Conservation in the Classroom

Why Rivers Need To Flow

January 18, 2023

2:00 pm ET / 11:00 am PT

Recommended grade levels: 4–8

Watch live on Conservation in the Classroom

View recording on the Wild Classroom YouTube channel

Natalie Shahbol
WWF Freshwater

Healthy rivers are extremely important to the survival of people and nature around the world. They provide habitat and food for plants and animals, and provide protection and livelihood for humans living near and far. But when human infrastructures like dams, roads, and buildings prevent rivers from flowing freely, they are unable to support all the organisms that depend on them.

During this talk, Natalie Shahbol, Freshwater Specialist at WWF, explains the importance of using freshwater resources responsibly so as not to cause devastating impacts to the environment. She breaks down all the benefits we get from rivers and describes how students can do their part to take care of the rivers in their communities.

BELL-RINGER WARM-UP QUESTIONS

Help prepare your learners by introducing the topic with these warm-up questions.

Brainstorm

Various organisms depend on rivers in different ways. Explain how each of these life forms might rely on rivers differently:

- Plants: _____

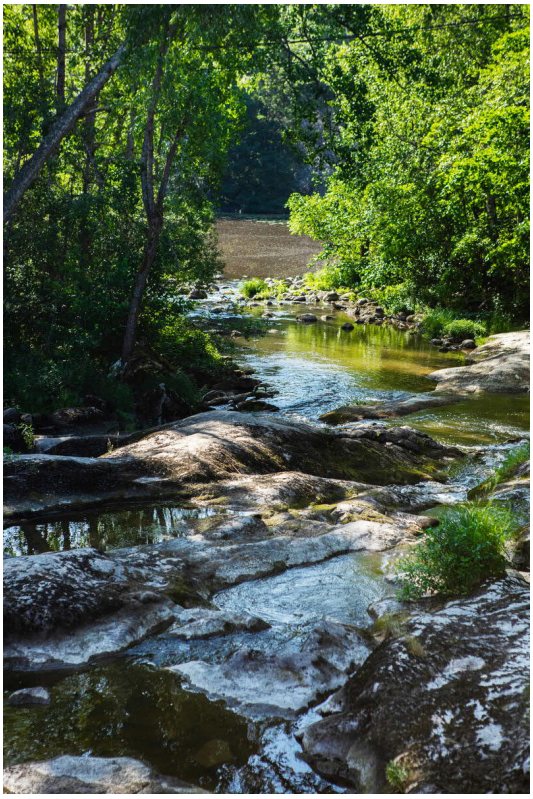
  _____

- Freshwater fish: _____

  _____

- Birds: _____

  _____



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Consider

Name one thing that might prevent a river from staying connected and flowing naturally:

_____

Reflect

Name three ways you use freshwater in your everyday life.

1. _____
2. _____
3. _____

✂ ------- ✂ -------- ✂ -------- ✂ --------- ✂ --------- ✂ --------- ✂ --------- ✂ --------- ✂

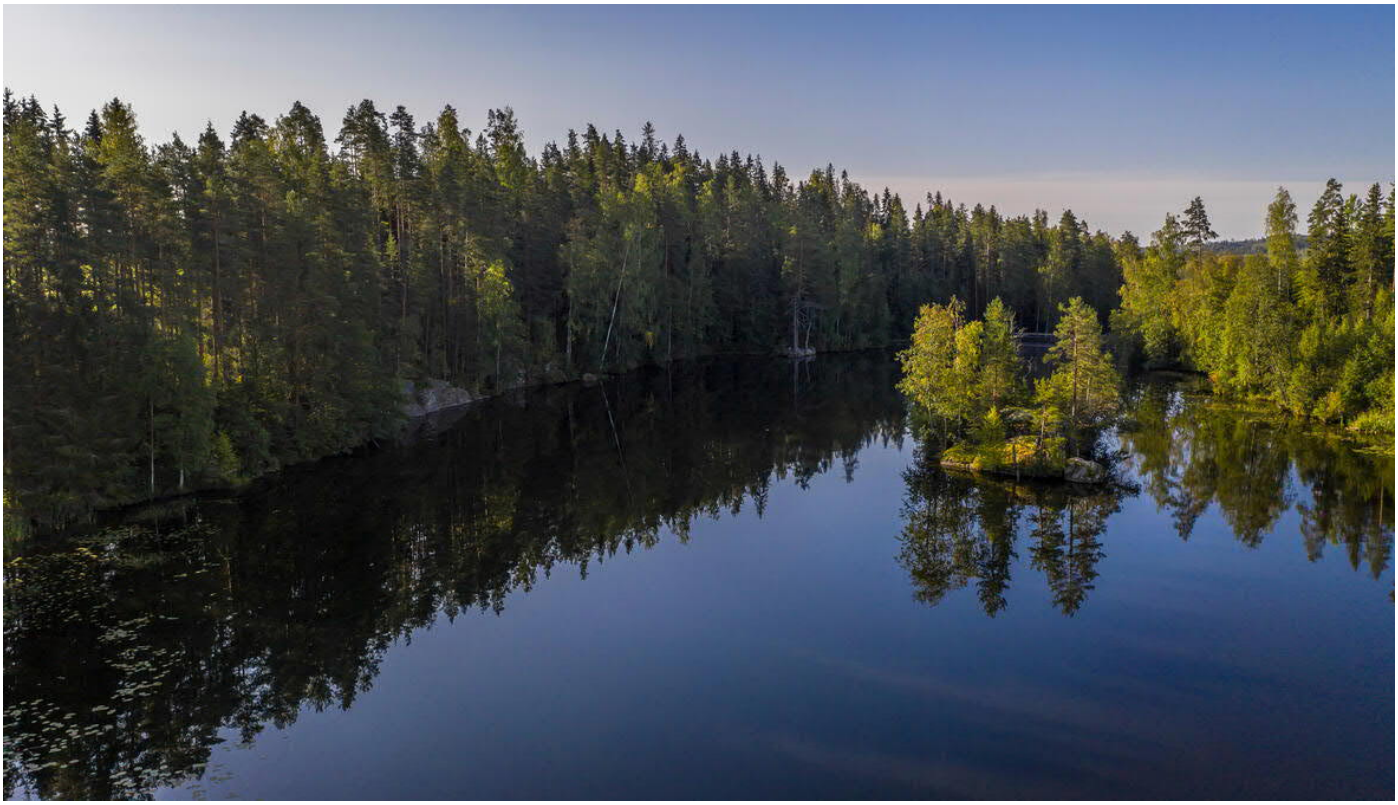
Planning to watch the event live? Write your question(s) for the presenter here:

_____

INFORMATIONAL RESOURCES

Use these resources to provide background information to your learners

- Web article: Source to Sink: What Makes a Free-Flowing River
- Web article: Just One-Third of the World's Longest Rivers Remain Free-Flowing
- Web article: An 83% decline of freshwater animals underscores the need to keep rivers connected and flowing
- Web page: Freshwater
- Web page: Healthy Rivers For All
- Web page: Free-Flowing Rivers
- Web story: 3 ways you can protect rivers and the communities and wildlife that depend on them
- Web story: 4 species impacted by dams



ACTIVITIES

Check out these lesson plans to supplement the content from the event.

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Like the River Flows

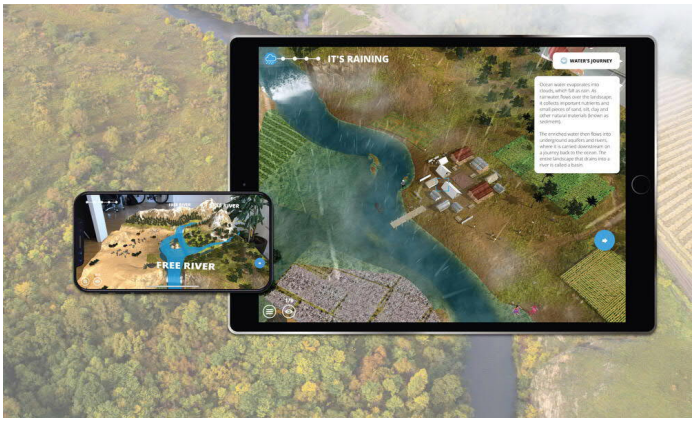
After explaining how rivers are like the arteries and veins of the Earth, students will develop their own metaphors and similes in a poem that reflects the importance of free-flowing rivers.

Grades 3-5

Free Rivers: An Augmented Reality App

Use the WWF Free Rivers augmented reality app to explore a virtual world, meet people, and observe wildlife. The storytelling experience will help young learners understand how rivers support biodiversity and healthy communities.

Grades 3-8



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Freshwater Dam Debate

Students will learn about the pros and cons of freshwater dams from the perspectives of various town stakeholders and engage in debates to discuss environmental, community, political, and business impacts of building dams.

Grades: 6-8

ASSESSMENTS

Conclude your lesson with these resources and fun assessment tools.

Online quizzes/Kahoot!

- WWF Quiz: How Healthy Is Your Favorite Water Basin?
- Kahoot!: How has our planet changed? The Living Planet Report 2022

Answer key for Quick Quiz (next page)

1) Groundwater (c); Free-flowing river (a); Infrastructure (d); Sediment (b)

2) Salmon, sturgeon, and other fish; river dolphins; egrets and other wetland birds

3) b

4) **False**: Most long, free-flowing rivers remain only in remote and/or less developed regions.

Why Rivers Need To Flow

Answer the following quiz questions and writing prompts after watching the Conservation in the Classroom event.

Quick Quiz

1) Match the freshwater vocabulary term (left) with its corresponding statement (right).

GROUNDWATER	a. largely unaffected by human-made changes to its flow and connectivity
FREE-FLOWING RIVER	b. what free-flowing rivers help to transfer; helps reduce flood and drought risk
INFRASTRUCTURE	c. where almost 50% of people in the US get their drinking water from
SEDIMENT	d. the biggest culprit in interfering with the flow of a river

2) Name one animal whose migration could be disrupted by placing a dam, or other form of infrastructure, in the wrong place.

_____

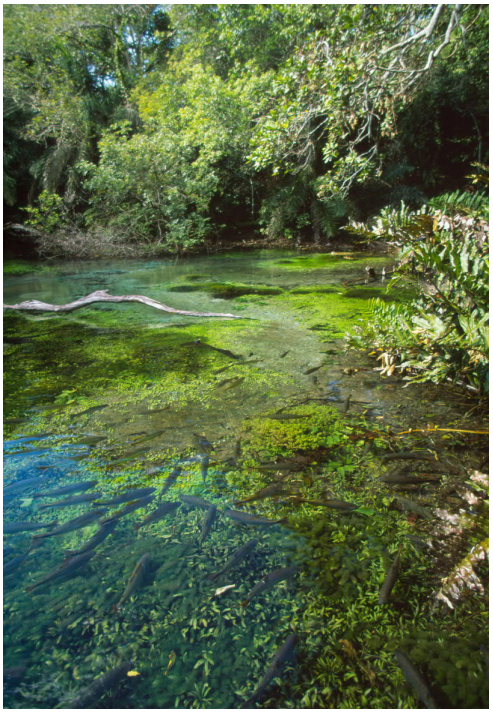
3) What portion of the world's longest rivers (620 miles and longer) remain free-flowing?
   a. 1/4
   b. 1/3
   c. 1/2

4) **TRUE** or **FALSE**: The majority of free-flowing rivers are located along big cities.

Short answer writing prompts

The 2022 Living Planet Report revealed that since 1970, freshwater species populations have declined by 83%, the most from any ecosystem around the world.

Explain how this loss of biodiversity not only affects the health of the rivers, but also the people that depend on them.



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Even though dams can have negative impacts on freshwater species and the people that depend on them, the number of dams being built continues to increase, with over 60,000 major dams currently existing around the world.

What benefits do dams provide communities, causing them to continue to be built? What changes need to be made in order to use dams more safely and sustainably?

Consider a river that you have visited or that is near to you. Is it healthy? What threats does it face?

Write a letter to your local/state representative explaining how you would like them to improve the management of this river to help preserve its resources so that it can continue to provide for people and biodiversity.