

Comparing the Impact of Multiple Uses

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Preview of Main Ideas: The Forest Service is a part of the Department of Agriculture, and Forest Service managers are expected to oversee “multiple uses” of National Forests and Grasslands. The balance of commercial, recreational, and natural uses is therefore variable from one location to another, and the “proper” balance is subjective and debatable. This classroom exercise focuses students’ attention on multiple land uses in National Forests and Grasslands and encourages them to evaluate the effects of each use on all other uses.

Connection with the Curriculum: Geography and biology/environmental studies classes; may be used in government classes.

Teaching Level: Grades 7-12.

Objective: Students will gain an understanding of multiple land uses and their effects on one another.

Standard #14: How human actions modify the physical environment.

Skill Set #4: Analyzing geographic information.

Theme: Human-Environmental Interaction.

Materials: 1. USDA map and contact information for all National Forests and Grasslands: “A Guide to Your National Forests.” Publication FS-418. Contact U.S. Geological Survey Information Services, Box 25286, Denver, CO 80225. Phone: 888-ASK USGS; e-mail: infoservices@usgs.gov Photocopy the three information panels and duplicate enough for each student (the three panels will fit on one 8 1/2 x 11” sheet).

2. Interagency map and information about public lands: “Outdoor America: Recreational Opportunities on Public Lands.” Prepared by USGS. Phone: 1-800-USA MAPS.

3. Internet access, if desired. In particular, the Public Lands Information Association (www.publiclands.org) provides much information about and links to public lands and the agencies that administer them. Click on “Agencies” and follow it to the Forest Service web site or go directly to the Forest Service site at www.fs.fed.us The “National Geographic Public Lands of the United States” color map (limited supplies) can also be ordered through PLIA. Free, but shipping charges apply.

Introducing the Lesson:

Present the topic “Public Lands.” Discuss with students the differences between private (individual) and public (collective) ownership of land and other objects. Use examples of the school, streets, and the city park to illustrate collective ownership. Compare them to privately owned property, such as a family’s home, driveway, and yard.

Display “Outdoor America: Recreational Opportunities on Public Lands,” a map which uses color symbols to identify areas administered by the several public land agencies. Note that approximately one-third of the nation is publicly owned.

Ask students to name the federal and state agencies that administer public lands and list them on the blackboard or overhead projector. After naming “Park Service,” students may need hints to name the others: “Forest Service,” “Bureau of Reclamation,” “Bureau of Land Management,” “Fish and Wildlife Service,” and “Army Corps of Engineers.” In addition, the “Tennessee Valley Authority” administers a system of dams and reservoirs, and state and local agencies manage a variety of public spaces and facilities. Review the responsibilities of each. Explain the map symbols and point out the areas of the U.S. administered by each agency. Note that the Forest Service is an agency within the Department of Agriculture, whereas the Park Service is within the Department of the Interior. Ask students to speculate on how this alignment might result in different responsibilities for the two agencies.

Distribute photocopies of information panels from “A Guide to Your National Forests.” Give students a few minutes to read them, then review the information as a class. ((e.g., What does the Forest Service do? How are National Forests used?) Discuss the terms “multiple use,” “sustained yield,” “renewable resources,” and “stewardship.”

For homework, assign students the task of listing the activities and land uses permissible on public lands. Encourage them to categorize items under “recreational” and “commercial.” Tell them their answers will provide the basis for the next class work and encourage them to think of how the physical environment must be changed to accommodate the items on their lists.

Developing the Lesson.

Arrange students in groups of 3-5. Assign them the task of comparing their homework and developing a comprehensive list of human activities and land uses permissible on public lands. Encourage them to classify items as recreational or commercial. (Depending on one’s perspective, of course, some activities could fit both categories). After students have had the opportunity to compare lists and discuss them briefly, discuss the uses as a class. Encourage students to imagine the possible conflicts

that several activities might generate if they were performed in the same place. How are disputes mediated? How does the Forest Service minimize conflicts?

Re-arrange students into their groups. Present to each group a copy of the following matrix of common activities permitted in National Forests. Explain to students that they are to rate the impact of each activity (listed in the column, at left) on all other activities (shown across the top of the page), using the scale suggested here and writing the rating number in the intersecting square:

- +2 major positive influence
- +1 minor positive influence
- 0 no influence or minimal influence
- 1 minor negative influence
- 2 major negative influence

(For example: Select “Bicycling” in the left column. What impact does bicycling have on the “Physical Environment?” Is the impact positive or negative? How strong is the impact? Next, move on to assess the impact of bicycling on “Hiking.” Continue until the group has assessed and rated the impact of bicycling on all items. Then, move on to the next item in the left column (“Canoe, raft”) and discuss the impact on each of the items at the top of the matrix).

Encourage discussion. Ask students to imagine both “best” and “worst” case scenarios when they evaluate the impact of each activity. When finished, have them tally each row (across) so that they can compare the impact of the activities. Discuss as a class. Some items may be “hot topics” in your community while others may not generate much interest among students. Furthermore, the list can be lengthened or shortened as desired.

Concluding the Lesson.

For homework, have students write general statements to explain their findings. Discuss the statements as a class.

Extending the Lesson.

Arrange a visit to a nearby park (or other publicly owned area, including the school campus). Have students map or otherwise inventory land uses and observe potential problems and conflicts. Back in the classroom, discuss student observations. If a visit is not possible, present maps and photographs of the public area. Encourage students to visualize competing land uses from the perspectives of various interest groups as they did while discussing competing land uses in the “Multiple Uses” exercise. Discussion might include the following:

- How has the physical environment been altered to accommodate human uses?
- Who makes decisions about how the space is used?
- What individuals or groups influence decisions about land uses and activities?
- Are there conflicts evident? How can they be resolved to the satisfaction of all?