

Forest Fact and Fiction

Writing about the forest community

Standards Addressed

Environmental Education Content Standards:

- A. Questioning and Analysis: A.4.4.
- B. Knowledge of Environmental Processes and Systems: B.4.1, B.4.4, B.4.5, B.4.6, B.4.10, and B.4.12.
- D. Decision and Action Skills: D.4.2, D.4.3, and D.4.5.

Science Content Standards:

- A. Science Connections: A.4.5.
- C. Science Inquiry: C.4.6.
- E. Earth and Space Science: E.4.6 and E.4.8.
- F. Life and Environmental Science: F.4.1, F.4.3, and F.4.4.
- H. Science in Social and Personal Perspectives: H.4.2.

English Language Arts Content Standards:

- B. Writing: B.4.1, B.4.2, and B.4.3.
- D. Language: D.4.1.
- F. Research and Inquiry: F.4.1.

Math Performance Standards (optional):

- A. Mathematical Process: A.4.2.
- E. Statistics and Probability: E.4.1.

Social Studies Content Standards:

- A. Geography: People, Places, and Environments: A.4.1, A.4.2, and A.4.4.
- C. Political Science and Citizenship: C.4.1.

Key Concepts/Content

- 🌲 To relate unifying themes in a forest community such as interaction, constancy, change, evolution, energy, and form and function through observation.
- 🌲 To know what makes a forest a forest.
- 🌲 To know where forests are located in Wisconsin (optional: in the U.S. and the world).
- 🌲 To understand essential elements for plant and animal survival in a forest.

- 🌲 To develop a better understanding of predator/prey relationships and food chains within the forest community.
- 🌲 To write about the life cycle of a tree.
- 🌲 To see seasonal changes that occur in temperate deciduous and coniferous forests found in Wisconsin.
- 🌲 To know about plant and animal adaptations that are tailored for life in the forest.
- 🌲 To see how trees and forests are useful to the animals that live in the forest as well as to people.
- 🌲 To know why forests need to be conserved and what people, especially children, can do to help care for forests.

Teacher Background

Wisconsin's history is rich in forestry. From the early lumbering days to today's tourism, the natural beauty of Wisconsin's forests is evident. The forest provides many natural resources. It is important that students have a basic understanding of this important Wisconsin resource.

Before this activity, teachers should lead students through learning experiences that introduce and reinforce the key concepts. Students should also have practice writing paragraphs.

Students will be creating a book that expresses their knowledge about Wisconsin forests. They will create a big picture view of the forest and its many values. You may wish to assign this project as an individual, pair, or small group project. The completed books can be placed in the school library for other students to check out.

Getting Ready

- Prepare parent letter, student project description, and grading tool. Copy for each student.
- Copy graphic organizer for each student.
- Arrange with library/media specialist for student books to be circulated in the school library.
- Call local decorating stores to acquire old wallpaper sample books.

Safety Issues



- ◆ Arrange for parent help if choosing option 2—publishing.
- ◆ Students should not be allowed to use the utility knife to cut wallpaper.

- ✦ Parent Letter (see sample)
- ✦ Student description of project, including grading checklist (see sample)
- ✦ Access to resources used during forestry unit
- ✦ Access to final copy paper, crayons/markers/colored pencils
- ✦ Publishing materials:

Option 1	Option 2
Plastic bindings	Cardboard or tag board for book cover (cereal boxes work well, but must be larger than the final copy paper)
Binding machine	Book tape and masking tape
Envelopes cut in half for library card	Stapler
Library check out cards	Glue
Plastic sheets or cardstock for book cover	Scissors
	Safety utility knife
	Wallpaper or wrapping paper
	Envelopes cut in half for library card
	Library check out cards

Procedures

1. Introduce the project to students. Use the Forest Book Guidelines or create a class description of what a good forest book would include. Sharing an example or two of prior student work can help clarify the project and provide a model. Send home the parent letter the day the project is introduced.

2. Establish a timeline for completion. Students should have due dates for the plan, rough draft, self-editing, peer-editing, adult editing, and final copy completion.
3. Share the grading process with students. Use the provided rubric, adapt it to your needs, or create your own with students' input.
4. Have students plan their stories using a graphic organizer (see sample for one option). Check each student plan to make sure requirements are included.
5. Allow students class time to work on their books. They will be eager to share them with you and each other as they go. Use computer resources, if they are available, to create the final copy (or even rough draft!), showing students how to make page breaks and leave space for their illustrations.
6. Edit. Students should be given a copy of the grading rubric or checklist as they self-edit and peer-edit. The teacher, adult assistants, or parents can do adult editing.
7. Final copy and illustrations. Students may type or neatly write by hand the final copy. While doing this, they should determine placement of illustrations and page breaks. Student-created illustrations should be encouraged over clip-art. Illustrations can be made using any art medium, but remember, other students will handle books. (Adding a dedication page at the front and an "About the Author" page at the end is a fun way to personalize each book.)
8. Publish the book. Choose either option 1 or 2. Both create nice books.

Option 1	Option 2
<ul style="list-style-type: none"> • Students design cover and title page, making sure to include title and author. • Assemble completed pages in order and number them. Put cover and end page in place. (Plastic transparency sheets may also be used to protect the cover.) • Bind with binding machine. • Glue half an envelope with opening toward the top in the back of the book. • Fill out proper information on the library card and insert it into the envelope. 	<ul style="list-style-type: none"> • Students design title page, making sure to include title and author. • Assemble completed pages in order and number them. Put title page and end page in place. • Staple pages near the left edge in 3-4 places. • Cut cardboard to desired size and shape. Fold to create a center. • Tape stapled pages to the center of the cardboard. • Adults should help students cut wallpaper or wrapping paper to the right size to cover the outside of the cardboard. • Glue wallpaper or wrapping paper to the cardboard. Fold edges to the inside and tape to secure. • Glue blank paper on the inside front and back to cover the wallpaper/wrapping paper edges and tape. • Students should design the cover, making sure to write (Sharpie markers work best) the title and author on the front. • Glue half an envelope with opening toward the top in the back of the book. • Fill out proper information on the library card and insert it into the envelope. • Allow to dry.

- 9. Assess student books using the predetermined rubric. (Do not write on the final book copy because it will be placed in the school library.)
- 10. Place student books in the school library for about a month, providing an audience for student work. (If students have younger reading buddies, they may enjoy sharing their books first!)

Evidence of Student Understanding

Teachers may wish to document each stage of the writing process upon completion for each student.

Sample Rubric:

4	<ul style="list-style-type: none"> ▪ Student included all required concepts. These were clearly explained with examples. ▪ Student included several concepts about forests not required. These were clearly explained with examples. ▪ Student carefully followed each step in the writing process on time. ▪ Story sequence is logical (it has a plot and makes sense). ▪ Story shows thoughtful use of grammar and punctuation. (Sentences are complete and express clear thoughts.) ▪ Story shows thoughtful use of paragraphing. (Main idea and supporting details are obvious.) ▪ Final copy is neatly done with thoughtful illustrations. Final copy shows exceptional effort. ▪ Student used class time wisely.
3	<ul style="list-style-type: none"> ▪ Student included all required concepts. These were clearly explained with examples. ▪ Student included one or two concepts about forests not required. These were clearly explained with examples. ▪ Student carefully followed each step in the writing process on time.

	<ul style="list-style-type: none"> ▪ Story shows thoughtful use of paragraphing. (Main idea and supporting details are obvious.) A few errors may be present. ▪ Final copy is neatly done with thoughtful illustrations. ▪ Student used class time wisely.
2	<ul style="list-style-type: none"> ▪ Student included most required concepts. These were explained with examples. ▪ Student followed most steps in the writing process, or didn't complete them on time. ▪ Story sequence is logical (it has a plot and makes sense). ▪ Story shows attempt at thoughtful use of grammar and punctuation. (Sentences are complete and express clear thoughts.) Several errors may be present. ▪ Story shows attempt at thoughtful use of paragraphing. (Main idea and supporting details are obvious.) Several errors may be present. ▪ Final copy is done with illustrations. Lack of effort and thoughtfulness may be evident. ▪ Student did not use class time wisely.
1	<ul style="list-style-type: none"> ▪ Student included few required concepts with explanations and examples. ▪ Student followed few steps in the writing process, or didn't complete them on time. ▪ Story sequence lacks logic. ▪ Story shows little attempt at thoughtful use of grammar and punctuation. Several errors may be present. ▪ Story shows little attempt at thoughtful use of paragraphing. (Main idea and supporting details are not obvious.) Several errors may be present. ▪ Final copy is done with illustrations. Lack of effort and thoughtfulness may be evident. ▪ Student did not use class time wisely.

Comments:

Sample Checklist

Description of Expectation	Points Received
<p>Inclusion of required concepts, explained with examples (5 points each):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Examples of interaction, constancy, change, evolution, energy, and form and function in a forest community. <input type="checkbox"/> What makes a forest a forest? <input type="checkbox"/> Where are forests located in Wisconsin? <input type="checkbox"/> What do plants and animals need for survival in a forest? <input type="checkbox"/> Predator/prey relationships and food chains within the forest community. <input type="checkbox"/> Life cycle of the tree. <input type="checkbox"/> Seasonal changes that occur in the forests found in Wisconsin. <input type="checkbox"/> Examples of plant and animal adaptations, and an explanation of why each adaptation helps the plant or animal to survive in the forest. <input type="checkbox"/> Ways that trees and forests are useful to the animals that live in the forest as well as to people. <input type="checkbox"/> Why forests need to be cared for and what people, especially kids, can do to help care for forests. <input type="checkbox"/> Ways that people manage the forests to provide for wildlife and for the recreation and economic needs of people. <p>Inclusion of non-required concepts, explained with examples (5 points each):</p>	
Timely completion of each step in the writing process (5 points)	
Thoughtful use of grammar and punctuation (5 points)	
Thoughtful use of paragraphing (5 points)	
Story sequence is logical and makes sense (5 points)	
Final copy is neatly done with thoughtful illustrations (5 points)	
Wise use of class time (5 points)	
Point Total	
Grade for Forest Book	

Comments:

Sample Parent Letter

Dear Parents/Guardians,

As an assessment of student learning, fourth grade students will be writing forest books. The books will reflect the forest concepts we have been learning. Some of these include:

- ✓ Examples of interaction, constancy, change, evolution, energy, and form and function in a forest community.
- ✓ What makes a forest a forest?
- ✓ Where are forests located in Wisconsin?
- ✓ What do plants and animals need for survival in a forest?
- ✓ Predator/prey relationships and food chains within the forest community.
- ✓ Life cycle of the tree.
- ✓ Seasonal changes that occur in the forests found in Wisconsin.
- ✓ Examples of plant and animal adaptations, and an explanation of why each adaptation helps the plant or animal to survive in the forest.
- ✓ Ways that trees and forests are useful to the animals that live in the forest as well as to people.
- ✓ Why forests need to be protected and what people, especially kids can do to help protect forests and reverse the damage people have done.
- ✓ Ways that people manage the forests to provide for wildlife and for the recreation and economic needs of people.

Each student will plan out his/her book and write it following the writing process. Once the rough draft is complete, students will self-edit, then share their work with a peer. Approximately 5 hours of class time will be made available for writing. Parents may be asked to aid students with the adult edit phase of the writing process. During this phase, parents may help students with grammar and punctuation, encourage them to improve content and paragraphing, and talk out their thoughts to make them more complete. Do not feel that everything must be perfect. The final copy must still reflect the true work of the child.

Rough drafts are tentatively due (_____). Final copies with illustrations are tentatively due (_____).

Students will be publishing each book using cardboard and wrapping or wallpaper. Students will need to bring a large cereal box or 2 pieces of cardboard slightly larger than a regular 8-1/2 x 11 inch piece of paper. They should also bring in wallpaper or wrapping paper to cover the books. Volunteers to help with the publishing process on the 25th (from approximately 12:30 to 2:00) would be greatly appreciated!

After the books are published and graded (for both science content and writing skills), they will be placed in the school library for other students in the building to check out.

Thank you for your continued support.

Sample Student Guidelines for Forest Book

Forest Book Guidelines

1. Your book must include the following concepts of life in Wisconsin's temperate deciduous forests:
 - ✓ Examples of interaction, constancy, change, evolution, energy, and form and function in a forest community.
 - ✓ What makes a forest a forest?
 - ✓ Where are forests located in Wisconsin?
 - ✓ What do plants and animals need for survival in a forest?
 - ✓ Predator/prey relationships and food chains within the forest community.
 - ✓ Life cycle of the tree.
 - ✓ Seasonal changes that occur in the forests found in Wisconsin.
 - ✓ Examples of plant and animal adaptations, and an explanation of **why** each adaptation helps the plant or animal to survive in the forest. (For example: a woodpecker's beak allows it to "drill" holes in the bark of a tree to get to the bugs underneath to eat.)
 - ✓ Ways that trees and forests are useful to the animals that live in the forest as well as to people.
 - ✓ Why forests need to be conserved and what people, especially kids, can do to help care for forests.
 - ✓ Ways that people manage the forests to provide for wildlife and for the recreation and economic needs of people.
2. The book does not have to read like a report. The above requirements can be covered in a story too. For example, you could tell the story of a day in the life of a grub. However, you need to explain what each concept means and give at least one example found in the forest.
3. Your final copy may be either typed or neatly handwritten. Length depends upon your story.
4. Your sentences should be complete with correct punctuation. Your paragraphs should have a clear main idea and supporting details.
5. Your final copy must have illustrations and will be bound into book form in class.

6. You may also choose to include other ideas you learned about the forest such as:
 - ✓ Layers of the forest
 - ✓ Family life of animals, birds, or insects
 - ✓ Unique plants or animals that are found only in the forest
 - ✓ People in Wisconsin who have been important to the history of forests and forestry
7. Have fun and do your best work!

References/ Resources

- 📖 Ranger Rick's *NatureScope: Trees are Terrific*
 - Great resource for activities with reproducible pages for teaching about trees in the community. This resource also has good background information for teachers.

Websites:

- 📖 Missouri Botanical Gardens *What's It Like Where You Live?*
<http://www.mobot.org/MBGnet/>
 - Written at a 4-6 grade level. Includes graphs, maps, and charts to research and compare biomes. Each biome page also has relevant links to other web sites. Includes temperate deciduous forests, tundra, taiga, grasslands, rain forests, deserts, oceans, and freshwater environments.
- <http://www.mobot.org/MBGnet/store.htm>
 - (Online ordering of supplemental *What's it Like Where You Live?* curriculum. The curriculum includes excellent videos, a multimedia animal reference CD, teacher's guide, and reproducible pages.)
- 📖 *ABC World Reference: Wide World of Animals*
 - (Online ordering information) <http://www.learningcompanyschool.com/school/products/abcwwa.htm>.

- An excellent CD Rom to research animals in biomes. Go on detailed explorations of more than 700 species of animals. Students observe animals in their natural habitats, gather remarkable facts about animal characteristics, and discover threats to their survival. Featuring text, photos, sound clips, full-screen videos, interactive taxonomy trees, time-lapse exhibits of changes in the animal world, and more.

 *GORP (Great Outdoor Recreation Pages) National Forests and Grasslands*

http://www.gorp.com/gorp/resource/US_National_Forest/main.htm

- Descriptions of national forests, including activities, tours, trails, wildlife areas, etc.

 *New Forests Project*

<http://www.newforestsproject.com/>

- The New Forests Project (NFP) is a people-to-people, direct-action program established in 1982 in an effort to initiate reforestation and reduce deforestation in “developing countries.” This site includes information about this project as well as educational resources for teachers about forests. For example: Tree Species of the Month.

 *School Nature Area Project*

<http://www.stolaf.edu/other/snap/> (homepage)

<http://www.stolaf.edu/other/snap/cyberseasons.html> (Cyberseasons)

- CyberSeasons is a project of the School Nature Area Project (SNAP) of St. Olaf College. SNAP works as a partner with Minnesota schools and communities, using local nature areas to further environmental education and benefit the environment through grants, training, and resource support. CyberSeasons and SNAP’s website are open to all those interested in environmental education and using their schoolyards as a meaningful part of the school experience.
- You can collect and submit data from your class as well as access data from other schools all school year

with Following Fall, Snow, and Did Spring Snap?
There are also resources, activity ideas, and galleries
of student work.

 *The Environment Web Directory K-12 Links*


<http://www.webdirectory.com/Education/K-12/>

- List of K-12 environmental web resources and school projects.

 *National Wildlife Federation Homepage*

<http://www.nwf.org/nwf/index.html>

- Access information about NWF resources. Do a search of the site and get background information and selected activities from NatureScope and other NWF publications.

 *Nature Net, The Environmental Learning Network, Links to south-central Wisconsin outdoor environmental education sites.*

<http://www.naturenet.com/>

 *Wisconsin Department of Natural Resources*

<http://www.dnr.state.wi.us/>

 *EEK! Wisconsin Department of Natural Resources site for kids*

<http://www.dnr.state.wi.us/org/caer/ce/eeek/>

 *EE Link (Environmental Education Link)*


<http://eelink.net/>

- Online access to EE publications, resources, and links.

 *Global Schoolhouse*

<http://www.gsh.org/>

- Collection of projects and resources for teachers and students.

 *DuPage Environmental Awareness Center's Listing of Books for Children*

<http://www.terasys.com/deac/form.htm>

- Do a title, author, keyword, grade level, or publisher search on this data base.

📖 *Children's Literature Web Guide*

<http://www.acs.ucalgary.ca/~dkbrown/index.html>

- The Children's Literature Web Guide is an attempt to gather together and categorize the growing number of Internet resources related to books for children and young adults. Searchable data base.

Other Resources:

📖 *EE News: Environmental Education in Wisconsin*, published by the Wisconsin Department of Natural Resources, UE-Extension, the Wisconsin Association for Environmental Education, Inc., the Wisconsin Center for Environmental Education, and the Wisconsin Department of Public Instruction.

- Excellent resource for Wisconsin specific environmental education information, including biographies of important environmental contributors in Wisconsin history, lesson plans, resources, and upcoming workshops.
- To subscribe for 1 year, send your name, address, and a check for \$5.00 to EE News, DNR, CE/6, P.O. Box 7921, Madison, WI 53707.

📖 *Down to Earth: The Wisconsin Environmental Science Activity Notebook, A Teacher's Guide*, Today's Educational Products for Tomorrow's Earth by Dave Thorson, 1994. (Route 1, Box 135A, Gordon, WI 54838)

📖 Sayre, April Pulley. *Temperate Deciduous Forest*. Twenty-first Century Books New York 1994. ISBN 0-8050-2828-5

📖 Cooper, Ann. *In the Forest*. Denver Natural History Press: Denver, CO 1996. ISBN 0-916278-71-9