



# RIVERS ARE ALIVE

## 2024 TEACHER'S GUIDE





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

Our goal is to provide accessible, engaging, watershed-wide, youth environmental education programming to inspire a future community of park visitors, stewards, and advocates.

We work to achieve our goals by following our guiding principles:

- **Positive Partnerships**
  - We collaborate with partners throughout the watershed to create meaningful, inclusive, community-based programming.
- **St. Croix National Scenic Riverway**
  - We incorporate our wild and scenic Riverway into our program by partnering with the National Park Service.
- **Accessible and Affordable**
  - We strive to remove barriers by traveling to you or offering transportation scholarships to bring you to the river to provide low-cost programming with flexible schedules.
- **Standards based. Student centered.**
  - We offer curriculum to assist schools in meeting academic goals while fostering self-discovery, exploration, reflection, and wonder.
- **Watershed Wide**
  - We educate the watershed to protect the National Park that flows through its heart.
- **Whole School Model**
  - We offer a whole school model that serves students from grades K-12 as well as professional development for educators.

We 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)

**Have questions? Reach out to:**

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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

	<b>Rivers Are Alive Program</b>	<b>At the River</b>	<b>At the School Yard</b>	<b>In Your Class Room</b>	<b>NPS Visitor Center</b>	<b>Virtual</b>
All Ages	Let's Go Birding	X	X			
	Let's Go Mucking	X	X			
	Let's Go Snowshoeing (Jan-March)	X	X			
	Let's Go Ice Fishing (Jan-March)	X	X			
	Let's Go Fishing	X	X			
	NPS Scavenger Hunt and Film				X	
K-2	Meet a Mussel			X	X	X
	River Connections in the Classroom			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			
	*NEW* Science of Change	X	X	X	X	X
	River Connections in the Classroom			X	X	
	What is a Watershed?	X	X	X		
	The Flooded Forest	X	X			
6-8	A Watershed in Jeopardy - Aquatic Invasive Species			X	X	X
	Into the Weeds			X	X	X
	The Flooded Forest	X	X			
	The Great Mussel Mystery		X	X	X	X
9-12	Conservation Careers			X	X	X
	A Watershed in Jeopardy - Aquatic Invasive Species			X	X	X
	Into the Weeds			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 river! 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 experienced staff 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 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.



### **MN and WI State Parks**

We work closely with MN and WI state parks 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!

## RIVERS ARE ALIVE IN YOUR COMMUNITY



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.

# 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 in your classroom. Students will explore the connection of their local river ecosystem discovering their place in the watershed.



### Virtual

If meeting in-person is not the best option, 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

Fourth-grade teachers, your students are eligible to receive an Every Kid Outdoors Pass which gets them into National Parks and other Federal sites for free!

### EVERY KID OUTDOORS



## WILD RIVER JOURNEY

Wild River Journey is a field trip for 4th grade students to experience the awe and wonder of our incredible national park on a historic riverboat. On board the boat, students rotate through three learning stations that raise their awareness of the cultural, historical, and natural significance of the St. Croix National Scenic Riverway.



# ADVENTURES IN THE WATERSHED

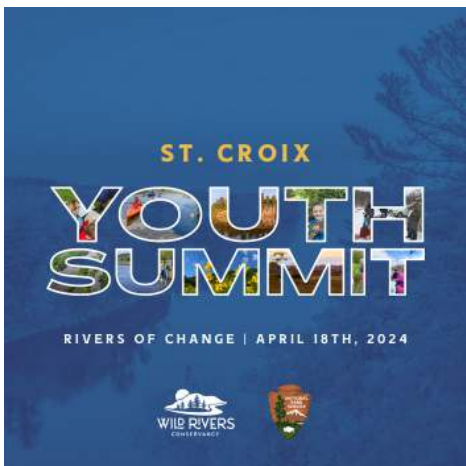
GETTING STUDENTS OUTDOORS IN OUR NATIONAL PARK



## RIVERS ARE ALIVE... EVEN IN WINTER

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

Let's Go Ice Fishing teaches students how to get on the ice safely and set up for catching some fish.



## ST. CROIX YOUTH SUMMIT

Annually before Earth Day, we host the St. Croix Youth Summit. Learn from professionals in their field to inspire a sense of community through stewardship and ecological awareness.

## TEACHER WORKSHOPS

Our workshops allow teachers to expand their awareness of opportunities in the watershed and participate in RAA programs!

Educators will earn CEUs.

### SAVE THE DATES:

1.20.24 | MN National Parks: Teacher Workshop

7.25.24 | Summer Teacher Paddle

9.14.24 | Fall Colors Teacher Paddle

12.14.24 | Winter Teacher Workshop

## **PROGRAM DESCRIPTIONS**

### **Science of Change (3-5)**

Students will learn that they can make a difference and will one day be the ones in charge. We start with defining the difference between climate and weather, play a game demonstrating how greenhouse gases work, and taking a climate hike to discuss what we can do in our everyday lives to help!

### **Conservation Careers (9-12)**

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.

### **Let's Go Birding (All Ages)**

Available 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 Ice Fishing & Fishing (All Ages)**

Available January - March (Ice Fishing) and April - October (Fishing). Learn about water safety in all seasons and how to set up for success when fishing in our lakes, streams, and rivers! Students will be able to put hooks in the water and try their hand, and patience, at catching fish.

### **Let's Go Mucking (All Ages)**

Available 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 (All Ages)**

Available 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.

## **PROGRAM DESCRIPTIONS CONT.**

### **Flooded Forest (Grades 6-8)**

Using the river and floodplains all around us, we can use our observation skills to study a flooded forest. Students will discover the world around them and build an ecosystem model of the interactions within it.

### **The Great Mussel Mystery (Grades 3-8)**

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.

### **Into the Weeds (Grades 6-8)**

Go into the weeds to learn more about terrestrial native and invasive species. Students will participate in different activities to recognize the dangers of invasive species on land. How can you help prevent the spread of invasive species that threaten the St. Croix National Scenic Riverway?

### **Meet a Mussel (Grades K-2)**

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!

### **NPS Visitor Center Scavenger Hunt and Film (All Ages)**

We have a National Park right in our backyard! 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.

### **Observation Olympics (Grades K-2)**

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.**

### **Out of Place?**

#### **Intro to Aquatic Invasive Species (Grades 3-5)**

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 (Grades K-5)**

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.

#### **A Watershed in Jeopardy (Grades 6-12)**

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.

#### **What is a Watershed? (Grades 3-5)**

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.

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### **DON'T SEE A TOPIC HERE?**

TALK TO OUR ENVIRONMENTAL EDUCATION COORDINATOR  
TO LEARN HOW WE CAN ADAPT OUR PROGRAMS TO FIT  
YOUR NEEDS!

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# 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

### Suggested Donations:

- \$2 per student for a half-day or classroom program
- \$4 per student for a full-day program

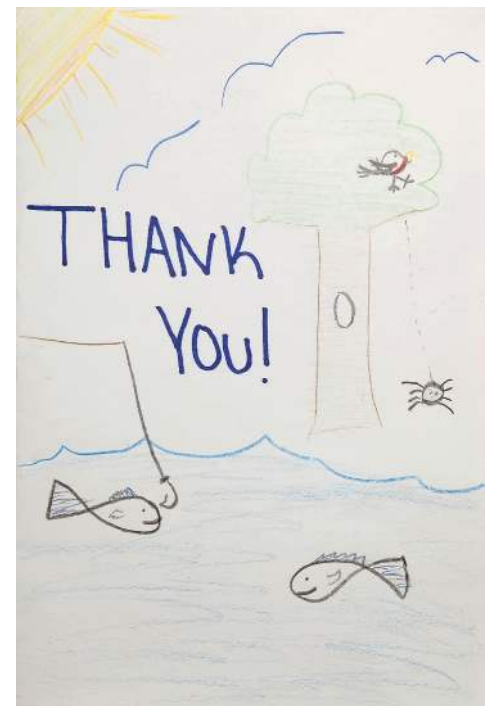
**Limited busing scholarships available!**

Find additional information on our website:

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

Our Rivers Are Alive programming is made possible  
with support from:

- National Park Foundation
- National Park Service
- Chisago County
- Fred C. and Katherine B. Andersen Foundation
- Minnesota Department of Natural Resources
- Wisconsin Department of Natural Resources
- St. Croix Valley Foundation
- Xcel Energy
- Pine County
- Andersen Windows
- Royal Credit Union
- Best Buy
- Great River Energy
- MidWest One Bank
- Polaris Foundation
- Taylors Falls Scenic Boat Tours
- Stillwater River Boats





**"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**