
Dams & Salmon

Video Length: 5:29

Lesson Description:

Can we save the salmon and still keep the dams? Are environmental activists exaggerating the threat to fish populations? This video explores the debate over whether dams, which provide crucial hydroelectric power, are really driving salmon to extinction.

Objectives:

Students will be able to:

- identify the main arguments presented by activists and experts regarding the impact of dams on salmon populations.
- explain how innovations like fish ladders and passage structures have influenced salmon recovery efforts.
- compare the differing perspectives on the benefits and drawbacks of dam removal for both environmental and energy concerns.
- evaluate the effectiveness of current policies related to dam preservation and salmon recovery based on evidence from the video.

Concepts & Key Terms:

Activists: Individuals or groups advocating for social, political, or environmental change.

Fish ladders: Structures built on dams to help fish migrate upstream by providing an alternative path around the dam.

Gullible: Easily persuaded to believe something, often without questioning or checking facts.

Hydroelectric power: Electricity generated by using the flow of water to turn turbines.

Salmon recovery: Efforts to restore and maintain healthy salmon populations, often through conservation and technological innovations.

Preview Activity:

Use Think, Pair, Share to have students answer and discuss these preview questions: What do you know about how dams impact the environment? Why might some people want to remove dams, while others want to keep them in place? How can changes in technology affect the relationship between energy production and environmental conservation?

OR

Distribute copies of the K-W-L worksheet to the class. Have students fill in the K and W sections. After showing the video, have students complete the L section and answer the questions at the bottom of the worksheet.

Viewing Guide:

We recommend that teachers show the video twice: first to allow students to view the video and focus on the issues presented, and second to allow them time to complete the viewing guide. After they complete the viewing guide, allow students a few minutes to work in pairs to share and verify answers.

Answers to Viewing Guide

1. ladders
2. scientific
3. dishonest
4. impact
5. damage

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Viewing Guide

Name _____

Date _____

Class _____ Per _____

Teacher _____

Directions: As you watch the video, fill in the blanks with the correct words.

1. But still, today, most fish pass. How? Well, there are _____ on the dams that allow passage.
2. Today, between 96% and 98% of the salmon successfully pass each dam, which is why the federal _____ agencies say that salmon will recover with the dams in place.
3. People don't want to believe that their favorite environmental group is _____.
4. We keep doing dumb things. We put money into places where it doesn't have an environmental _____, and then we wonder 10, 20, 300 years, why we haven't made any environmental progress.
5. So, destroying hydro and replacing it with wind makes absolutely no sense. We'll do serious _____ to our electrical grid for a tiny benefit to salmon over those who are elected officials.

Take a few moments to reflect on the video and answer these questions.

What are the dangers of forming strong opinions based on emotional appeals rather than evidence, especially in debates about science and the environment? _____

If both sides of a controversial issue use selective facts or exaggerated claims, how can we, as informed citizens, figure out what to believe and what actions (if any) should be taken? _____

Discussion and Analysis

1. What are the main claims made by activists about dams and salmon?
2. How do fish ladders help salmon get past dams?
3. How has technology changed the way dams impact salmon populations?
4. Why do some activists believe salmon are close to extinction?
5. What are the benefits of keeping the Snake River dams in place?
6. How have media reports influenced public opinion about the salmon crisis?
7. What evidence does the video provide to show that salmon populations are recovering?
8. How do the arguments for and against dam removal compare?
9. What might happen to the region's energy supply if the dams are removed? How will that impact the human population of the region?
10. How effective are innovations like fish ladders in solving the problem?
11. Why do some people continue to believe the claims about salmon extinction despite evidence to the contrary?
12. Why did John Stossel call some media "gullible?" Do you agree with his assertion? Why/why not?
13. What are the financial implications of removing the dams versus keeping them?
14. Why is it important to understand the objectives of a group advocating for a specific action, in this case, to destroy the dams?
15. What role do emotional appeals play in the debate over dam removal?
16. Why is it important to be skeptical and to research claims made by various groups and/or individuals?
17. What is the media's responsibility to the public when discussing things like the salmon population and energy production?
18. How might alternative energy sources, like wind and solar, compare to hydroelectric power in this region?
19. Do wind and solar energy also impact wildlife? Who should choose which wildlife to protect and which not to in our pursuit of energy?
20. What do you think is the best solution to balancing energy needs with salmon recovery efforts? Why?

4. Have students complete the CER (Claim, Evidence, Response) graphic organizer in class or for homework.
5. Have students complete and submit the Exit Ticket as they leave class.
6. Ask students to research the technology behind fish ladders and create a short presentation that explains how they work and their impact on salmon migration. Students should include diagrams and examples of real-world usage. This can be done in pairs or small groups.
7. Organize a class debate where one side argues for dam removal and the other side argues to keep the dams. Students will need to research both the environmental and energy impacts of dams and present their case using evidence from the video and other sources.
8. Have students individually write a policy proposal that outlines their stance on dam removal, focusing on balancing environmental concerns with energy needs. They should include specific recommendations based on evidence from the video and other sources.
9. In small groups, have students compare news reports and environmental group claims about salmon extinction with the data and arguments presented in the video. Each group should create a short report discussing how the media influences public perception on this issue.
10. Students research alternative energy sources such as wind and solar and compare their reliability, as well as their impact on wildlife, to hydroelectric power. Each student can create a chart or infographic showing the pros and cons of each energy source.
11. Students will write a letter (can be sent as an email if you wish to submit them) to a local or national politician explaining their position on dam removal. They should reference key points from the video and propose solutions for balancing environmental and energy needs.
12. Have students research historical salmon population data in the Snake River region and create a graph showing trends over time. They should write a short analysis of the factors that may have contributed to the fluctuations.
13. Students individually write a cost-benefit analysis of dam removal versus keeping the dams. They should consider environmental impacts, energy production/loss, and financial costs, using evidence from the video and other sources.
14. Students can research an environmental group that is actively campaigning against the dams and write a brief report on the group's objectives, strategies, and claims. They should compare this to what was presented in the video.

Name _____

Date _____

Class _____ Period _____

Teacher _____

Dams & Salmon K-W-L Chart

Directions: Complete the **K** and **W** sections prior to watching the video. After you have seen the video, complete the **L** section and answer the questions below the K-W-L chart.

K	W	L
What I know about hydroelectric dams and salmon...	What I want to know about hydroelectric dams and salmon...	What I've learned about hydroelectric dams and salmon...

What might happen to the region's energy supply if the dams are removed? How will that impact the human population of the region? _____

How effective are the innovations like fish ladders in solving the problem? _____

Name _____

Date _____

Class _____ Period _____

Teacher _____

Dams & Salmon PMI Chart

P = Plus: What might be some positive effects of hydroelectric dams?
M = Minus: What might be some negative effects of hydroelectric dams?
I = Interesting: What is interesting about hydroelectric dams?

+ Plusses +	- Minuses -	I

What are the financial implications of removing the dams versus keeping them? _____

What do you think is the best solution to balancing energy needs with salmon recovery efforts? Why? _____

Name _____

Date _____

Class _____ Period ____

Teacher _____

Dams & Salmon

Claim Evidence Reasoning Activity

Claim: What is the claim from this video that you are evaluating?

Evidence: What evidence is presented (or can you find) in support of the claim?

Reasoning: How does the evidence support (or dispute) the claim?

5 Steps to Verify Information

1. Evaluate the Source

- Check the credibility of the source. Is it a well-known and respected outlet? Look for information about the author and the organization's reputation.



2. Cross-Check Information

- Verify the facts by comparing them with multiple reputable sources. See if other reliable sources are reporting the same information.



3. Check for Bias

- Assess the content for any potential bias. Look for loaded language or one-sided arguments. Consider the source's potential motives or interests.



4. Examine the Evidence

- Look for supporting evidence, such as data, expert quotes, and references. Reliable information will be backed by verifiable facts and sources.



5. Verify Dates and Context

- Ensure the information is current and relevant. Check the publication date and consider the context in which the information was presented.

Name _____

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Political Cartoon Activity

Directions: Use the political cartoon to answer the questions.



“Not only did they install an elevator to help you get over the dam, they also hired an elevator operator.”

CartoonStock.com

How does the cartoon use humor to comment on the innovations like fish ladders mentioned in the video? _____

How does the cartoon suggest that human efforts to assist salmon might be overly complex? _____

Based on the video, do you think fish ladders are effective or is the cartoon making a valid criticism? Explain. _____

How does the message of the cartoon relate to the arguments presented in the video about the balance between helping salmon and keeping the dams? _____

Name

Admit One

Should hydroelectric dams be torn down? Why or why not?

Admit One

EXIT TICKET

Name

Admit One

Should hydroelectric dams be torn down? Why or why not?

Admit One

EXIT TICKET

Name

Admit One

Should hydroelectric dams be torn down? Why or why not?

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EXIT TICKET