

**Flooding the Sistine Chapel or a Source of Water and Energy for the Southwest:
A Grand Canyon Debate, 1963-1967**

DURATION	45 to 60 Minutes
LOCATION	Classroom
KEY VOCABULARY	<ol style="list-style-type: none">1. Boundary: a spatial division of an area2. Sustainability: a condition that can continue indefinitely3. Reclamation: the process of improving or restoring the condition of land or other material to a better or more useful state4. Absolute space: area specifically outlined and contained within real boundaries5. Relative space: an area that supports multiple uses at the same or different times6. Representational space: an area imagined and supported by symbols, shared meaning, history or values; a special attachment to a place7. Ecosystem: the complex of a community of organisms and its environment functioning as an ecological unit8. Wilderness: an area essentially undisturbed by human activity together with its naturally developed life community
TRUNK MATERIALS	<p>Master Copies of:</p> <ul style="list-style-type: none">• Excerpt from <i>Wilderness and the American Mind</i> by Roderick Frazier Nash, pp. 227-234• Damming the Grand Canyon worksheet• “Newlands Act of 1902”• Primary Source Analysis Worksheet• Debate: Grand Canyon Controversy worksheet• Debate: Mission Statements sheet• <i>Salt Lake Tribune</i>, “Glen Canyon Dam Flush: Set the river free once again”• <i>New York Times</i>, “Torrent in Colorado River is Unleashed to Aid Fish”• <i>New York Times</i>, “Uranium Exploration Near Grand Canyon”• <i>Arizona Republic</i>, “Canyon Needs Protections”• A Letter to the Park Superintendent Student Checklist• A Letter to the Park Superintendent Grading Checklist
ADDITIONAL MATERIALS (NOT SUPPLIED)	<p>Copies of these documents for each student:</p> <ul style="list-style-type: none">• Excerpt from <i>Wilderness and the American Mind</i> by Roderick Frazier Nash, pp. 227-234• Damming the Grand Canyon worksheet• “Newlands Act of 1902”• Primary Source Analysis Worksheet

- Debate: Grand Canyon Controversy worksheet
- Debate: Mission Statements sheet
- *Salt Lake Tribune*, “Glen Canyon Dam Flush: Set the river free once again”
- *New York Times*, “Torrent in Colorado River is Unleashed to Aid Fish”
- *New York Times*, “Uranium Exploration Near Grand Canyon”
- *Arizona Republic*, “Canyon Needs Protections”
- A Letter to the Park Superintendent Student Checklist

ENDURING UNDERSTANDING (BIG IDEA)

The Grand Canyon region has existed and continues to exist amid controversy. People have contested boundaries and debated ways to utilize the place. Some uses provide human benefits but threaten the sustainability of this unique area and of Grand Canyon National Park.

ESSENTIAL QUESTIONS

1. Should the Colorado River be dammed in the Grand Canyon to provide water and power to people in the Southwest or should the Canyon be preserved in its natural state?
2. How did the 1960s dam controversy illustrate how special the Grand Canyon was in the American mind?
3. How important is the Colorado River to sustaining the ecosystems, economy, and beauty of the Grand Canyon?
4. As the Southwest continues its rapid growth in population and need for natural resources, can the Grand Canyon support multiple uses?

LEARNING OBJECTIVES

Students will be able to:

1. Differentiate between absolute space, relative space, and representational space and how these definitions apply to the Grand Canyon.
2. Analyze how the Grand Canyon developed into a representative space for many Americans.
3. Identify and debate current issues that reflect the efforts to balance natural and human demands on the Grand Canyon.

BACKGROUND

This lesson helps students explore some of the ways that a particular place is understood as both a real physical location that can be used and as an imagined space that may have cultural value and significance. It does so by introducing students to an important controversy in the 1960s over whether to dam the Colorado River in the Grand Canyon.

Geography:

Geographers think about places in many ways. They study geographical spaces to understand the physical and cultural aspects of a region or area. They look at space as places to occupy, use, enjoy, and understand. Geographer Barbara Morehouse in her book *A Place Called Grand Canyon* explains a few ways of understanding space by discussing absolute space; relative space; and representational space (p.7 and 8). The Grand Canyon is an absolute space. It is defined by real boundary lines. It is a relative space that is used by various people as a sacred place and also for recreational uses. It has also been used for mining and farming. Finally, the Canyon is a representational space. For many it is a spot of grandeur, an iconic landscape of great beauty and often spiritual significance. It has also become representative of the state of Arizona and the

**SUGGESTED
PROCEDURE**

west.

History:

The early twentieth century saw a flurry of dam building throughout the southwest including the construction of Hoover Dam, Roosevelt Dam, Parker Dam and Glen Canyon Dam to name a few. These dams were constructed as a part of the Bureau of Reclamation's water management policy. Each of these dams served and often continue to serve a purpose in sustaining tremendous population growth by harnessing the power of the major rivers flowing through the southwest and to bring water to the arid region.

As these dams were built throughout the region, many activists and conservation groups such as the Sierra Club began to take notice of the effect that these dams had upon the natural environment in which they were built. This became all the more apparent with the construction of Glen Canyon Dam in the 1950s which flooded beautiful Glen Canyon not far from the Grand Canyon.

In 1963 the Bureau of Reclamation unveiled its Pacific Southwest Water Plan which included a plan to build two dams in the Grand Canyon region. This plan brought about a tremendous response from the Sierra Club and eventually the nation and demonstrated the significance of the Grand Canyon in the American mind.

Homework Preparation for Lesson:

Students will be given the *Wilderness and the American Mind* reading and "Damming the Grand Canyon Worksheet" to complete as homework. The instructor should review with the class the definitions and concepts of absolute space, relative space and representational space and have each student record those answers on their worksheet. The instructor should display the definitions of each and explain to the class that these definitions of space have remained an important issue throughout Grand Canyon history. For homework, students should be instructed to read the excerpt and complete the front side of their worksheet (questions 1-8) to be discussed and turned in the following day.

Day of the lesson:

1. As a 'warm up' activity students will be asked: In what ways has the Grand Canyon become representative of Arizona and why do you think that is? Some possible examples students can discuss are: "The Grand Canyon State" on license plates, the Grand Canyon on the state quarter, postcards, etc.
2. Students will then read the opening section of the Reclamation/Newlands Act and complete their "Primary Source Analysis Worksheet." The process of analyzing a primary document should be modeled for the class by the instructor. It is recommended that the "Primary Source Analysis Worksheet" should be completed as a class to teach the students the process and guide the students through the document and to teach them what to look for.

3. After completing their analysis students should then be divided into groups of four. Each group will then use both documents to discuss and complete the last two questions on the “Damming the Grand Canyon Worksheet” from homework the previous evening. Students should be reminded that they will need to refer back to their *Wilderness and the American Mind* reading as well as the primary source analysis in order to answer the questions. These questions can be discussed within each group. If extra time is needed for students to answer each question with sufficient detail the worksheet can be completed for homework.
4. After learning about the controversy over the dams in the Grand Canyon each group will be randomly split. Two students will be instructed to argue for the side of the Bureau of Reclamation and the building of the dams and the other will be for the Sierra Club and against the dams. Students will utilize the background information from *Wilderness and the American Mind* and the “Debate: Mission Statement” sheet including the mission statements of the Sierra Club and Bureau of Reclamation to format their argument. Each pair will answer the questions on their “Debate: Grand Canyon Dam Controversy” sheet and use this as the format and basis for their argument. This should be a short debate lasting only about 10 minutes, long enough for each group to answer their questions and present their argument to the opposing side.
5. Now that the class has examined one of the issues of use of the Grand Canyon that has since been resolved they will look at some of the current controversies over the use of the canyon. Students should choose one of the contemporary articles provided, read the article and chose their stance on the issue. They will then write a persuasive letter to the Park Superintendent where they choose if the Grand Canyon should remain a representative space, undisturbed and protected from outside influences or if it should also be considered a relative space, one in which multiple uses can and should be supported. They should express their stance on the issue and include facts from their article and possibly some outside research on the issue if the instructor so chooses. Each student should use the persuasive letter checklist in order to write an effective letter.

**EVALUATIONS
(ASSESSMENT)**

- All worksheets can be collected, graded and used as an assessment of student understanding of the material presented.
- Students will apply their understanding of absolute, relative and representational space within their persuasive letter. This letter can be graded and used as an assessment of each student’s understanding of the past and contemporary issues of use of the Grand Canyon.

EXTENSIONS

- As an extension the letter writing activity can be adapted to a research project. Students can do more extensive research about their contemporary issue at the Grand Canyon. Ideas included in his or her letter can then be developed and adapted into a class presentation or research paper.
- The letter writing activity also works well as a collaboration activity with

language arts or English classes where the focus can be on writing an effective letter.

- Students who would like to read more about the debate can read an interesting account by Morris K. Udall, "Flooding the Sistine Chapel: A Grand Canyon Debacle," *Too Funny to be President* (New York: Henry Holt, 1988), 46-64.
- Students who are interested in learning more about the Sierra Club, David Brower and environmental activism at the Grand Canyon and other wilderness areas should go to the Sierra Club website's numerous resources www.sierraclub.org.

RESOURCES

- Barringer, Felicity. "Torrent in Colorado River Is Unleashed to Aid Fish." The New York Times 6 Mar. 2008.
<http://www.nytimes.com/2008/03/06/us/06canyon.html?_r=1&sq=glen%20canyon%20dam&st=nyt&adxnnl=1&scp=2&pagewanted=print&adxnnlx=1212078049-B7jVXyqYOCjCKGst77172Q>. Accessed 6 June 2008.
- Barringer, Felicity. "Uranium Exploration Near Grand Canyon." The New York Times 7 Feb. 2008.
<<http://www.nytimes.com/2008/02/07/washington/07canyon.html?pagewanted=print>>. Accessed 6 June 2008.
- Hamburg, Stacey. "Canyon needs protections." Editorial. The Arizona Republic 12 Jan. 2008.
<http://www.azcentral.com/arizonarepublic/opinions/articles/0112satlets4-121.html#> accessed 6 June 2008.
- Loomis, Brandon. "Glen Canyon Dam Flush: 'Set the River Free Once Again.'" Salt Lake Tribune 6 Mar. 2008. <<http://www.sltrib.com/archivesearch>>. Accessed 6 June 2008.
- Morehouse, Barbara J. A Place Called Grand Canyon: Contested Geographies. Tucson: University of Arizona Press, 1996.
- Nash, Roderick Frazier. Wilderness and the American Mind. 1967. 4th ed. New Haven: Yale University Press, 2001.
- Newlands Act. Center for Columbia River History. Washington. 17 June 1902
<<http://www.ccrh.org/comm/amoses/primary/newlands.html>>. Accessed 6 June 2008.

STANDARDS
(NATIONAL AND AZ,
CORRELATIONS
SOCIAL STUDIES,

LANGUAGE,
READING, WRITING,
ARTS, AND TECH

