



Issues in Conserving Natural Resources

Middle School Food and Agricultural Literacy Curriculum

Precepts

- J. Mental Growth
- J7. Practice sound study skills.

National Standards

- CS.09. Compare and contrast issues affecting the AFNR industry.
- ESS.03.03.01.c. Research and debate one or more current environmental issues associated with the supplies of groundwater and surface water.
- NRS.01.01.01.c. Research and debate one or more current issues related to the conservation or preservation of natural resources.
- NL-ENG.K-12.8 – Developing Research Skills
- NS.5-8.3 – Life Science
- NS.5-8.6 – Science in Personal and Social Perspectives
- NT.L-12.5 – Technology Research Tools

Student Learning Objectives

- As a result of this **unit** the student will...
 - Evaluate current agriculture issues.
- As a result of this **lesson** the student will...
 - Identify current issues related to the conservation and preservation of natural resources by researching.

Content Outline

Objective 1. Identify current issues related to the **conservation** and **preservation** of **natural resources** by researching.

- I. A **natural resource** is something, such as a forest, a mineral deposit, or fresh water that is found in nature and is necessary or useful to humans.
- II. **Conservation** is the protection, **preservation**, management, or restoration of natural environments and the ecological communities

Time

Instruction time for this lesson: 45 minutes

Resources

National FFA Organization. (2003). LifeKnowledge Precepts and Signs of Success. — National FFA Organization (2009). Retrieved October 1, 2009. From Team AgEd Learning Center website. http://www.agedlearning.org/files/scorm/Ag_Issues/HTML/issues/animal-examples.html

Tools, Equipment, and Supplies

- Overhead projector/transparencies
- Notebook paper
- Writing utensils
- Computer – one per student, locate and schedule prior to class
- Use of school library or agriculture magazines, newspapers – locate and schedule prior to class
- Any agriculture textbooks
- MS.AI.1.5.TM.A – one per teacher
- MS.AI.1.5.AS.A – one per student
- MS.AI.1.5.AS.B – one per student
- MS.AI.1.5.ASSESS.A – one per student

Key Terms

The following terms are presented in this lesson and appear in **bold italics**:

Natural resources

Conservation

Preservation

that inhabit them. **Conservation** is generally held to include the management of human use of **natural resources** for current public benefit and sustainable social and economic utilization.

- III. **Preservation** is to keep alive or in existence.

Interest Approach

Objective 1. Identify current issues related to the **conservation** or **preservation** of **natural resources** by researching.

Before conducting this lesson, review http://www.agedlearning.org/files/scorm/Ag_Issues/HTML/home.html to gain an understanding of this main component of the lesson.



Lesson Number: MS.AI.1.5

Middle School Food and Agricultural Literacy Curriculum

Issues in Conserving Natural Resources

This interest approach provides an overview of the three key terms since most of the class time should be spent researching. Students should record the information displayed in **MS.AI.1.5.TM.A** and move to the library where each student has access to a computer and other print resources.

Today we need to behave like investigators and utilize the available sources to help guide us toward a solid conclusion about some very invaluable cases. Investigators are always looking for related clues within a clue. They line up these clues and call it a theory. But they have to prove this theory with facts. How do they get the facts? They research, which is precisely what we will be doing today. Let's begin by looking at the issue we need to prove or deny. Take out your notebooks and record the following information:

Display only first definition on **MS.AI.1.5.TM.A**.

Summary of Content and Teaching Strategies

Objective 1. Identify current issues related to the **conservation** and **preservation** of **natural resources**.

Using that definition, how do water, air, and land meet those requirements? Elicit responses.

Correct, they are useful or necessary to humans.. Today we will be discovering ways that we can **conserve** and **preserve** those three **natural resources**. Before we move on, we should review those definitions as well as record them in our notes.

Display the final two definitions on **MS.AI.1.5.TM.A** and wait for students to finish recording.

If we put on our investigator personas and look at these definitions as clues through our spy glass, what theory can we come up with?

Elicit responses.

That's right! We are going to solve the mysterious case of how we conserve and preserve our **natural resources**!

Objective 2. Research a current issue related to the **conservation** or **preservation** of **natural resources**.

Our topics today will center on the **conservation** and **preservation** of water, air, and land.

In just a few minutes, you will be gathering all of the information you can find to address and answer the questions on the outline. As you are researching, remember to evaluate for credible and non-credible sources. Now that we have our facts, let's begin researching the motivations behind saving these precious commodities.

Distribute **MS.AI.1.5.AS.A** and **B**.

Glance over the sheet I just gave you and pay special attention to Step 8 as we move quietly to the computers.

Step 8 identifies their assignment for the class period. Have students log in to the computers and walk them through each step.

Before we begin conducting our own research, let's walk through some steps that will help you get to your facts quicker!

Briefly identify the seven steps with the students before giving them time to complete their research.

Step 1: Go to http://www.agedlearning.org/files/scorm/Ag_Issues/HTML/home.html

Step 2: Click on Issue Analysis tab and select "Issue from a problem."

Direct students to the second and third paragraphs concerning what a debate means.

Debate is a means of settling differences. There must be a difference of opinion or a conflict of interest before there can be a debate. This difference of opinion is often called a controversy or a problem. Through the debate process, persuasive information on behalf of or in opposition to a stated proposition or topic is presented. Within the context of this instructional material the terms proposition, controversy, problem question and issue will be synonymous. In summary, when an individual or group of individuals comes in contact with something that they take a positive or negative view toward, they have created an issue and in order for the issue to be resolved, a thorough analysis of the issue is needed.



Lesson Number: MS.AI.1.5

Middle School Food and Agricultural Literacy Curriculum

Issues in Conserving Natural Resources

Step 3: Click Analyze Issue and read #1.

Each issue should be stated as a question. It should make a single statement about a single thing, for example, "Is the use of agricultural pesticides contaminating our groundwater?"

Step 4: Click "Gather information" Read bold face type for numbers 1-5 and letters a-g

Step 5: Click on "Prepare Issue":

This includes the same outline students received. Students should be able to answer most of these questions or address the topics in this outline.

Step 6: Select "Instructional Units" tab: Choose "Unit Two Environmental Issues" and choose a subtopic in sections I and II, Water or Land.

Groundwater contamination, surface water contamination, or use of water resources; soil contamination, urbanization, deforestation, use of public lands, plant and animal habitat

Have students approach their research with a bias...find articles that support their bias.

Step 7: Click "Source and Resource" tab: select the link "View Current Issues" under the heading "Sources for Current Agricultural Issues"; Select the "Environmental" link located in the "Related Information" box.

Step 8: Students need to find two articles from the resource list and one article found from their independent research. Have them revisit the "Gather Information" tab.

Now that we've unlocked most of the clues we need, it is time to select the ones most compelling to support your theory. We have the remainder of the class time to complete Step 8. Be sure to remain focused because time is of essence. Remember that you need to show me three printed copies of your resources before you leave class today.

As each student shows you their printed copies, use **MS.AI.1.5.ASSESS.A** to track those who have finished. Congratulate each student for their hard work and diligence.

Review/Summary

If I'm in need of a group of people who can investigate for me, I'll be sure to find you! Everyone did an excellent job of uncovering factual evidence on ways to **conserve** and **preserve** our **natural resources**.

Application

Extended classroom activity:

Have students take research materials home along with the outline from **MS.AI.1.5.AS.B**. Students should highlight the information on their printed copies and indicate in the margin the item on the outline which it addresses.

FFA activity:

Have students research a leadership issue and give a short speech on their findings.

SAE activity:

Assign students either an additional animal or plant agriculture issue. Have them identify the What, So What, and Now What for the topic.

Evaluation

MS.AI.1.5.ASSESS.A

Answers to Evaluation

Scoring is based on execution of task. Place a checkmark in each column for each resource students print and show you.



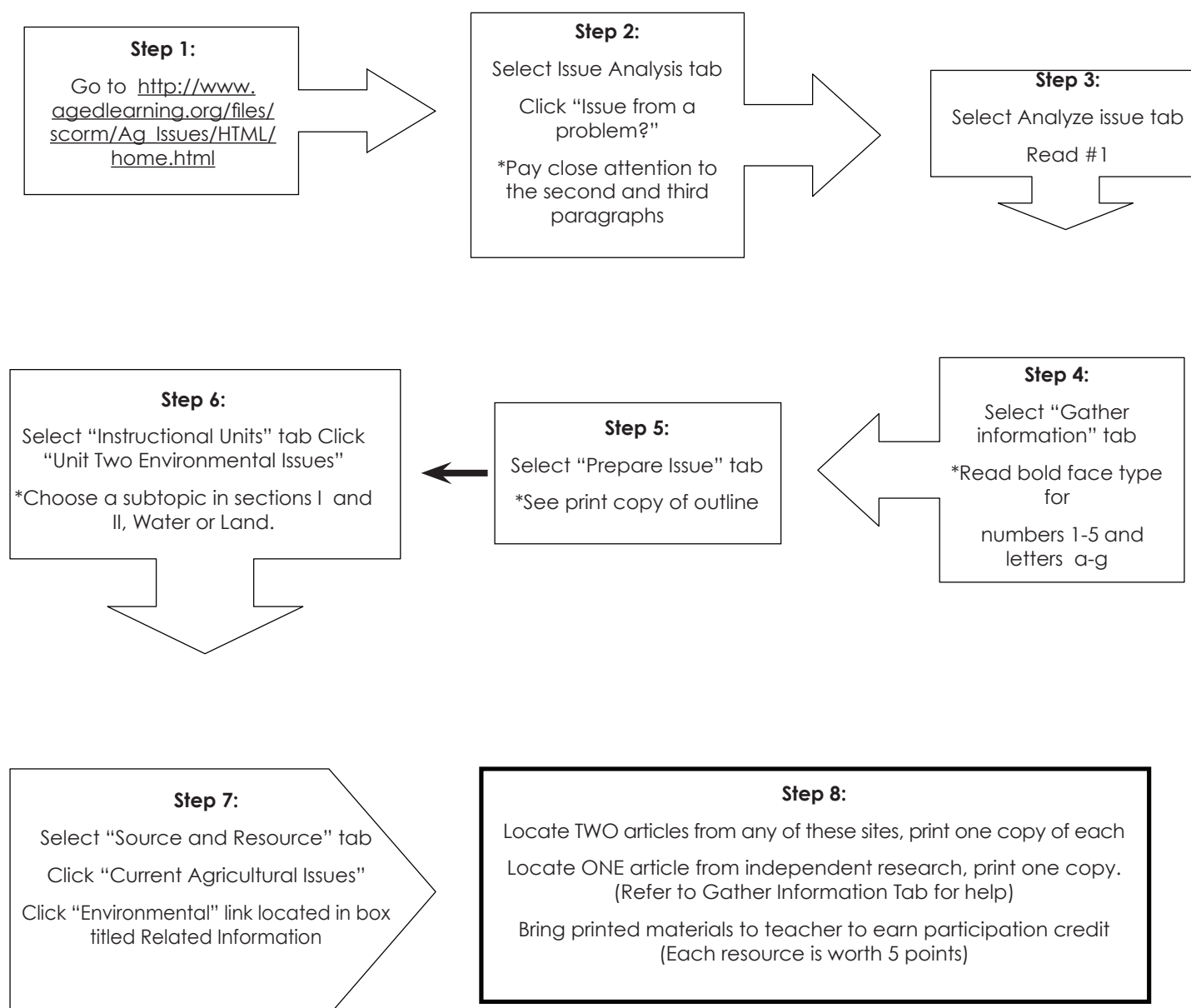
A Natural resource is: Something, such as a forest, a mineral deposit, or fresh water, that is found in nature and is necessary or useful to humans.

Conservation is: The protection, preservation, management, or restoration of natural environments and the ecological communities that inhabit them. Conservation is generally held to include the management of human use of natural resources for current public benefit and sustainable social and economic utilization.

Preservation is: To keep alive or in existence



The Research Pathway





I. What do the terms of the issue mean?

II. What is the nature of the issue?

- A. What are the facts of the present situation?
 - 1. How can the present situation best be described?
 - a. What is going on?
 - b. Who is involved?
 - c. What kinds of difficulties exist?
 - d. When did the issue develop?
 - e. Where is the issue most serious?
 - f. Have I presented enough factual information to make the nature of the issue clear?
 - 2. How serious is the issue?
 - a. Is the issue extensive?
 - b. Is a change urgent?
 - c. Is the issue increasing/decreasing in importance? Why?
- B. What are the causes of the issue?
 - 1. What is the history of the issue?
 - 2. What conditions brought it about?
- C. What forces are at work to change the present situation?
 - 1. What solutions have been tried?
 - a. How extensive have these attempts been?
 - b. How successful have these attempts been?
 - 2. Is there need for additional attempts to solve the issue?
 - 3. What will be the probable results if no action is taken?
- D. To what extent does this group agree on a course of action?
 - 1. On what matters are members agreed?
 - 2. On what matters are members disagreed?
 - 3. What are the controversies which must be worked out?

III. What standards, criteria, or goals must any solution to the issue meet?

- A. What are the risks?
- B. What are the benefits?
- C. In what kind of world do I want to live?
- D. What ideals must a solution satisfy?

IV. What courses of action are possible?

- A. What is one possible solution?
 - 1. What is good about this possibility?
 - 2. What is bad about this possibility?
- B. What is another possible solution? etc.

V. What solution should this group choose?

VI. What steps should be followed in putting this solution into effect?

[illegible]