



Forest Management Activity

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District: Wausaukee
School District,
Wausaukee, WI

2017

Overview:

Students will increase their understanding of the forest as a renewable resource by learning about forest management techniques and developing a forestry management plan.

Featured Externship Business:

[Verso Corporation](#)

Subject:

Environmental Science, Earth Science, Biology, Agriculture

Grade Level:

9-10

Learning Objectives:

After doing this activity, students should be able to:

- Develop an understanding that the forest is a renewable resource that is to be conserved and utilized
- Learn the different management techniques that are currently being employed in forestry
- Discover how the forest impacts their everyday life

Workplace Readiness Skill:

- | | |
|--|--|
| <input type="checkbox"/> Social Skills | X Communication |
| X Teamwork | X Critical Thinking |
| <input type="checkbox"/> Attitude and Initiative | X Planning and Organization |
| <input type="checkbox"/> Professionalism | <input type="checkbox"/> Media Etiquette |

Type of Activity:

- Individual
- X Small Group
- Whole Class

Time: Two 90-minute block classes

Academic Standards for School Counseling:

Personal/Social Development Domain:

Content Standard D: Students will acquire the knowledge, attitudes and interpersonal skills to help them understand and respect self, others and individuals from different cultural backgrounds.

Core performance standard 2: Acquire and demonstrate acceptable, interpersonal skills as it relates to understanding oneself and others.

Content Standard E: Students will make decisions, set goals, and take necessary action to achieve goals

Next Generation Science Standards:

HS-LS2-6 Evaluate claims, evidence and reasoning that complex interactions in ecosystems maintain relatively consistent numbers Types of organisms in stable but changing conditions may result in a new ecosystem.

Wisconsin Standards for Agriculture, Food and Natural Resources Standards:

NR3 Students will apply knowledge of natural resources to production and processing industries.

NR3.a.15.h List and describe uses of tree species and determine when to harvest forest products.

Materials:

- Computers
- Key Concepts worksheet
- Timber Research worksheet

Directions:

1. In groups of 2-3, students will examine each of the Key Concepts (worksheet below) and list at least one Pro and one Con about each of the 10 Key Concepts listed. (20 points)
2. Students will research the value of types of timber to determine the amount of money a company can make from selling various types of wood. Groups should research 3 different types of hardwoods and 3 different types of softwoods and

compare prices using the Timber Research chart (worksheet below). Use Wisconsin pricing. (12 points)

3. Students will then receive the following information (see complete grading rubric with detailed requirements attached):

“You and your group have been assigned to 1,000 acres of forested land.

Develop a brief management plan based on the following:

- a. Which hardwoods and softwoods are found on your plot? List percentages of each type of wood. Use information from your Timber Research chart.
- b. Which cutting practices will you use and explain why?
- c. What does the habitat look like on your land?
- d. What will you do to protect the existing habitat (if that is a concern)?
- e. How will you protect your resources for future use?

(45 points)

Wrap-up:

Students will share out how they decided to manage their 1,000 acres of forest land.

Extension Activity:

Have a forester come in and speak to the students and take either a regular or virtual field trip to see what a managed forested area looks like.

Invite individual(s) from Verso Corporation to serve as the panel for the forest management presentations and encourage them to provide real-world feedback on the student plans.



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Forestry Key Concepts

Term (definition)	Pro(s)	Con(s)
Shelterwood Cut: Harvest both small and some large trees leaving larger trees to remain as seed trees.		
Thinning from above: Harvest of trees by diameter until the stand of timber is about 30% of the stand is left.		
Thinning from below: Harvest of smaller trees in increasingly larger diameters until 60% of the stand is left for growing.		
Improvement thinning: Designed by a professional forester to provide income, habitat, and to protect all other resources by reducing to 60% according to size, species, and spacing.		
Silvicultural Clearcut: The removal of all trees in one cutting		
Seed Tree: Very similar to the shelterwood cut but leaves fewer trees and dependent upon the trees to reestablish themselves by seed dispersal.		
Wildlife		
Regeneration of the forest		
Resource protection		
Timber Value		

Timber Research chart

Complete the following chart with information on three hardwoods and three softwoods found in Wisconsin. Include the Wisconsin pricing in your chart.

	Type of wood	Wisconsin pricing
Hardwood 1		
Hardwood 2		
Hardwood 3		
Softwood 1		
Softwood 2		
Softwood 3		

Grading Rubric for 1,000 Acre Forest Management Activity

	Possible Points	Your Points
MAP		
Draw a simulated forested area on an 8.5 x 11 inch piece of paper. You are creating an aerial view. of your land.	10	
Label the stands of trees---hardwoods and softwoods--and include percent of each type contained on your land.	5	
Draw in and label any water resources or other resources that your land may have.	5	
Indicate which animals and where they may live and/or paths they may have through your area.	5	
WRITTEN REPORT		
Explain the cutting practices you will use and explain why you chose them.	10	
Explain the natural resources on your land and how you are going to protect and conserve them as you harvest your trees.	10	
TOTAL	45	
Comments:		