



## **-Introduction-**

“America’s Relationship to the Environment” is a lesson designed to produce a cross-curricular learning environment as well as provide students and teachers with the opportunity to think conceptually about the nature of America’s relationships with the natural world. Though principally designed for environmental science and history classrooms, the lesson has the potential for much wider application including English and art classes. By integrating historical reasoning skills, artistic expression, critical reading skills, group activities, scientific themes, and writing “America’s Relationship to the Environment” is a truly cross-curricular experience.

Teachers should begin by reading the “Teacher Overture” accompanying the lesson. The overture will provide the teacher with the necessary informational background to effectively guide students through the cross-curricular experience. The overture is written concisely yet in straightforward terms to allow teachers of all degrees of familiarity with the content to successfully navigate the lesson for themselves and their students.

Though the lesson is designed for a single teacher in a single classroom, teachers wishing to work with colleagues from different disciplines are encouraged to reference the “Adaptations” section of the “Teacher Overture” for guidance on extending the project to the school community.

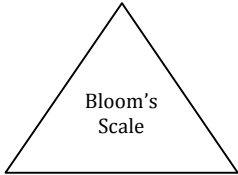
**This is a sample lesson. Therefore, many components of the lesson are excluded but can be accessed via email request by contacting [flagstaffecoranch@gmail.com](mailto:flagstaffecoranch@gmail.com).**

Prior to implementing this lesson, teacher should have the students complete D-1: Pre-Test for homework.

**Day One:**

Prep Set (Introduction):

1. (5-10 minutes) As a class, discuss the following questions and record answers to each on the board. For tips on leading this opening discussion, refer to the “Teacher Overture” section.
  - a. What is the environment?
  - b. How close or far away are you from the “environment?” To help us understand your answer, provide as many examples as you can.
  - c. In a sentence, answer this question: “What is your relationship to the environment?”



Knowledge

Lesson Activities (Body):

1. Hand out graphic-organizer, D-2: Environmental Worldviews
2. (10-12 minutes) Present the “Environmental Worldview” opening lecture. For teachers with overhead capabilities, lecture slides are provided: D-3: Environmental Worldview Slides. Otherwise, teachers may recreate the slides on the board (it is recommended that this be done in advance).
  - 2a. Articles D-4: Lecture Notes, provides teachers with an easy to follow review of the environmental worldviews including prompts to check for student understanding. Additionally, teachers should review the “Improving Attention” textbox on D-4 for additional tips on promoting information retention.

Apply

3. (20 minutes) Divide students into groups of 2-4. Ask students to apply the Environmental Worldviews to real-life or hypothetical situations. In other words, have students produce situations that exemplify each worldview.
  - 3a. *Example: For the “utilitarian” worldview, students may provide an example of sand-dunes where owners of dune-buggies and motor bikes take venture onto the environment and use it strictly for recreational purposes with no regard to environmental quality or their impact on local ecosystems. Note to students that this is not inherently bad, just one way we relate to the environment and view their world.*
4. (5-10 minutes) Have students share their examples, one example per group. Teacher should take an active role in monitoring responses to assure students thoroughly grasp the concepts.

Create	<p>Homework (Conclusion):</p> <ol style="list-style-type: none"> <li>1. Students should apply a worldview to their own lives. Each student should write a brief paragraph explaining why a specific worldview represents their relationship to the environment. Students should be alerted that they may be called on to present their reflections in class tomorrow.</li> </ol>
Knowledge	<p><b>Day 2:</b></p> <p>Prep Set (Introduction):</p> <ol style="list-style-type: none"> <li>1. (5-10 minutes) Have students partner up and read their responses out loud to each other. <ul style="list-style-type: none"> <li><i>Encourage students to check their partner for conceptual understanding of the environmental worldviews and any difficulties completing the assignment as well as where those difficulties were in the assignment (metacognition).</i></li> </ul> </li> <li>2. Have 4-5 students share their homework responses with the entire class. <ul style="list-style-type: none"> <li><i>Teacher check for understanding.</i></li> </ul> </li> </ol>
Understand/Anal	<p>Lesson Activities (Body):</p> <ol style="list-style-type: none"> <li>1. Put students into pairs based on reading ability and/or high-low pairing (<i>Accelerated classes/Advanced Placement courses may have students read individually</i>)</li> <li>2. Pass out D-5: "A History of our Relationship"</li> <li>3. (30 minutes) Students take turns reading aloud alternating paragraphs. At the end of the paragraph the listening student paraphrases the paragraph to check for understanding and the reader verifies. Ultimately, students will help one another towards a firmer understanding of the reading. <i>Teacher circulates through room to clarify or assist students.</i></li> </ol>
Evaluate	<p>Homework (Conclusion):</p> <ol style="list-style-type: none"> <li>1. Students complete critical thinking questions attached to D-4</li> </ol>

Knowledg

### Day 3:

#### Prep Set (Introduction):

1. (5-10 minutes) Review critical thinking questions.  
*Teachers check for understanding.*

Understan

#### Lesson Activities (Body)

1. Inform student's that they will be *answering* the open-ended question, "What is America's Relationship to the Environment" and answering through art and a written rationale. The art may be on any medium available to the teacher i.e., construction paper, white boards, poster board, etc.
2. (15 minutes) Teacher passes out D-6: Project Rubric
2. Review the requirements of the project with the class. *Be sure to explain to students the proper methods of using a rubric and how to ensure a passing grade.*
3. (5 minutes) Teacher will put students into groups of 4 or 5 and either assign or allow students to choose one of the following job titles. *Prior to the assignment, however, teacher should review each title, but reinforce the idea that everyone in the group is responsible for helping with all tasks. Also, inform students that they will be filling out self and peer evaluations, which will be factored into their grade.*
  - a. Scribe – collects brainstorming ideas and is primarily responsible for synthesizing the group's written portion of the project.
  - b. Picasso – primarily responsible for producing the artwork (with group support)
  - c. Bureaucrat – primarily responsible for ensuring that the group adheres to the requirements of the rubric
  - d. Task Master – primarily responsible for monitoring the group's activity and time-management
  - e. Scientist – (additional and/or supplementary position) primarily responsible for research and gathering useful resources
4. (Remaining Time) Students work in their groups on the projects.

Creat

#### Homework (Conclusion):

1. Students spend anytime possible outside of the class crafting a rationale and brainstorming artistic expressions.

#### Day 4:

##### Prep Set (Introduction):

1. (5 minutes) Allow students to share any ideas, difficulties, or resources with the class in order to help those groups that may be having problems

##### Lesson Activities (Body)

1. (Remaining Time) Allow students to utilize class time to prepare and work on projects.

#### Day 5:

##### Lesson Activities (Body)

1. Students will present their projects to the class and explain their rationale according to D-6: Project Rubric. Peers are encouraged to ask questions and provide constructive criticism.
2. Following presentations, class will discuss any obstacles they faced, ways to overcome these problems, challenges working with others and ways to improve, and any constructive criticism about the project as a whole.

Evaluation

##### Homework (Conclusion):

1. Students will fill out a self and peer evaluation which will be figured into the grade for the project.
2. Students will complete D-7: Post-Test

##### Resuming the Traditional Curriculum:

This lesson is designed so that the teacher does not have to simply end, but she or he can return to the traditional curriculum and ensure the idea of interconnectedness and congruency among lessons.

- In a science course the teacher could continue by exploring food webs, trophic levels, biomagnification, biodiversity, or even biological pest management.
- This lesson could supplement traditional United States history content whilst covering the Conquest of the Far West, the Conservation Movement of Teddy Roosevelt's administration, or the modern environmental movement of the 1960.
- For an English course, the lesson provides an excellent opportunity to explore explanatory writing through the rationale segment of the lesson.