



St. Croix  River
ASSOCIATION


RIVERS
ARE **ALIVE**

FIELD TRIP GUIDE



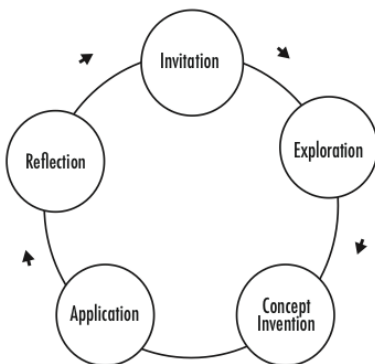
Dear Educator,

We are thrilled that your group is participating in the K-12 Rivers Are Alive education program. This program is a partnership between the St. Croix River Association and the St. Croix National Scenic Riverway, a unit of the National Park Service. We also collaborate with WI State Parks and MN State Parks for some field trips.

We can't make this field trip successful without your help! Please review this field trip guide carefully, so you and your students have a full Rivers Are Alive experience.

Rivers Are Alive field trips offer your students the opportunity to experience the wonder of this incredible National Park and its greater watershed. Your students will actively engage with scientific practices, make personal connections with nature, and be inspired to be stewards of rivers and wild places.

The Learning Cycle



Our activities are hands-on, nature-based, and aligned with state education standards. We structure field trips around the learning cycle (see diagram) to give students an engaging learning experience.

We strongly recommend completing a relevant pre activity before your trip and a post activity after. These activities will deepen the connection students make to the learning concepts and nature. We may be available to lead a pre or post activity in your classroom – just ask!

This field trip guide will share what to bring, expect, and share with your students before the big day!

If you have further questions, please feel free to contact us at:

St. Croix River Association: 715-483-3300

Outdoor Educator, Nicole Biagi – nicolebiagi@scramail.com

Thank you again for taking part in the Rivers Are Alive K-12 watershed education program. We look forward to working with you and your students!

Teacher Checklist

Please print this checklist and use it while planning your program.

2 weeks before your field trip:

- Get excited! Yes, the planning can be a lot of work, but the students will love their field trip.
- Check the field trip schedule to make sure the arrival and departure times are accurate. Make sure you have enough time for lunch.
- Conduct one of the Rivers Are Alive pre-field trip activities if you haven't already.
- Print the one page "Chaperone Guide to Rivers Are Alive" for each chaperone.
- Send the Field Trip Packing List home with your students
- Communicate with students and chaperones about weather-appropriate clothing. It's better to be prepared with extra jackets, layers, and raingear if there is a chance of cold weather or rain. Good shoes are essential to staying warm. If your program involves wading into the river, make sure students have an extra pair of shoes and socks, or rain boots.

1 week before your field trip:

- Print the field trip schedule and driving directions to the site for each bus or car driver.
- Split your students into the learning groups listed on the schedule.
- Inform students of the Rivers Are Alive field trip guidelines listed in the Field Trip Guide.
- Create nametags for your students so we can call your students by name from the start!
- Check the weather forecast. If the weather seems unbearable, call to reschedule your program.
- Review the schedule for how lunches are being handled. Sometimes we ask students to carry their lunches in their backpacks. Sometimes, it makes sense to have them organized by learning group. There will be instructions for lunches on your schedule.
- Contact the Outdoor Educator at the St. Croix River Association with any questions you have.**
715-483-3300

Day of the field trip:

- Make sure students know what learning group they are in (write it on their nametag).
- Give out nametags to students with their first name only. Masking tape works great! Have students put their nametags on the layer of clothing that's likely to be on the outside.
- Give the field trip schedules and driving directions to the bus or car drivers. If there's a complicated shuttling schedule, review the schedule with the drivers.
- Give out the one page "Chaperone Guide to Rivers Are Alive" to each chaperone.
- Keep students seated when the buses arrive. Have the lead teacher briefly check in with our staff before unloading the buses.

Chaperone Guide

Thanks a million for taking the time to come on this field trip. We know you've likely made sacrifices to attend, and we want to make the most of your time. *Please read this short guide carefully, and have it in your pocket during the field trip.*

We see you as a partner in education. The best way you can support student learning is through genuine curiosity, engagement, and enthusiasm. If students see that you're interested, they will be more involved. If possible, please turn your cell phone to airplane mode during the field trip.

Help to support and refocus students. We recognize that different students need different types of support. It's hard for one or two educators to provide that support to all students, and that's where you come in. If a student is withdrawn, see if you can find a gentle way to engage them in the activities. "Whoa, did you see this? What do you think it is? Can you find any more of these around here?"

If you notice a student who keeps talking to the person next to them when they should be listening, quietly stand by them.

Be a co-explorer and ask questions to students. During our exploration activities students may be working alone or in small groups. You can go near them and listen in on what they're working on and saying. If they're having trouble getting started, help them out. But instead of telling them what you know, do the opposite. Focus on things you don't know, and try to figure them out *with* students. Ask them questions instead of telling them answers. And then ask them more questions.

Mystery facilitates science learning. Our teaching style may be a bit different than what you've experienced. Our goals are for students to explore nature, notice things, become curious, come up with questions, figure things out, and discuss ideas. We try not to "tell them the answer" when they're exploring. Instead, we help them ask questions to widen their thinking process. Below are some of the questions we use to help students discover on their own. Try out some of these when you're co-exploring with students on the field trip.

Questions to support exploration:	Follow-up questions:
What do you notice? What patterns can you see? What do you wonder about it? What does it remind you of? How does it compare to_____?	How might you explain that? What's your evidence for that? How could you be more certain?

Thanks again for being here and for supporting student learning!

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The St. Croix National Scenic Riverway

-BACKGROUND-

NATIONAL PARK SERVICE

The (NPS) is charged with the management and preservation of the nation's most precious natural and cultural resources. These resources are woven into our heritage, and they provide opportunities for recreation, appreciation of beauty, historical reflection, cultural enrichment, and environmental education.

The future vision of the NPS includes protection of park resources; access and enjoyment for all people; education and interpretation to convey contributions of each park unit and the National Park system to the nation's values, character, and experience; continuing science, research and resource management to manage and protect Park resources.

ST. CROIX NATIONAL SCENIC RIVERWAY

The Saint Croix National Scenic Riverway, a unit of the National Park System, is a federally protected system of rivers located in eastern Minnesota and northwestern Wisconsin. It protects 252 miles (406 km) of river, including the St. Croix River (on the Wisconsin/Minnesota border), and the Namekagon River (in Wisconsin), as well as adjacent land along the rivers. The Riverway is one of the original eight National Wild and Scenic Rivers, largely as a result of legislation by senators Walter Mondale of Minnesota and Gaylord Nelson of Wisconsin. The largest scenic Riverway east of the Mississippi River, it lies within parts of nine counties in Wisconsin: Barron, Bayfield, Burnett, Douglas, Pierce, Polk, St. Croix, Sawyer, and Washburn; and six in Minnesota: Anoka, Chisago, Isanti, Kanabec, Pine, and Washington.

The Upper St. Croix from Gordon Dam to the Boomsite above Stillwater, MN and the Namekagon River is managed by the National Park Service. The Riverway headquarters and main visitor's center are located in St. Croix Falls, Wisconsin, with an additional visitor's center in Trego, Wisconsin operated during the summer. Large areas along both sides of the river are also managed by state agencies and include state parks and state forests.



CRAIG BLACKLOCK PHOTOGRAPHY

The cultural resources found within the current boundaries of St. Croix National Scenic Riverway document evidence of past human activities occurring on or near the Riverway over an extended period of time. Human occupation began as early as 10,000 years ago. Burial mounds, campsites, chipping stations, quarries, wild rice processing areas, rock art, and village sites offer evidence of the seasonal and complex nature of prehistoric life along the rivers. Historic American Indian archeological sites are also present and evidence the coming of European people and culture. The St. Croix River/Brule River was a favored fur trade route from the Mississippi River to Lake Superior. Interaction took place between traders and Dakota and Ojibwe and other Indians as they traveled the rivers and traded. In 1837 a treaty opened the area to settlement by Euro-Americans. Logging and early settlement occurred along the Riverway and is evidenced by the remains of logging dams and camps, the foundations of houses and farms, and the "trash" people left behind. More recent cultural resources are recreational homes, roadbeds and pine plantations.



The 1886 log jam in the Dalles of the St. Croix River, Minnesota Historical Society

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Your Field Trip

LOGISTICS

Field trip schedules and destinations vary with each school. This field trip guide offers an overview of what you can expect from all Rivers Are Alive experiences, no matter the destination or time frame.

The education staff who will be leading your group will be waiting for your bus at an agreed upon location (river landing, state park, visitor center, etc.). When you arrive, please have the lead teacher step off the bus and we will tell that person where we want the students to gather. Once the students are off the bus, there will be time for restrooms. We'll then give a brief orientation to the St. Croix National Scenic Riverway, review the day's schedule, and set program expectations. We will also provide instruction on what students should do with their lunches and backpacks. Students are encouraged to carry a water bottle with them throughout the field trip.

SCHEDULE

The schedules on the following pages represent a typical Namekagon and St. Croix River field trip. However, please keep in mind that changes in weather, river levels, field trip destinations, and/or transportation may require schedule adjustments. Flexibility is essential to having an enjoyable Rivers Are Alive experience. School groups are encouraged to depart from school for the field trip as soon as is practical, and to depart as late as the bus and school schedules allow.



Riverside Landing, Namekagon River, Danbury, WI

STUDENT SCHEDULE	GROUP 1	GROUP 2
9:30am	Arrive at landing, restrooms, orientation, split into learning groups	
9:45 – 10:45am	Let's Go Mucking	River Web of Life
10:45 -11:45am	Mussels Activity	Let's Go Mucking
11:45am – 12:15pm	Free Time, Restrooms and Lunch	
12:15 – 1:15pm	River Web of Life	Mussels Activity
1:15pm – 1:30pm	Group Wrap-up and Depart	

Interstate Park Experience, Taylors Falls, MN & St. Croix Falls, WI

STUDENT SCHEDULE	GROUP 1	GROUP 2	GROUP 3	GROUP 4
9:45 – 10:35am	Discovery Hike in WI	WI Pothole Trail	MN Pothole Trail	Macro Observation
10:45 – 11:35am	WI Pothole Trail	Discovery Hike on WI	Macro Observation	MN Pothole Trail
11:45am – 12:05pm	*Lunch at WI Pothole Trail		*Lunch under covered bridge	
12:05 – 12:15	Walk to MN Interstate		Walk to WI Interstate	
12:15 – 1:05pm	MN Pothole Trail	Macro Observation	Discovery Hike on WI side	WI Pothole Trail
1:15 – 2:05pm	Macro Observation	MN Pothole Trail	WI Pothole Trail	Discovery Hike on WI side

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Preparing For Your Field Trip

BACKPACK

Please send your students with a backpack that they can keep their water, lunch and layers in.

LUNCH

Most Rivers Are Alive field trips happen at state parks along the St. Croix National Scenic Riverway where there are not garbage cans available. Our staff will supply garbage bags and recycling bags and appreciate your help in making sure students *Leave No Trace*. We also appreciate your help in packing lunches that minimize waste (using reusable water bottles and containers is encouraged). Students and chaperones are responsible for leaving the park clean.

WATER

It's important to keep students hydrated during their field trip. Each student should bring a full water bottle on the day of the trip and keep it in their backpack for the day.

What to Wear: Parents, please dress your students for the weather. We recommend sending your children in layers that they can add or remove and put in their backpack if they get warm or cold. All students should wear comfortable close-toed shoes that they can walk, hike and run in.

Cold and Damp Weather

If it is going to be cold and damp, please send them with a rain jacket or poncho, a warm hat and gloves.

Warm and Sunny Weather

If it is going to be a sunny and warm day, please send your children with a hat and sunscreen.

For Mucking or Paddling activities

If your children are mucking or paddling, **please send them with an extra pair of tennis shoes, rubberboots or watershoes.** Students must wear shoes at all times, even in the water. Students are welcome to bring a towel and an extra pair of dry socks.

Winter Field Trips

For winter field trips, students need snowpants, winter jackets, insulated winter boots, long and warm socks (please no short ankle socks), insulated mittens and gloves (please no thin knit mittens or gloves), and warm hats.

NAMETAGS

For safety and courtesy, we prefer to address students and adults by name. This can even be a single piece of masking tape with a participant's name. Please make sure your students arrive with their nametags on. If it's cold, put the nametags on their jackets.

INCLEMENT WEATHER

If rain or cold weather is in the forecast, please communicate with parents that students should come properly dressed to be outside during the entire field trip. Layers work best and can always be left on the bus.

** The window for completing these programs is limited due to the high demand of Rivers Are Alive programs. Therefore, whenever it is safe to do so, it is preferable to go ahead with the program on the planned day, even if the forecast is less than ideal. This is especially true early in the week, when most of the programs remain to be completed. On rare occasions, because of safety concerns the program may be rescheduled. SCRA staff should have good contact information for the lead teachers to coordinate any changes in plans. **

BUG SPRAY & SUN SCREEN

In the spring months, Teachers may recommend that parents send appropriate insect repellent that they can use with their children. In the fall, the bugs are usually gone. We always recommend students come prepared with sun screen in every season.

TRANSPORTATION

The schools will arrange for bus transportation of the students. When possible, to maximize the time that students have to participate in the programs, it is ideal to schedule buses which do not have to travel to additional schools before dismissal time. Whenever possible buses should remain at the field trip site for the duration of the program. For some field trips it is necessary for buses to shuttle students to different sites within a state park. To maximize your field trip time, plan to depart from school as early as possible in the morning.

DIRECTIONS

We will always send you the best driving directions and address we can find. If we can send a Google map link and image, we will do so.

CHAPERONES

Chaperones are an integral part of the field trip experience. They provide support to the Rivers Are Alive education staff, as well as guidance for the students. We have included a one page "Chaperone Guide to Rivers Are Alive" for you to give out to chaperones. This guide gives chaperones tools they can use to assist with student learning.

Please encourage chaperones to assist in maintaining discipline and to be on the lookout for potential safety hazards. We ask that adults refrain from smoking in front of the students. Chaperones should be reminded to be active participants in all program activities and keep cell phones turned off or have the ringer turned down. It is disruptive and potentially unsafe if a chaperone is on their cell phone during the middle of an activity. When the adults are actively engaged and modeling attentive behavior, the students will follow. There should be at least one teacher and one other chaperone with each learning group. Having additional chaperones is useful and encouraged.

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Preparing Students for your Field Trip

PRE-ACTIVITIES

Pre-site preparation conducted by classroom or Rivers Are Alive educators prior to field trips is a crucial part of the program. We have standards-aligned activities that are easy to facilitate and will prepare students for their Rivers Are Alive experience. If students learn about the St. Croix National Scenic Riverway before the trip, they will have the opportunity to make tangible connections with what they previously learned. Additionally, Rivers Are Alive education staff will be able to build on their prior knowledge instead of covering the basics. Please ask us for a write up of a pre-trip activity, or make up your own! If you want to create your own simple activity, some ideas are suggested below.

PREDICT, OBSERVE, EXPLAIN

This strategy can be used in the classroom to predict what the students will experience on your field trip. What activities do they think they will be doing? What animals they might encounter, and what they will be learning. Record your predictions on the board or in notebooks. Observations can be made during the trip, and then discussed and compared to predictions afterwards. Were the original predictions accurate? What predictions can you make about wildlife activity at different times of the day and year? How about the future? Will habitats and wildlife populations change over time? What other evidence could you use to make more accurate predictions?

AQUATIC MACROINVERTEBRATES

Aquatic macroinvertebrates are small animals that live in water, are big enough to see with the naked eye, and have no backbone. These animals include many types of insects as well as other animals such as worms, mollusks, and crustaceans. Most aquatic macroinvertebrates make their homes in rocks, leaves, and the sediment of streambeds. These organisms have many special adaptations allowing them to live in demanding environments. These bugs are important because they are an integral part of the food chain. They provide food for fish and other aquatic organisms. Many of them are also key indicator species. They can tell us about the quality of the water where they are found. Bugs that have a low tolerance to pollution tell us that the water they are found in is relatively healthy.

WHAT IS A RIVER? WHAT IS A WATERSHED?

The Rivers Are Alive activities offer opportunities for students to explore the answers to these questions. A river is more than a moving, flowing, body of water. We all live in a watershed. These are important concepts that the Rivers Are Alive program helps students understand through hands-on science.

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Reflecting on Your Field Trip

POST FIELD TRIP ACTIVITIES

We also have standards aligned post activities that serve as field trip follow-up and reflection. We encourage teachers to use our lesson plans and/or conduct activities that allow students to share their experience and express their new awareness with others. Following are some ideas for post activities. Please ask us if you'd like to use activities we've created.

ART

Students could use various mediums to create what they saw, felt, heard, touched, smelled, or tasted on their adventure. They may cut out animals and trees to make a scene from their experience. They might use objects in the room, or musical instruments to demonstrate sounds they may have heard or how they felt during this experience. Reflective art activities help students cement the experience in their minds and recall the day's events for future learning.

MATH

Allow students to "plan a trip" on the Namekagon or St. Croix Rivers, where they have to calculate mileage and distance, using the charts found here: [Paddling Guide to the Namekagon River](#), [Paddling Guide to the Upper St. Croix River](#), [Paddling Guide to the Lower St. Croix River](#)

READING & RESEARCH

Your Rivers Are Alive will scratch the surface of all there is to learn about the St. Croix National Scenic Riverway. Consider having your students check out books about the Riverway and conduct research on the wild and scenic values that characterizes the Riverway. Invite parents for a Wild and Scenic Science Fair Night! If students took photographs of their field trip experience, have them create a Google Slides or Power Point presentation invite parents (and us!) for a Wild and Scenic Science Fair night.

SCIENCE

Follow the life cycle of an animal that goes through metamorphosis. How is this type of life cycle beneficial to the animal? What challenges might metamorphosis pose to survival? How are life cycles of two different macroinvertebrates similar and different?

WRITING

Consider having students write St. Croix Haiku poems, essays, or journal entries about their field trip.

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Evaluation, Safety, Rules, Emergencies



plants. Collecting pine cones, feathers, rocks, or natural objects is not allowed in the St. Croix National Scenic Riverway or any national park.

BE CONSIDERATE OF OTHERS

Loud noises and disruptive behavior may disturb wildlife or other visitors.

STAY TOGETHER

Remind students to always stay with their group. Each group should be led by an instructor or ranger, with an adult chaperone or classroom teacher at the end.

BE AWARE

Biting/stinging insects are common in the park so avoid exposure or injuries by being aware of your surroundings, especially where you put your hands or feet.

LEAVE NO TRACE

We hope to inspire students to practice leaving no trace. This helps keep wild places, wild. Likewise, after lunch, your group is responsible for picking up all pieces of trash and crumbs.

PROTECT OUR NATIONAL PARK

Remind your students and chaperones that in a national park, collecting or damaging any plants, rocks, historic sites or animals is prohibited.

WILDLIFE

Feeding or harassing animals in the park is illegal. Remember that these are wild animals. In addition to protecting ourselves, this also protects the wild nature of the animals.

PLANTS

Picking flowers or breaking off leaves damages