



# RIVERS ARE ALIVE

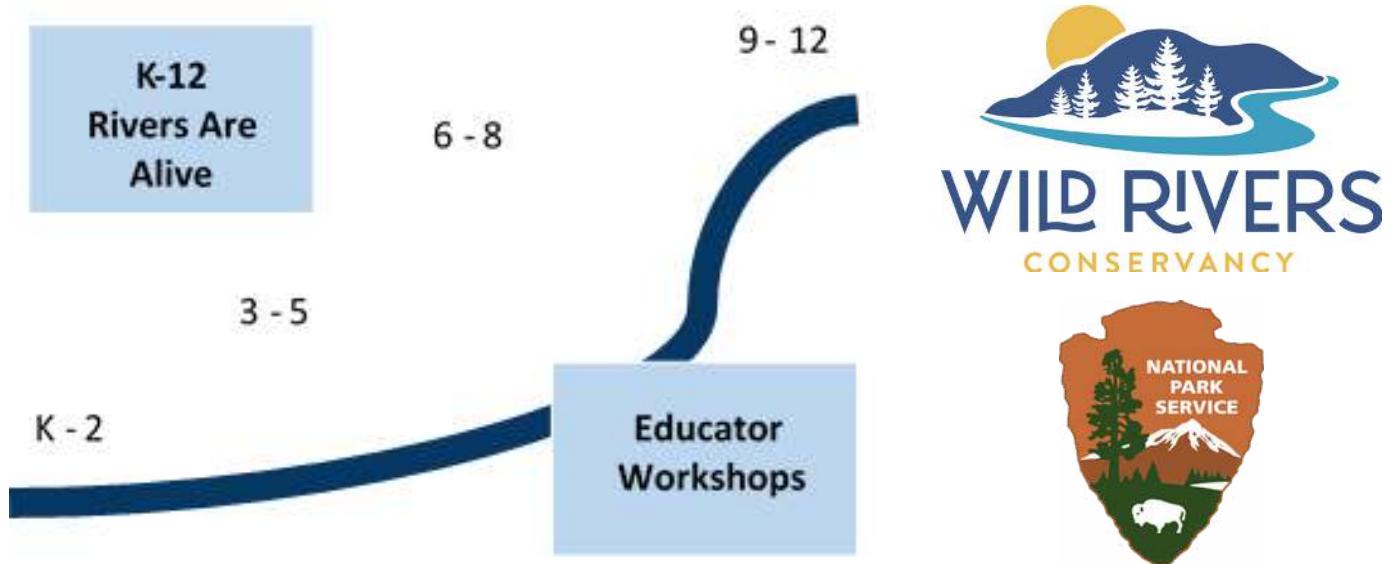
2021 TEACHER'S GUIDE





Rivers Are Alive is a K-12 environmental education program offered in partnership by the Wild Rivers Conservancy and the St. Croix National Scenic Riverway throughout the St Croix watershed in every season.

Rivers Are Alive offers engaging, standards aligned, science activities. Our whole school model connects students to this National Park and its watershed in a learning progression. We believe in the benefits of reconnecting with students throughout their school career to provide a holistic approach to environmental education so that rivers are always alive and present in their learning. We also believe in empowering educators to be river and watershed experts through valuable teacher in-service workshops.



## LEARN MORE

**Additional resources and the Rivers Are Alive program request form can be found at:**  
[wildriversconservancy.org/learn-explore/rivers-are-alive](http://wildriversconservancy.org/learn-explore/rivers-are-alive)

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# K-12 PROGRAM OVERVIEW

**K-2**

## Rivers are alive (Grades K-2)

Learners explore what a river is by investigating underwater life, the life above the river and at its edges.

### Big Ideas

- Rivers are more than a moving, stream of water
- Rivers are a home (habitat) to many plants and animals
- Rivers are a highway for fish and migrating birds
- The forests along the river are home to many plants and animals
- Rivers Are Alive in every season

**3-5**

## Rivers Connect Us (Grades 3 – 5)

Learners discover their personal connections to the river ecosystem while experiencing the dynamic life that lives there.

### Big Ideas

- Rivers are full of diverse aquatic (water) and terrestrial (land) life
- Animals and plants are adapted to live in their river home
- The living and nonliving parts of a river ecosystem are connected
- Humans are connected by rivers
- Humans have an impact on and can protect rivers

**6-8**

## We Need Healthy Rivers (Grades 6 - 8)

Learners explore the interconnectedness of the river ecosystem and the role humans play in maintaining its health.

### Big Ideas

- Rivers are full of diverse aquatic and terrestrial life
- Humans have an impact on and can protect water quality
- Invasive species, introduced by humans, can often disrupt ecosystem balance
- Biologists study aquatic and terrestrial ecosystems to learn about animal behavior, life styles and population health (even in the winter)

**9-12**

## We Are River Responsible (Grades 9 - 12)

Students are engaged in citizen science, career path exploration, and river research.

### Big Ideas

- We all have an impact on and can protect water quality
- Invasive species and pollutants disrupt ecosystem balance
- Scientists are always actively studying the St. Croix National Scenic Riverway
- There are important career and volunteer opportunities in conservation
- There are threats to the river, but we can be part of the solution

# CHOOSE YOUR OWN ADVENTURE

	RIVERS ARE ALIVE PROGRAM	AT THE RIVER	AT THE SCHOOL YARD	IN YOUR CLASS ROOM	NPS VISITOR CENTER	VIRTUAL
All Ages	Let's go Birding	X	X			
	Let's go Mucking	X	X			
	Let's go Snowshoeing (Jan-March)	X	X			
	NPS Scavenger Hunt and Film				X	
K-2	Meet a Mussel			X	X	X
	Observation Olympics	X	X			
3-5	The Great Mussel Mystery			X	X	X
	Out of Place? Intro to Aquatic Invasive Species	X	X			
	River Connections in the Classroom	X	X	X	X	
	What is a Watershed?	X	X	X		
6-8	A Watershed Jeopardy-Aquatic Invasive Species			X	X	X
	The Great Mussel Mystery		X	X	X	X
9-12	Conservation Careers			X	X	X
	A Watershed Jeopardy-Aquatic Invasive Species			X	X	X

## ADD AN ENRICHMENT ACTIVITY!

### SERVICE PROJECT

- Our team will assist in finding the perfect fit for you and your students to help your school, your community, and your riverway! Some options may include garlic mustard pulls or buckthorn removal, storm drain stenciling and river clean-up, or connect you with citizen science projects to suit your needs.

### LET'S GO PADDLING!

- Explore the water...while on the water! Our trained kayak instructors can help you plan the perfect outing for your students to learn the basics of paddling while exploring the great outdoors.

# AT THE RIVER

FIELD TRIPS TO THE ST. CROIX NATIONAL SCENIC RIVERWAY

## Namekagon River Visitor Center

TREGO, WI

For northern watershed schools, a visit to the Namekagon River National Park Visitor Center makes for a fun and educational field trip! Students will explore the Visitor Center, watch a fantastic film and discover the underwater life in the Namekagon River.



## St. Croix River Visitor Center

ST. CROIX FALLS, WI

For central and southern watershed schools, a visit to the St. Croix National Scenic Riverway Visitor Center makes for a fun and educational field trip! Students will explore the Visitor Center, watch a fantastic film and discover the wild and scenic St. Croix River.



## Rivers Are Alive in Your Community

Rivers Are Alive will travel! We can meet your class at a tributary or river landing near you or even at a local park or preserve. Students will experience how their community is connected to our watershed and to this National Park.



## MN and WI State Parks

We work closely with MN and WI state park in the St. Croix River watershed to coordinate Rivers Are Alive field trips to all state parks in the St. Croix River watershed. Hiking and hands-on learning are an integral part of these state park adventures!

# AT YOUR SCHOOL

RIVERS ARE ALIVE IN THE CLASSROOM

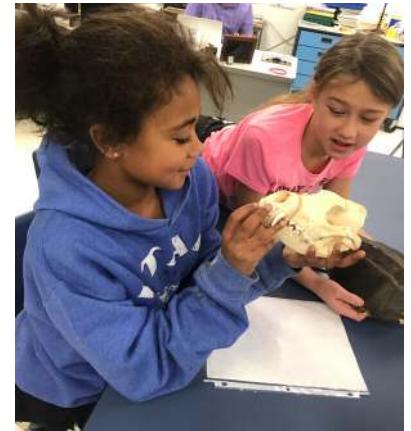
## School Yard

**Our most popular programs can take place right outside your school! Let us bring the river to you with fun activities and lessons that will help students learn what makes the river alive.**



## In the Classroom

**We will bring the river to life for students in your classroom. Students will explore the interconnectedness of their local river ecosystem discovering their place in the watershed.**



## Virtual

**If meeting in-person is not the best option for your class, ask us about our engaging and interactive virtual programs. They can be scheduled as stand-alone programs or as a pre/post activity to your in-person program.**

## Fourth Grade National Park Pass

### EVERY KID OUTDOORS

**Fourth grade teachers, your students are eligible to receive an Every Kid Outdoors Pass which gets them into National Park and other Federal sites for free! acroinverte-wow!PPING my national parkal Park field trip programming fun Kid in a Park Pass which gets**



# ADVENTURES IN THE WATERSHED

GETTING STUDENTS OUTDOORS IN OUR NATIONAL PARK



## RIVERS ARE ALIVE... EVEN IN WINTER

The Let's Go Snowshoeing class for grades K-12 introduces students to snowshoeing by considering all of the animals who travel on snowy ground with their furry, snowshoe-like feet.





## PROGRAM DESCRIPTIONS

### ALL AGES

#### **Let's Go Birding (Year Round)**

The St. Croix National Scenic Riverway is home to an amazing variety of birds from small colorful songbirds to large powerful raptors. Learning to use binoculars and identify common bird species are lifelong skills that students can use anytime of year and anywhere they go. Older students will learn about the Riverway's wide variety of protected habitats and environments that make it a uniquely rich birding corridor.

#### **Let's Go Mucking (April - October)**

Sometimes it's the smallest creatures in an ecosystem that tell us the most about its health. It doesn't get any more hands-on than mucking in the river for macroinvertebrates. In this class, students become biologists and use a variety of tools and materials to collect, observe and identify the tiny creatures that are big indicators of how healthy a body of water is.

#### **Let's Go Snowshoeing (January - March)**

Winter is a cold and quiet time of the year, but animal life is active all winter long. Students will put on snowshoes and discover how rivers are alive, even in the winter, by searching for animal signs and learning animal tracking basics.

#### **NPS Visitor Center Scavenger Hunt and Film**

We do not have to travel too far to visit a National Park or Monument. An interactive scavenger hunt during your field trip to the Namekagon or St. Croix Visitor Center will inspire your students to learn more about this incredible Riverway. Students will also view a short film that tells the story of the St. Croix and how it became designated as a Wild and Scenic River through the National Wild and Scenic Rivers Act.

### GRADES K-2

#### **Meet a mussel**

You mean muscle, right? Nope! Freshwater mussels live in lakes and rivers in Minnesota and Wisconsin. What are they? Let's meet a mussel and learn about these mysterious and marvelous creatures together!

#### **Observation Olympics**

Our eyes are not the only tool we can use to make observations of the natural world. We can use all five of our senses to experience and explore nature...and it can be fun! This fast paced, hands-on class makes observation fun. When we are actively observing like scientists, one could argue that observation could even be an Olympic sport!

# PROGRAM DESCRIPTIONS CONT.

## GRADES 3-5

### The Great Mussel Mystery

We have muscles (strong, of course) and rivers have mussels; freshwater mussels! These bi-valves remind us of oysters and clams, and North America has more than 300 species of freshwater mussels; more than anywhere else in the world. But what are these two-shelled organisms? Are they animals? Are they alive? Do they even do anything? Mussels are mysterious and students will gather evidence (clues) to learn more about these river and lake bottom dwellers.

### Out of Place? Intro to Aquatic Invasive Species

Have you ever been the new kid and felt a little out of place? Sometimes in nature, animals and plants are introduced to an ecosystem where they are considered out of place, and they have to figure out a way to thrive and survive. And sometimes, those out of place animals and plants figure out a survival strategy that works too well and they make it hard for the animals and plants that have always lived in that ecosystem to survive. Students will participate in an interactive game to explore this idea.

### River Connections in the Classroom

Rivers Are Alive! We can learn a lot by observing the animals that live near us, even if we are only observing animal objects. In this class, we will bring the river to your classroom. Students will step into the shoes of scientists and participate in observation, collaboration, and team teaching. Finally, they will discover the interconnectedness of a river ecosystem, in which humans are part of, by creating an ecosystem model.

### What is a Watershed?

The ponds, streams, creeks, rivers and lakes in our communities are full of life, and they are all connected to each other. Students will be introduced to watersheds by constructing their own watershed and experimenting with a watershed model. They will understand that we all live in a watershed and are connected by them, and how we care for the water in our communities can positively or negatively impact our downstream neighbors and the quality of water within a watershed.

## GRADES 6-8

### The Great Mussel Mystery

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### A Watershed in Jeopardy

Invasive species may forever change the way we live our lives. From gardeners to hikers, farmers to landowners, humans are impacted by these fast-spreading species. Students will identify how terrestrial invasive species affect our economies and ecosystems, and the role we all can play to prevent their further spread through an engaging and interactive game of jeopardy.

# PROGRAM DESCRIPTIONS CONT.

## GRADES 9-12

### Conservation Careers

Students will explore conservation career paths by listening to the words of past conservation leaders who worked to protect the St. Croix National Scenic Riverway and other important public lands, as well as the voice of new leadership who are working to ensure a more diverse and inclusive outdoors.

### A Watershed in Jeopardy

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"We can't thank you enough for the learning you facilitated with our students. We were all so impressed and the students were so engaged. We will definitely be contacting you next fall for a similar experience. THANK YOU!"  
- River Crest Elementary Teacher

# READY TO SCHEDULE

GET IN TOUCH

## COMPLETE ONLINE REQUEST FORM

[wildriversconservancy.org/learn-explore/rivers-are-alive/raa-program-info-request](http://wildriversconservancy.org/learn-explore/rivers-are-alive/raa-program-info-request)

## PROGRAM COSTS

### Donations Encouraged\*:

- \$2 (half-day or classroom)
- \$4 (full-day) per student

\*To ensure this program continues for long into the future.

### All programs are free except for:

- Transportation costs (schools cover)\*

\*Scholarships available; please ask us!

### Find additional information on our website:

[wildriversconservancy.org/learn-explore/rivers-are-alive](http://wildriversconservancy.org/learn-explore/rivers-are-alive)

