

The Pros and Cons of Dams

by David Clarke and Sean Estill

Grade Level 5-7

Time Required

Three 50-minute class periods, plus a field trip

Materials/Technology

Video “The River Lives”
A copy of the story

Summary

This lesson helps students become more aware of issues involved in making decisions about their environment. Through discussion, videos, stories, and a role-playing presentation, students examine the pros and cons of dams on our rivers.

Objectives

The student will

- 1) gain knowledge and awareness of many issues surrounding dam and water management.
- 2) develop oral skills in making an informative presentation about dam management.
- 3) develop skills in writing a persuasive paper

Montana Science Standards Addressed

- 1) Students demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.
- 2) Students understand how scientific knowledge and technological developments impact society.

Assessment

Evaluate students based on the following.

- 1) Observation of students’ work in class
- 2) Quality of the student’s paper, based on their ability to use evidence to support their argument and address opposing viewpoints.

Background

The Flathead River and Flathead Lake have had economic, recreational, and spiritual significance to the people living in the Mission Valley since pre-European contact times. Today, they still have a large influence on the lives of area residents. The building of Kerr Dam in the first part of the twentieth century was very controversial, particularly since it’s location was at a Kootenai sacred site known as “The Place of Falling Waters” or Kwa Taq Nuk. The Confederated Salish and Kootenai Tribes own the dam and they will be taking over its operation in the next few years. As a source of hydroelectric power, it generates millions of dollars in revenue annually for the tribes. The water fluctuation that occurs with dam management affects the lake and river ecosystems,

especially animal populations, as well as water recreation and property values, so the dam is a constant source of controversy even today.

This activity seeks to raise students' awareness of the many issues surrounding the dam and water management in northwest Montana. There are many local resources available with information about this important subject. Two excellent film resources are "The River Lives" and "The Place of Falling Waters", both available at Darcy McNickle Library on the Salish Kootenai College campus. Local elders and tribal natural resource professionals would be valuable guests to speak to students about the dam and water as well. See the Further Information section for contact information.

Procedure

Day 1

- 1) As part of a group discussion, have the students list on the board the possible benefits of removing a dam versus the benefits of having a dam in place. Show the students the movie "The River Lives" and discuss it as a group.

Day 2

- 2) Break the students into small groups of two to three, and distribute the participant roles handouts, which describe conflicting positions on the removal of a fictitious local dam.
- 3) Ask student groups to write a brief position paper that describes their views on the removal of a dam.

Day 3

- 4) Ask members of each group to present their group's position concerning the removal of the dam. While a group is presenting, the members of the other groups should be taking notes on the information presented, to be used later in the class.
- 5) When all of the groups have presented, each individual student will prepare a paper that expresses their personal view whether or not to remove this fictitious dam. Ask students to research their position thoroughly. (Some useful web sites on the subject of dam removal are listed in the Further Information section.) The paper should clearly state:
 - The student's position on the removal of the dam
 - Two pieces of evidence to support their position
 - Two arguments or criticisms that a person with an opposing viewpoint may have
 - A response to each of these arguments or criticisms

Day 4

- 6) Take students on a field trip to Kerr Dam. Invite tribal members, such as culture committee members, elders, and tribal natural resource professionals to join you at the dam to discuss tribal issues about the dam.

Further Information

For further information about this lesson, contact the authors, David Clarke (Dclarke@montana.com) or Sean Estill (estillsci@hotmail.com).

The organization of American Rivers has a website that provides a great deal of information concerning the removal of dams in the United States. Their web address is <http://www.amrivers.org/damremoval/>

The following two sites provide information from groups that oppose dam removal.
<http://www.hydro.org/ga022.htm>
http://www.meadhunt.com/News/h20_i3-v4.htm

To arrange a field trip inside Kerr Dam call 883-5872.

To invite members of the culture committees to talk with your class about the dam, call the Salish Culture Committee at 745-4572, and the Kootenai Culture Committee at 849-5659.

Several of the programs of the CSKT Natural Resource Department deal with dam related issues, including fisheries and shoreline protection. Contact them and invite them to talk with your students by calling 675-2700.

References

Salish Kootenai College Media Center. (1987). The River Lives [film]. Missoula, MT: D'Arcy McNickle Library.

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Participant Roles

Groups Supporting Dam Removal

Association of Concerned Fisherman

These individuals are concerned with effects that the dam is having on the migration and breeding of native populations of fish.

Outdoor Recreation Society

The members of this group would like to see the river returned to its original state, before the construction of the dam. They would like to see the return of the rafting and fishing opportunities that were present before the dam.

Engineers Against Catastrophic Dam Failure

These people are worried about the possibility that the dam may weaken and break in the future, releasing a torrent of water and sediment downstream.

Cultural Conservation Center

This group is composed mainly of tribal members who are concerned that their cultural connection with the river has been damaged by the construction of the dam. The health of the river habitat is very important to this group.

River Health United

This is a national organization whose goal is the selective removal of unnecessary dams to restore rivers, bring back fish and wildlife, improve recreation opportunities, and revitalize local communities.

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Groups Opposing Dam Removal

Lakefront Property Owners Association

This group of homeowners lives and plays on the shores of the lake. They feel that this should not be a privilege that is taken from them

Valley Bottom Irrigators Association

The members of this group represent the farmers and ranchers living below the dam that rely on the dam to provide a reliable source of water for irrigation during the summer months.

Power Company Employee Association

The removal of the dam would be the end of the jobs for the employees of the company that manages the dam. They want their voice heard before any action is taken

Scientists Supporting Clean Energy Sources

The mission of this organization is to develop and encourage the use of “clean” energy sources. They worry that as electricity-producing dams are removed, the United States will become more and more dependent on fossil fuels for energy production.

Members of the Tribe that own the dam

This dam is a significant source of revenue for the local tribe, providing millions of dollars each year. The members of this group feel that removing the dam would be disastrous for the tribe and the local economy.

Here are two links to pages that oppose the removal of dam.

<http://www.hydro.org/ga022.htm>

http://www.meadhunt.com/News/h20_i3-v4.htm