FIELD ENHANCEMENT 2

Are Forests Important Today?

OBJECTIVES

Upon completion of this lesson, students will be able to:

- List recreational uses of forests.
- Describe how the forest provides products and jobs for people.
- Describe the importance of forests for wildlife.

SUBJECT AREAS

Arts, Language Arts, Science

LESSON/ACTIVITY TIME

- Total Lesson Time: 70 minutes
- Time Breakdown:

Introduction.....5 minutes
Activity .....40 minutes
Conclusion.....25 minutes

TEACHING SITE

Any wooded area

CLASSROOM LESSON CONNECTIONS

This lesson ties closely with Classroom Lesson 6, *Forests Are Important to You and Me*.

NUTSHELL

In this lesson, students go on a scavenger hunt to play *Forest Values Bingo* and discover why forests are ecologically, economically, and socially valuable.

BACKGROUND INFORMATION

Whether we realize it or not, we depend on forests in our daily lives. Forests play an important role in our **environment**, our **economy**, and our social well-being.

Forests provide habitat for wildlife. Many animals depend on the forest for survival. The forest provides animals with all of their needs: water, food, shelter, air, and space. Some animals, like squirrels, have adapted to living in urban forests. Others, like fishers, need to have larger expanses of forest in order to survive.

Besides providing for wildlife, forests have other **ecological values**. Trees help keep our air clean by filtering particulates and storing carbon. During photosynthesis, trees use carbon dioxide and give off oxygen used by humans and animals. Shade is another benefit of forests. Shade from trees keeps the forest cool for inhabitants. Urban forests help keep the neighborhood cool. In addition, forests help prevent soil erosion. Plants and leaves that cover the ground as well as the roots growing in the ground keep soil from eroding away. This in turn keeps our rivers and streams cleaner.

Forests play a critical role in the economy of Wisconsin. Wood and paper products plus many cosmetic and grocery items are made from raw materials harvested from our forests. Americans depend on products like paper, lumber, and cardboard every day. What some people may not realize is that products like liquid smoke, candy wrappers, milk cartons, and thousands of others are made from parts of trees harvested in Wisconsin.

VOCABULARY

Ecological Value: The worth of a forest in terms of what it contributes to an ecosystem as a whole.

Economic Value: The worth of a forest in financial terms (dollars and cents).

Economy: The prosperity of an area based on the trading of money for products and services.

Environment: The air, water, soil, and organisms that surround and affect us.

Scat: A scientific term for animal feces.

Social Value: The worth of a forest to people (e.g., aesthetics, culture, education, and recreation).

MATERIALS LIST

FOR EACH STUDENT

- One copy of Student Page **1A**, **B** OR **C**, *Forest Values Bingo Cards*
- Pencil
- Drawing paper
- Crayons/markers
- Clipboard or other writing surface

TEACHER PREPARATION

- Visit the teaching site in advance to decide on the boundaries within which your students will work.

SAFETY PRECAUTIONS

Set up boundaries for your students to work within. Make sure you will be able to see all the students at all times. Children should walk, not run, at all times and be aware of rough terrain.

It's not only Americans who benefit from Wisconsin's forests. Our state exports forest products all over the world. In order for these products to end up in the store, people have to make them. That means lots of jobs! Forest products and forest-based recreation employ 18 percent of Wisconsin's workforce. Foresters, loggers, paper mill workers, carpenters, factory workers, builders, and many others depend on materials from the forest.

Forest recreational activities not only bring tourism dollars to our state, but also help many Wisconsin residents relax and refresh themselves. From hiking and birdwatching to riding snowmobiles and all-terrain vehicles, recreational opportunities abound in our beautiful forests. Simply, the aesthetics of our splendid forests add to our social well-being.

PROCEDURE

INTRODUCTION

Ask your students what a forest provides that is valuable to them. *(Possible answers include wood, wildlife, a place to hike, clean air, etc.)*

Explain to your students that forests are valuable to us in several ways. Forests are valuable to our social well-being. That means they provide beauty and a place to participate in fun activities like camping and hiking. Explain that forests are valuable to wildlife. They provide animals with food and shelter. Ask if any of their parents work as carpenters, foresters, loggers, or in a paper mill. *(Some may answer yes.)* People in these jobs use materials from the forest to make products we use every day like paper, furniture, and houses. In this way the forest is valuable to our economy. Have students brainstorm other jobs associated with the forest. *(Wildland firefighter, park ranger, ecologist/scientist, sawmill positions.)* The forest is also valuable to our environment. Leaves help keep our air clean. Trees provide shade to keep us cool, and roots keep the soil from eroding.

ACTIVITY

1. Explain to your students that they will be playing a game of bingo to learn more about the value of forests. Begin by showing your students the boundaries they will work within while playing this game.

2. Hand each student one of Student Page **1A**, **B** OR **C**, *Forest Values Bingo Cards,* a pencil, and a clipboard.

3. Explain to your students that each column on their card represents a different type of value. Tell your students that their job is to walk around inside the boundaries and look for the values listed on their bingo card. When they find one, they should draw an "X" through that square. In order to win at this bingo game, your students need to get five in a row, either across or diagonally. Since all the values are important, getting five in one column does not count.

4. Explain that the first column contains recreational uses for forests. Ask one of your students to raise his or her hand and tell you what is happening in one of the pictures in the first column on their card. *(The pictures show people skiing, hunting, birdwatching, hiking, camping, fishing, biking, riding snowmobiles, and snowshoeing.)* Explain that in order to mark a square in the first column, they need to see a place where that particular recreational activity can be done.

5. Next, ask your students what they see in the second column on their cards. *(Animals like a rabbit, a squirrel, a deer, an ant, a bird, a spider, a raccoon, and a fly.)* Explain that to mark a square in the second column, they need to actually see that animal.

6. Ask what they see in the third column. *(Pictures of tracks, scat, deer rubbings, a nest, a feather, chewed-up leaves, a hole dug in the ground and a pile of seed hulls under a tree.)* Explain that these are all signs of wildlife. For the third column, they need to see that particular sign of wildlife.

7. Ask what pictures they see in the fourth column. *(Forest products like a Christmas tree, maple syrup, a book, a strawberry plant, a chair, a table, a raspberry plant, toilet paper, and a fruit tree.)* Explain that for the fourth column, they need to see a tree or plant that can produce the product shown in the picture.

8. The fifth column contains ways that forests are valuable to the environment. Ask your students which picture shows how the forest affects our air. *(The picture of the leaf taking in CO_2 and giving off O_2.)* Have students point to at least one picture that shows how the forest keeps us and our homes cool. *(They should point to the picture of someone sitting in the shade, or the picture of the tree shading the house.)* Ask which pictures show how the forest helps prevent soil erosion. *(The picture of the roots holding the soil and the picture of plants growing in the soil.)* Point out the last picture to your students. It shows trees serving as a windbreak. Explain that windbreaks help prevent soil erosion, as well as insulate our homes against cold winds. Tell your students that in order to mark a square in the fifth column, they need to see those particular examples of how the forest helps our environment.

9. Send your students out to search the woods for values. Give them about fifteen minutes to work. If a student completes his or her bingo card before the time is up, have him or her help another student.

10. When everyone has gotten bingo at least once, call the group back together to discuss what they found. Ask your students to share which recreational activities they thought could be done in this forest. Ask them if they saw any wildlife or signs of wildlife. Ask which forest products come from materials in this forest. Ask for examples of the ecological values of this forest. *(Answers will vary depending on the site.)*

CONCLUSION

This portion of the lesson could be done back in the classroom.

1. Lead your students in a discussion about why all the values are important. Ask what might happen if the forest didn't have values for the environment (animals, air, soil and water quality, etc.). *(Answers may include: our air would be polluted, our climate would be warmer, and our soil would be eroded.)* Ask what life would be like if the forest did not have recreational value. *(We would not have a place to hike, bike, hunt, etc.)* Ask what might happen if the forest did not provide benefits for wildlife. *(Many of the wildlife we have in Wisconsin might not exist at all because many of them depend on the forest for survival.)* Ask what might happen if the forest did not have economic value. *(We would not have many of the products that we use every day and many of our parents would not have jobs that depend on the forest.)* Explain that the reason they had to get bingo across or diagonally on the card was because we need all types of values from the forest. Getting bingo in a downward column on their bingo card would mean the forest was only valuable for one thing.

2. Give each student a piece of drawing paper. Ask them to fold it in half in both directions so that the paper is divided into four squares. Tell your students to draw four different pictures. One picture should show an ecological value of forests, one picture should show an economic value, one picture should show a social value and the last picture should show why forests are valuable to them.

3. Once everyone has completed their drawings, gather your students together. Ask several or all your students to share about their drawings.

SUMMATIVE ASSESSMENT

Have each of your students write a story about what life would be like if there weren't any forests. At least one paragraph should describe what the environment might be like if there weren't any forests. They should include at least one paragraph about how they would get by without forest products. In addition, at least one paragraph should describe how they would fill their free time if they couldn't use the forest or forest products for recreation.

REFERENCES

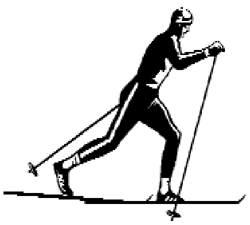
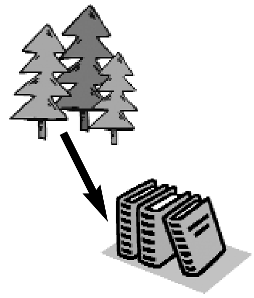
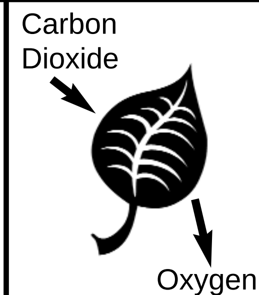
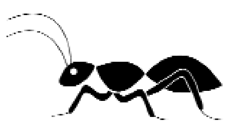
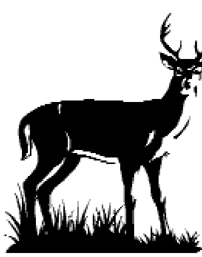
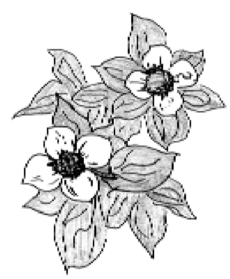
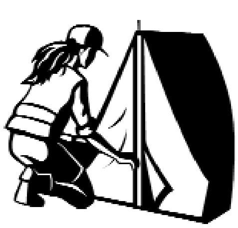
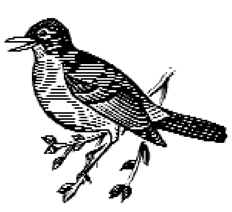
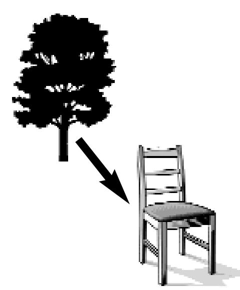
Finan, A. S. (2000). Wisconsin Forests at the Millennium: An Assessment. Madison, WI: Wisconsin Department of Natural Resources. PUB-FR-161 2000.

RECOMMENDED RESOURCES

●●● BOOK ●●●

The Giving Tree by Shel Silverstein (HarperCollins, 1964.) Discover the many values of a tree to a boy throughout his life.

FOREST VALUES BINGO CARD A

SOCIAL VALUE	WILDLIFE VALUE	WILDLIFE VALUE	ECONOMIC VALUE	ECOLOGICAL VALUE
				
				
				
				
				

FOREST VALUES BINGO CARD B

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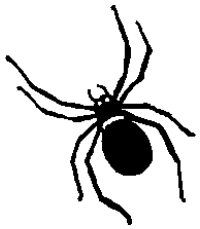
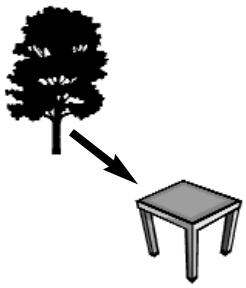
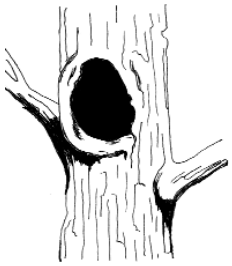
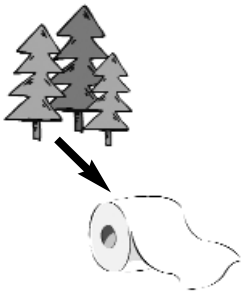
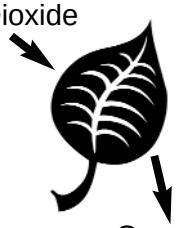
				
				
				Carbon Dioxide  Oxygen
				
				

FOREST VALUES BINGO CARD C

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		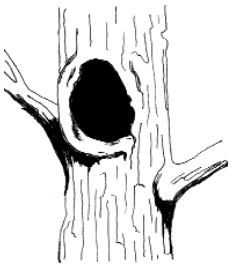		
			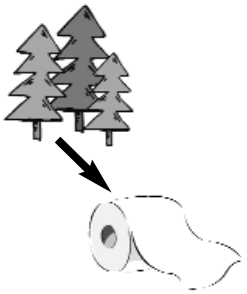	
				
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			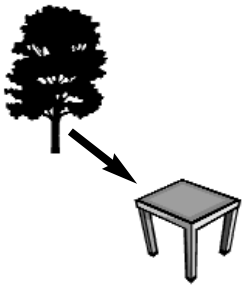	


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