, water quality, wildlife, and recreation.

Multiple use management involves making choices about the types of activities that can take place in particular areas. Some forest ecosystems cannot support certain activities, and certain activities should not take place in the same area at the same time. For example, few people would want to hike alongside a strip mine or camp next to a logging operation. Loggers would have a tough time doing their jobs if





people using off-road vehicles were driving through an area where they worked. And protecting a watershed or a commercial fishery might mean carefully planning other activities, such as road-building or mining.

For information about products that come from forests, see the Background for Activity 13, "We All Need Trees."

GETTING READY

For Part A, gather pictures of forest animals, of recreational activities that people do in forests, and of products that people get from forests. You might ask older students to help with this. (Look in nature, outdoor, recreation, or tourist magazines.) Pictures you might use include salamander; centipede; mouse; spider; deer; raccoon; woodpecker; people hiking, camping, fishing, hunting, skiing, snowmobiling, picnicking, or firewood; paper and wood products; oil rig, gas station, or car (runs on gas); and mines, coal, or metal objects.

DOING THE ACTIVITY

PART A—Activities in the Forest

1. Show students the collected pictures of forest animals and have them identify each one. Ask if they've ever seen each animal in real life. If they have, ask where. (Many will have seen the animal only in a zoo.) If they haven't seen the animals, discuss why not. (Some may never have been in a forest and even in a forest, people do not see many animals because they hide.) Tack the pictures on a bulletin board or tape them to a board under the heading "Wildlife." You may also want to have students name other animals that live in forests.

2. Show students the collected pictures of people doing recreational activities. What are people doing in each picture? Have any students done



those activities? Which activities could be done in a forest? (All.) Again, place the pictures on a bulletin board or board under the heading "recreation," and ask students to name other activities people could do in forests.

3. Show students pictures of products from forests, and have them identify what's in each picture. Ask which items they use. (Depending on the pictures you gathered, you may need to explain what some items are.) Place those pictures on a bulletin board or board under the heading "Products," and have students name other examples of forest products.

4. Have students look at all the pictures you've posted, and explain that there are people who manage forests so that the forests can provide homes for wildlife and people, recreation places for people, and products people need and want. Ask students to identify activities listed on the bulletin board that might go on in a forest at the same time. For example, people may hike through a forest where animals under the "Wildlife" heading are living. Other people may hike, bird-watch, and ski in the same areas. People may reach camping areas by driving on the same roads that go to logging areas. Some animal species, such as deer, towhees, and sparrows

may do well in areas where logging has reduced tree density, while others will not do well.

PART B—Management Decisions

1. Ask students what ways they use or benefit from forests. Record their ideas on the board.

2. Next, divide students into teams of four. Ask each team to list different ways that people and wildlife use or benefit from forests. You may want to walk among the teams and encourage them to add more to their lists by asking further questions. What kinds of recreational activities have they or their families done in forests? What kinds of products do people get from forests? What animals live in forests (including less obvious ones like fish, insects, worms, and microorganisms)? How do forests impact water and air?

3. Write the words "Wildlife," "Recreation," and "Products" on the board. Have teams share ideas from their lists that fit under each category. For example, they may put food or water under "wildlife," camping and fishing under "recreation," and wood for or hydroelectricity for energy under "Products."

4. Explain that people manage forests with an emphasis on different needs. For example, some forests may be managed to meet the needs of wildlife, others to meet recreational needs, and still others to meet the need for forest products. Or, if possible, some forests may be managed to meet all of the needs above.

5. Tell team members to pretend they are forest managers and need to manage a forest for wildlife. What would wildlife need to survive in the forest? What strategies would they use to promote wildlife? Have each team brainstorm ideas, and then share with the group. Record their ideas on the board in a column next to "Wildlife."

6. Next, have students pretend they must manage a forest for recreational use. Have teams brainstorm what a forest manager would need to do to promote recreation. What types of activities might go on in the forest? What would the manager need to provide for these activities? (e.g. roads, trails, parking, bathrooms, campgrounds, picnic areas) Ask them to share their ideas and record them on the board next to "Recreation."

7. Finally, have students pretend that they must manage a forest to provide products for people. What things would they need to consider to man-

age the forest in this way? Which resources will be removed from the forest, how will they be taken out, and what will be needed so the resources can be removed? Once again, record the group's ideas on the board in a column next to "Products."

Note: As a time-saving alternative to doing Steps 5-7, you can divide your group into three teams and have each brainstorm a list of ideas for one category – "Wildlife," "Recreation," or "Products."

8. Explain that, in many cases, forests today are managed for more than one use at a time. Have your students look at the lists they created and ask them these questions:

- Which activities listed can go on at the same time in the same forest?
- Which activities on the list might conflict with one another if someone tried to manage both at the same time?
- Would those activities always conflict or conflict only at certain times and under certain conditions?

Enrichment

- Students will enjoy putting on silent skits to show different uses of a forest area. Divide students into teams of four and secretly assign each team a forest use such as hiking,

camping, logging, skiing, mining, or living in a wildlife habitat. Give teams a few minutes to plan and practice their skit, which must involve everyone in the group. After each skit is presented, have other teams guess what forest use was being portrayed.

- Invite a forest manager or family forest owner in your area to talk to your class about how local forests are managed for multiple uses.



READING CONNECTIONS

Bryan, Nichol. *Los Alamos Wildfires*. Gareth Stevens. 2003. Describes the events surrounding the wildfire that raged in New Mexico in 2000 and the resulting debate over the policy of prescribed burning, or purposely setting fires as a means of forest management. Grades 4-5. ISBN: 0836855078.

Camp, William G. and Thomas B. Daugherty. *Managing Our Natural Resources*. Delmar Learning. 1995. Examines the nature, history, and management of natural resources ranging from soil and water to forests,

wildlife, and marine resources. Includes suggested activities and discussion of occupations in the field. Grades 6+. ISBN: 0827367163.

Leavell, Chuck and Nicholas Cravotta. *The Tree Farmer*. VSP Books. 2005. A proud grandfather takes his grandson on a magical journey through his tree farm where they discover the majesty of the forest and the many benefits of trees. Grades K-5. ISBN: 1893622169.

Shetterly, Susan Hand. *Shelterwood*. Tilbury House. 1999. Sophie watches her grandfather harvest trees that will be cut into boards to build houses and furniture.

He lets the tallest, wind-firm trees stay, to drop their seeds and start a new generation. Sophie discovers that when we take care of the woods, it provides for us for generations to come. Grades 2-6. ISBN: 0884482561.

Silverstein, Shel. *The Giving Tree*. HarperCollins. 1964. A moving parable about the gift of giving and the capacity to love, told throughout the life of a boy who grows to manhood, and a tree that selflessly gives him her bounty through the years. Grades PreK-2. ISBN: 0060256656.

