

Forest Issues Project

Researching Local Environmental Forest Issues

Standards Addressed

Science Standards:

- A. Science Connections: A.4.1 and A.4.3.
- B. Nature of Science: B.4.1.
- C. Science Inquiry: C.4.2, C.4.3, C.4.5, C.4.6, C.4.7, and C.4.8.

English Language Arts Content Standards:

- B. Writing: B.4.1.
- F. Research and Inquiry: F.4.1.

Social Studies Content Standards:

- A. Geography: People, Places, and Environments: A.4.4, A.4.5, A.4.8, and A.4.9.

Environmental Education Content Standards:

- A. Questioning and Analysis: A.4.1, A.4.2, A.4.3, and A.4.4.
- C. Environmental Issue Investigation Skills: C.4.1, C.4.2, C.4.3, C.4.4, and C.4.5.

Key Concepts/Content

- 🌲 To use research skills.
- 🌲 To investigate local forest issues.
- 🌲 To analyze research findings.
- 🌲 To synthesize and present research findings.
- 🌲 To make connections between classroom learning and the outside world.

Getting Ready

Prepare student journal pages for each student. Also include student directions and grading rubric.

Send parent letter home.

Arrange for local community leaders to visit in order to help brainstorm local issues, provide information to students,

and provide names of people to interview and places to look for resources once students have selected their issue. These local experts can also help students brainstorm lists of questions to research. Such local experts can include university professors, city council members, local activists, local newspaper reporters, and concerned parents.

Teacher Background

Solving environmental problems and issues requires skills in environmental investigations. These skills, in turn, provide students with opportunities to apply and improve their capacity for systems thinking and their understanding of a sustainable world and society. Focusing on environmental issues offers students a means of integrating their knowledge of human and environmental systems and a way of finding personal relevance in that knowledge.

An excellent resource for students is the local DNR forester. A current list is available online at <http://www.dnr.state.wi.us/org/land/forestry/ftax/COUNTY.HTM> Students will work individually or in small groups to research a local forest issue. They will be using primary resources and interviewing local experts, neighbors, and community leaders. They will create a project to present what they have learned and what citizen action they have taken.

Materials Needed

- ✿ Parent Letter (see sample)
- ✿ Student research note books

Procedures

1. Introduce the project to students.
2. With local experts present (might include DNR representative), brainstorm possible forest issues. (Briefly discuss each issue to make sure students understand what it is.)

3. Allow students a few minutes to form groups (if they desire) and select an issue. You may choose to limit one group to each issue.
4. Allow students time to use experts to brainstorm questions and interview them. The experts can also help students identify others to contact.
5. Share the grading process with students. Use the provided rubric, adapt it to your needs, or create your own with students' input.
6. Set deadlines with students.
7. Allow students time during school to collaborate, call for interviews, and work on their projects. This will also allow the teacher the chance to check progress of each group.
8. Schedule presentations at least a week ahead of time.
9. Students present their research and projects at scheduled time.

**References/
Resources**

For information on trends affecting the midwest see North Central Research Station's website at:

<http://www.ncfes.umn.edu>

Look for the August/September 1999 NC NEWS article *Here Comes The Neighborhood*.

Sample Parent Letter

Dear Parents/Guardians,

Solving environmental problems and issues requires skills in environmental investigations. These skills, in turn, provide students with opportunities to apply and improve their capacity for systems thinking and their understanding of a sustainable world and society. Focusing on environmental issues offers students a means of integrating their knowledge of human and environmental systems and a way of finding personal relevance in that knowledge.

As a cumulative assessment of our forestry unit and our environmental studies, students will be involved in a forest-related local issues research project. Students will be working as individuals or in small groups, using primary resources such as newspapers and interviews, to research a local issue. To help them get started, local experts will be invited into the classroom. These experts will help list local issues, provide students with initial information, provide them with names of others to interview, and help students develop questions to ask. If you wish to be on the panel of local experts, please let me know. We would love to have you! Please look in your child's learning log for additional details.

Thank you for your continued support and partnership in your child's education!

Sample Forestry Issues

(The examples are to serve as a place to start. It is best to create a locally relevant list for students to choose from.)

Examples:

- Watershed health.
- Pressure on private landowners to sell their forestland to developers.
- How many deer are too many?
- Can we do more paper recycling?
- The forests are changing, is that okay?
- Is wilderness important?
- Can the Endangered Species Act be successful?
- Controlling exotic and invasive insects, plants and diseases

- Should prescribe fire be used in Wisconsin?
- How does a product become green certified?
- Is the forest big enough for everyone's recreational needs?
- Are forest products compatible with other forest uses?
- Can Wisconsin tourism survive without a healthy forest?
- What's going on in your town?

**Student Forestry
Issues Research
Project
Procedures I
Must Follow**

1. Choose a forestry issue that you find interesting. Remember the list generated in class; it was to help you get started with the project.
2. Follow this research process:
 - a. Presearch - choose topics and organize thoughts; narrow topic*
 - b. Search - figure out sources and pull materials together*
 - c. Research - use the sources and take notes in your own words to explain what you're finding
 - d. Organize - put notes, etc., together in an order that makes sense; do more research or make changes if necessary
 - e. Evaluate - evaluate your work and the final product; improve where you can

* The questions on the following page may be helpful.

**Questions I
Might Ask About
My Project**

What is the issue that I've selected?
What do I already know about this issue?
What do I want to know about this issue?
What is the history of the issue? (What caused the problem and what has been done so far?)
What are some of the problems related to the issue I selected?
Why do I think these are problems?
Is there more than one side to this issue? (Do people disagree about what is important? Why?)
Who might I interview to discover facts and opinions about the issue that I chose?
What are some questions that I can ask these individuals?
What other sources can I use to find facts and opinions about the issue that I chose?
Where can I access these sources of information?
Are there related subjects/topics that I can look into to get information about the issue that I chose?
Are there any national or global connections to the issue that I chose?
What would I like to see happen about this issue?
Why would I like this to happen?
What do I think would need to happen in order for this to occur?
What can I do to help this to happen?
What effect do I think this issue will have on the future?

Learning Log

You MUST keep a learning log during your research of the issue you chose and your development of the product!

What to Include in Your Learning Log

1. Date every entry made. Make an entry every day you learned something that may be useful in creating your project. This includes notes, thoughts, observations, etc. Your entries must be legible!!!
2. Notes using the following format:

Source/Page	Notes	Reactions
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Source/Page

Bibliographic information:

Book

Author. Title (underlined). place of publication, publisher, copyright date, pages information came from.

Example: Shippen, Katherine B. A Bridle for Pegasus. New York: Viking Press, 1951, pp. 28-42.

Magazine

Author. "Title of Article" (in quotation marks). Name of Magazine (underlined), volume: number, pages article found on.

Example: Lewis, C. "Navy Unveils Low-Cost Sounding Rocket." Aviation World, 69:6, pp. 49-51+, November 3, 1958.

Newspaper

Author (if given). "Title of Article" (in quotation marks). Name of Newspaper (underlined). town/city paper is from, date paper was published, pages article found on.

Example: Doe, John. "Who am I Really?" Sometown Journal. Sometown, WI, January 1, 1994, section B, pp. 2-3.

Person

Last name, First name. "What person was interviewed about." Where the interview took place, date of interview.
Example: Michalak, Ruth. "Life in the 1940's." Stanley, WI, November 14, 1993.

Encyclopedia

Author (if given). "Title of Article" (in quotation marks). Name of Encyclopedia (underlined). Edition (year published), Volume, pages used.

Example: Piccard, Don. "Balloon." The World Book Encyclopedia. 1964, vol. 2, pp. 39-44.

* If the source you find doesn't have helpful information about the issue you chose, do not include it in your bibliography!

Notes

Write down the information you believe is important in answering questions about the issue you chose. Notes should not be copied from the source unless it is a direct quote that the author will be given credit for writing or saying. It might be helpful to label each note as to which question it could answer.

Reactions

Explain how you feel about the information you put in your notes.

Why do you feel the information is important to the issue you chose?

What other questions do you have after finding this information?

Other comments or thoughts about the issue you chose that this information made you think about.

Ideas this information gave you that you might want to include in your product.

**Other Things
to Include**

3. Describe exciting things you learned or did that relate to the issue you chose.
4. Describe difficulties you are having. What changes might you need to make?
5. Additional comments/ideas you may have.

**Important
Things the
Teacher Should
Know About
the Project**

- * Students must obtain permission from the teacher to work in pairs or small groups. Each member of the group should do his/her own Learning Log!
- * Students should make at least 3 entries in their Learning Logs each week.

**Possible products for your students to show knowledge of
the issue they chose**

1. song
2. play
3. story
4. painting/drawing
5. sculpture
6. cartoon strip
7. videotape
8. letter to the editor
9. invention
10. report
11. game
12. model
13. a lesson designed and taught to the class
14. other (must be approved)

* Be sure to tell the students you reserve the right to ask questions and expect answers about the choices they make in creating any of the above. For example: Why did you choose the colors that you used in your painting?

Grading Checklist for Forestry Issues Research Project

Criterion	Minimum	Average	Good	Wow!	Comments
Process: Statement of purpose and research questions clearly explain the purpose of your research done and provides a good start for the research. Notes are neat and complete. (Show source, page number if available, and reaction) Learning Log entries show that several resources were used to gain knowledge on the topic, facts, and opinions (local resource people such as the DNR, city council members, newspaper articles, interview with local business people, etc.). Each note in Learning Log has a logical and thoughtful reaction.					
Group worked well together throughout the process.					
Project: Project shows preparation and thought throughout the time given. Product reflects the knowledge learned during the research process.					
Product: Student shows preparation for presentation. Student shows effort to contribute to the presentation of the product and information learned. Student shows good speaking skills. Student able to answer questions about the issue chosen and the project.					

Additional Comments:

Date	Source/Page	Notes	Reactions

Other:
