

Field Enhancement 2: Are Forests Important Today?

NUTSHELL

In this lesson, students go on a scavenger hunt and discover why forests are culturally, ecologically, economically, and socially valuable.

ENDURING UNDERSTANDINGS

- Humans value forests for their aesthetic, cultural, ecological, economic, educational, and recreational benefits.
- Forests impact air and water quality, prevent soil erosion, and provide habitat for wildlife.
- Humans depend on forests for products and services that they use every day.
- Choices humans make today directly affect our ability to sustain forest ecosystems essential to meeting future needs.

ESSENTIAL QUESTION

- What evidence can I find of the aesthetic, cultural, ecological, economic, educational, and recreational benefits of the forest?

OBJECTIVES

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

- List recreational and cultural 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

- Introduction5 minutes
- Activity 140 minutes
- Conclusion25 minutes

TEACHING SITE

Any wooded area.

CLASSROOM LESSON CONNECTIONS

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

STANDARDS CONNECTIONS

Standards for this lesson can be viewed online at the LEAF website (leafprogram.org).

BACKGROUND INFORMATION


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

Forests provide habitat for wildlife. Many animals depend on the forest for survival. The forest provides animals with all 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 to survive.

Besides providing for wildlife, forests have other **ecological values**. Trees help keep our air clean by filtering particulates and storing carbon. Trees are also a climate solution due to their ability to take in carbon dioxide from the atmosphere and store carbon in their cells. 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.

MATERIALS LIST

For Each Student

- Copy of Student Pages  **1A-B, Scavenger Hunt**
- Clipboard or other writing surface
- Pencil
- Crayons or markers (optional)

For the Teacher

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

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 keeps our rivers and streams cleaner.

Forests provide **economic value** in 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 tree parts harvested in Wisconsin.

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. 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 a large 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 bird-watching to riding snowmobiles and all-terrain vehicles, recreational opportunities abound in our beautiful forests. People also visit the forests to practice their cultural traditions like maple sugaring, hunting, and gathering. These **social values**, and the aesthetic beauty of the forest, add to our well-being.

VOCABULARY TERMS

Aesthetic Value: The beauty of a forest.

Cultural Value: The worth of a forest in terms of what it contributes to peoples cultural traditions.

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).

PROCEDURE

Introduction

1. Ask your students what a forest provides that is valuable to them. (*Possible answers include wood, wildlife, a place to hike, clean air, etc.*)
2. 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.
3. Tell students they will be going outdoors today and remind them about the importance of following the rules established by the ARPA and NAGPRA acts and abiding by the Leave No Trace principles. Information about ARPA, NAGPRA, and Leave No Trace can be found in Field Enhancement 1.

Activity 1

1. Explain to your students that they will be participating in a scavenger hunt to learn more about the value of forests. Begin by showing your students the boundaries they will work within while participating in the scavenger hunt.
2. Hand each student a copy of Student Pages **1A-B, Scavenger Hunt**, a pencil, and a clipboard. (*OPTIONAL: Allow students to use iPad or other devices that can take pictures.*)
3. Explain to your students that each row on their card represents a different type of value. To be successful in the scavenger hunt, they need to record at least one value in the first four rows (cultural/aesthetic, ecological, economic, and recreational/social) and two values in the fifth row (wildlife). Tell them that their job is to walk around inside the boundaries and look for activities that would fit under the values listed at the front of each row. When they find one, they should sketch a picture of it or describe it in the row. (*If they are using iPad or cameras, they should take a picture of it.*)
4. The first row is for ways forests provide **cultural or aesthetic value**. Ask students to share examples of what might belong in this row. (*Maple sugaring, hunting, gathering, making birch bark baskets, appreciating the beauty of the forest, forest bathing.*) Explain that to record an item in the first row, they need to see a specific place in the forest where that cultural/aesthetic activity can be done. Once they find a place they should sketch or describe the activity or location (or both) in row one.
5. The second row is for ways forests are valuable to the environment. Ask students how the forests affect our environment. (*The forests take in oxygen and give off carbon dioxide, they keep areas cool by providing shade – this is especially true for rivers, roots of trees hold prevent erosion by holding soil together.*) Tell your students that in order to record an item in the second row, they need to see a particular example of how the forest helps our environment.

6. The third row is for ways forests are valuable to the economy. Ask students how the forests impact our economy. (*Forests provide us with products like Christmas trees, paper, furniture, toilet paper, fruit, building materials, wood chips, etc.*) Explain that for the third row, they need to see a tree or plant that can produce a specific product and then sketch or describe either that tree or the product (or both) in the third row.
7. The fourth row is for recreational uses for forests. Ask one of your students to tell you something they think could belong in the fourth column. (*People skiing, bird-watching, hiking, camping, fishing, biking, riding snowmobiles, and snowshoeing.*) Explain that to record an item in the fourth row, they need to see a place where that particular recreational activity can be done. Once they find a place they should sketch or describe the activity or location (or both) in row four.
8. The last row (fifth) is for wildlife values of the forest. Explain to students that they need to record two different items here. One must be a living example of wildlife. Ask them what animals they might be able to see. (*Rabbit, squirrel, deer, ant, bird, spider, raccoon, fly.*) Tell them they must actually see the animal, bird, or insect, before they can sketch or describe it in row five. The other item they need to record is a sign of wildlife. Ask them to share what types of signs they might see. (*Tracks, scat, deer rubbings, nests, feathers, chewed-up leaves, a hole dug in the ground, pile of seed hulls under a tree.*) Explain that they need to see a sign of wildlife before they can sketch or describe it in row five.
9. Send your students out to search the woods for values. Give them about 15-20 minutes to work. If a student completes their scavenger hunt before the time is up, have them help another student.
10. When everyone has filled each row of the scavenger hunt, call the group back together to discuss what they found. Ask your students to share which cultural and 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

(**NOTE:** This portion of the lesson could be done back in the classroom.)

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 cultural or recreational values. (*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 find an item to record in each row was because we need all types of values from the forest.

"The woods are lovely, dark and deep. But I have promises to keep and miles to go before I sleep."

★ Robert Frost ★

SUMMATIVE ASSESSMENT

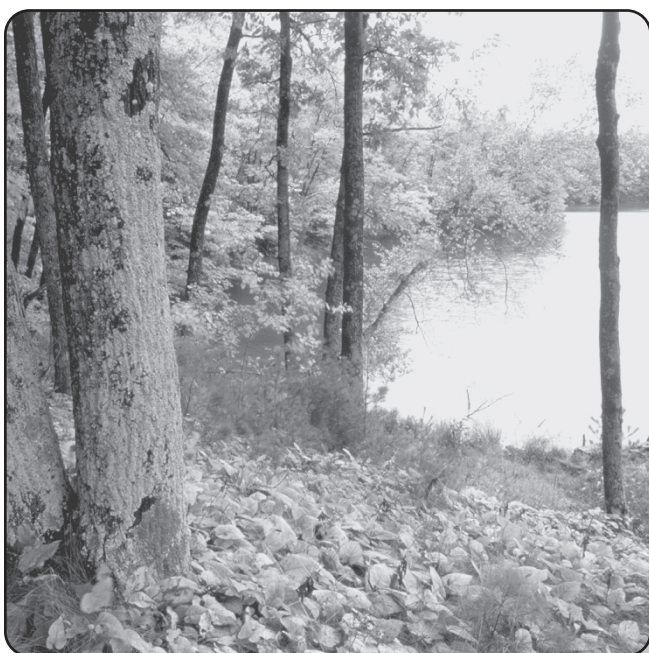
Have your students write a story with at least three paragraphs about what life would be like if there weren't any forests. At least one paragraph should describe what the environment might be like if there weren't any forests and the impact it would have on wildlife. They should include at least one paragraph about how they would get by without forest products. In addition, at least one paragraph should describe how their lives would be impacted if they could not use the forests for cultural or recreational activities.



RECOMMENDED RESOURCES

Book

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



NOTES



SCAVENGER HUNT

<p>Cultural/ Aesthetic Values</p> <p><i>List or sketch at least one value.</i></p>	
<p>Environmental/ Ecological Values</p> <p><i>List or sketch at least one value.</i></p>	
<p>Economic Values</p> <p><i>List or sketch at least one value.</i></p>	

SCAVENGER HUNT

Recreational Values

*List or sketch
at least one
value.*

Wildlife Values

*List or sketch at
least two values;
one of a living
animal and one of
a sign of wildlife.*