

Design a Forest Resources Management Area

Grade Levels: 6-8

Correlation to Learning Standards

Next Generation Science Standards: MS-LS2-5

Objective: Students will create a forest resources management plan for a designated area.

Goal: Using the topographic base map and information provided, manage an area to allow timber production and to maintain other benefits of forest communities, such as wildlife, water quality and aesthetics.

Background:

Wooden Bridge Timber Company owns a section of land containing 640 acres. One perennial stream and two intermittent streams are found on the land. The perennial stream is located in the southwest quarter of the section. This managed forest area contains 160 acres of mixed even-/uneven-aged trees. In July, a windstorm struck the upland area, damaging and felling many of the trees and destroying wildlife habitat. Regeneration of the area could occur naturally, by allowing seedlings and saplings to grow, or by direct seeding and planting of seedlings.

Students will develop a forestry management plan for this area. Points to consider in designing a management plan include allowing for a variety of activities to occur simultaneously with regeneration. For instance, timber skid trails could be developed for hiking and downed trees could be harvested for wood products. Timber along the perennial stream could be maintained for water quality and as a wildlife habitat corridor.

Procedure:

1. Copy and distribute the “topographic map” to each team of four to six students.
2. Have students review the standard map symbols.
3. Students should read the background information and develop a management plan for the area on the topographic map you have provided to them. Each map should use standard map symbols and include a legend. A directional area should be a part of the map. The scale and contour interval for the map should be selected and noted by each team. For example, the scale could be one inch = 10 miles or one inch = one mile. Suggested contour intervals are 10 feet, 50 feet or 100 feet.
4. After completing the map, have students make a presentation to the class about their management plan. The presentation should include a summary of the research that led to specific features of the plan and a discussion of anticipated costs, environmental impacts and visitor use.

Evaluation:
























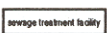




1. Quiz students on their recognition of the standard map symbols.
2. Evaluate the written and verbal presentation of the plan.
3. Evaluate the decision-making techniques used or considered (consensus, legislative, regulatory authority).

Extensions:

1. Create a flow chart of the actions required to implement the proposed management plan, including the groups involved at each stage.
2. Have teams exchange management plans. Ask them to review the plan and information from the presentation from the standpoint of a regulatory agency or as a group supporting or opposing the proposed action. Potential arguments could include the financial stability of the project, short- versus long-term economic gains and impacts on critical wildlife habitat. Have each team make a presentation on their decision to approve, disapprove, support or oppose the plan, including justifications.

Activity adapted from "Design a Resource Management Area," in the *Resource Conservation Education Kit*, 1994, Illinois Department of Natural Resources, Springfield, Illinois.

MAP SYMBOLS

	forest		marsh or swamp
	prairie		orchard
	house		airport
	school		cemetery
	church		primary highway
	mine		secondary highway
	barn/warehouse		unimproved road
	lake or pond		dam carrying road
	sand beach		trail
	picnic area		footbridge
	campground		bridge
	levee		sewage treatment facility
	powerline		intermittent stream
	quarry		perennial stream

