



Mississippi Gateway Visitor Center School Program Offerings

Presented by professional naturalists

The Mississippi Gateway Regional Park in Brooklyn Park offers students a close look at the beautiful Mississippi River! Safe and easy access to the river affords many opportunities for hands-on activities ranging from geology to water quality. Live animal ambassadors (reptiles and amphibians) are housed in the Visitor Center and can add value to programs. Floodplain forest, pond, fields, stream, and wetlands are close by to study. Educators emphasize fun, inquiry, and science in all of the activities!

Program fees are based on the number of students and program length and start at \$72. Scholarships (discounts) are available through the WonderFund, based on **your school's** percentage of free and reduced lunch program participants. Please inquire for a simple application form.

Many programs can be tailored to different grade levels or seasons. This **guide doesn't** include all possible programming—we can customize to your needs. All programs contain hands-on elements. For details, call 763.694.7790 or e-mail MississippiGateway@ThreeRiversParks.org.

If you are interested in our team of naturalists visiting your site, please see our list of Naturalist Outreach Program Offerings at: <https://www.threeriversparks.org/page/mississippi-gateway-regional-park-visitor-center-groups>

	Fall	Winter	Spring
Grades: PreK - 3	<ul style="list-style-type: none"> • Animal Builders • Animal Homes & Signs • Bugs, Butterflies & Beetles (life cycles) (Sept. – Oct.) • Classifying Fish • Deer • Fish & Fishing • Insects (Sept. – Oct.) • Mammals • Puppet Show: Animals Adapt for Winter • Recycling & Rot • Reptiles & Amphibians • River Rocks & Soils • Seeds • Senses & Seasons • Water Fun • Weather 	<ul style="list-style-type: none"> • Animal Homes & Signs • Puppet Show: Animals in Winter • Reptiles & Amphibians • Deer • Mammals • Puppet Shows • Senses & Seasons • Seeds • Snowshoeing • Survival • Tracks & Patterns • Weather • Winter Fun 	<ul style="list-style-type: none"> • Animal Builders • Bugs, Butterflies & Beetles (May) • Classifying Fish • Deer • Fish & Fishing • Insects (May) • Mammals • Puppet Show: Animals in Spring • Pond I • Recycling & Rot • Reptiles & Amphibians • Senses & Seasons • Water Fun • Weather

	Fall	Winter	Spring
Grades: 4 - 6	<ul style="list-style-type: none"> • Archery • Bike Along the River • Bird Families • Boats • Case of the Disappearing Log • Decomposition Mission • Finding Your Way • Fish & Fishing • Insects (Sept. – Oct.) • Landforms • River Geology • River Invertebrates • River Study • Soils • Survival • Teambuilding • Trees • Water Cycle 	<ul style="list-style-type: none"> • Boats • Finding Your Way • Mussels of the Mississippi • Skull Inquiry • Snowshoeing • Survival • Teambuilding • Trees • Water Cycle • Wetlands in Winter 	<ul style="list-style-type: none"> • Archery • Bike Along the River • Bird Families • Boats • Case of the Disappearing Log • Decomposition Mission • Finding Your Way • Fish & Fishing • Insects (May) • Pond II • River Geology • River Invertebrates • River Study • Soils • Survival • Teambuilding • Trees • Water Cycle

Program Descriptions

Grades: PreK-3

Animal Builders — Animals can be amazing engineers. Discover how animals build their homes using specific requirements for survival. Study bird nests and try to construct your own using basic engineering skills, or try your hand at building like a beaver. Hike to find homes that animals made and look for trees and branches that animals have taken for building material.

Animal Homes and Signs — What signs do animals leave in the woods, and where do they find shelter? Explore with a naturalist along park trails and see how different animals survive.

Bugs, Butterflies, and Beetles — What is a life cycle and how do the life cycles of some common **insect orders compare? Students learn the terms "larva," "pupa," and "metamorphosis" and the difference between complete and incomplete metamorphosis.** Students work in pairs using nets and jars to capture live insects in the park. Additional activity includes classifying common groups of plastic insects by order.

Classifying Fish — How can we tell fish families apart? What are some common Minnesota fish? Students discuss what adaptations all fish share and then learn one or two special features for each of six fish families. Teams of students receive a pile of toy fish which they divide into families using posters to compare features.

Deer — How many kinds of deer live in Minnesota? Students handle real deer parts and props to learn about the habits of our largest park animal, and walk along deer trails to discover signs and perhaps spy a live deer!

Fish & Fishing — Investigate the world of the freshwater fish living in our rivers, lakes, and ponds. Learn about their roles in the food web and problems they face. Spend time at the river and use fishing poles and fish seining nets to catch these critters.

Grades: Pre K-3 (continued)

Insects — What makes an insect an insect? Dress someone as an insect and examine toy insects. Outside portion includes searching for insects with nets and plastic jars.

Mammals — Discover what makes mammals different from other animals. Examine furs and skulls to learn about mammals and their adaptations. Choose a combination of subtopics: scat and sign, tracking, camouflage, predator/prey relationships, hibernation and winter adaptations.

Pond I — What lives in a pond? Introduction to invertebrates and the amazing adaptations they have to survive. **Students don boots and wade to collect a rich variety of "water bugs."**

Puppet Shows — At each season, animals of forest and river present their unique activities through discussion and original songs. Puppet shows are very flexible and can cover animal adaptations and habits. **Specific information can be included at teacher's request prior to the field trip date.** A naturalist-led hike follows to discover nature happenings using **our senses (including "sense of wonder")**.

Recycling & Rot — Students participate in a play about how a tree lives, dies, decomposes and makes soil for new life to grow. Carefully turn over dead logs to discover insects and other invertebrate decomposers as well as fungi. Learn at least three things that aid in natural decomposition.

Reptiles & Amphibians — What does 'cold-blooded' mean? What are the main characteristics of amphibians and reptiles, and how do we tell them apart? Students meet a variety of common reptiles and amphibians and they have the opportunity to touch them.

River Rocks & Soils — Investigate rocks of all sizes. Sort rocks by texture and type, and study rock classification. Use tools to see soil up close and discover tiny rocks in the sand. Discover what kinds of rocks are found along the Mississippi River. A sifting activity may be included.

Seeds — Discover the world of seeds, how plants use seeds to reproduce, how seeds provide food for animals, and how seeds travel. Dissect a seed and explore what a seed needs to germinate, or engineer a seed and see if it will fly.

Senses & Seasons — Use all your senses to explore the animal and plant life outdoors. What clues do animals leave about their activities? Puppet show may be included.

Snowshoeing — Students learn about the history of snowshoes and how they work. Students will have a chance to try out snowshoes on a short hike (depends on reasonable snow).

Survival — Learn about basic human needs. Work as a team to engineer a shelter. Fire-building as a group can be included in the program if desired.

Tracks & Patterns — Explore the secret world of animals in winter by searching for tracks and signs. Students learn track patterns of animals found in the park and go walking to see what they can discover. Animal tracks discovered are recorded using tally marks and students create a bar graph after the field trip to determine which tracks were most common.

Water Fun — Explore water. See how water flows, what floats, and what lives in the water. Look for creatures living in the pond or river.

Weather — Use tools to measure weather and explore microclimates. Conduct simple experiments to find wind direction and speed. Learn how changes in weather affect humans, animals, and plants.

Winter Fun — Play games, explore nature, and enjoy some fun in winter! Activities will be both indoors and outdoors.

Grades: 4-6

Archery — An introduction to the sport of archery. Students will learn the parts of a bow, shooting safety, and have time to practice target shooting.

Bike Along the River — Gain basic bike safety skills before pedaling on a scenic bike path along the Mississippi River. Stop along the way to explore the river up close and learn about the history and ecology of this stretch of the river. (Previous biking experience required; based on equipment availability.)

Bird Families — Students learn the basics of classifying birds by observing characteristics and adaptations of mounted birds and decoys. An introduction to the amazing variety of Minnesota birds is followed by instruction on using a dichotomous key to identify species. Students search for birds on a guided walk through the park. Additional options include learning about osprey, plotting their migration route and observing live osprey in a nest (if nesting).

Boats — Learn about the kinds of boats that are used on the river and how boats are able to carry their loads. Engineer a boat that will float with as much weight as possible.

Case of the Disappearing Log — Be a detective and explore fallen logs. Use a key to identify evidence of different organisms. Use observation and reasoning to make explanations about what may have happened to the log.

Decomposition Mission — Investigate the fascinating and complex process of decomposition. Search for evidence in the park. Lay the foundation for deeper understanding of concepts related to matter and energy transfer in ecosystems. Learn the difference between physical decomposition and chemical decomposition.

Finding Your Way — Using maps, compasses, GPS units, or a combination, students learn how to orient themselves in the park and complete a treasure hunt. Can include basic introductions to these tools, or a more advanced orienteering challenge.

Fish & Fishing — Investigate the world of the freshwater fish living in our rivers, lakes, and ponds. Learn about their roles in the food web and problems they face. Spend time at the river and use fishing poles and fish seining nets to catch these critters.

Insects (May–October) — Explore these tiny creatures and discover fun facts about the most abundant animals on earth. Collect and examine insects close-up. Study insect life cycles and adaptations as well as plant/insect interactions. Learn how to classify insects.

Landforms — What is a landform? Students learn about local processes that created landforms in the park by observing a large stream table in action and exploring on a walk to the river. An inquiry exercise using topographical maps of local areas explores topographic contours, landforms, scale, and the patterns of human development.

Mussels of the Mississippi — How do organisms depend upon their physical environment? Students learn about freshwater mussels and their adaptations, as well as how mussels contribute to other life in the Mississippi. A presentation is followed by a game in which students become young mussels that must survive by finding the correct host and substrate. Students will examine real mussels and learn how some common mussels are identified.

Pond II — Boots and nets enable students to catch a variety of organisms and discover which ones are predators and which are prey.

Grades: 4-6 (continued)

River Geology — Every rock has a story! Students learn about local geology and are able to identify igneous, sedimentary, and metamorphic rocks found on the river shoreline. Basic instruction on rock formation is followed by a rock collecting expedition in the park.

River Invertebrates — Students learn about different groups of river insects and what they reveal about water quality. Depending on available time, students can learn to use a pictorial key to identify invertebrates by adaptations and characteristics. Organisms are observed closely using microscopes and hand lenses, and students will be able to differentiate between the three major groups found here. Students don boots and use kick nets to capture live invertebrates in the Mississippi River.

River Study — The Mississippi River is a living laboratory where students use boots, equipment, and test kits to determine the physical, biological and chemical components of water quality. Students divide into teams to test the water and capture live invertebrates, which can provide information on pollutant and oxygen levels. Safe access to the river and a wonderful variety of insect larvae make this one of the top spots for students to study the Mississippi.

Skull Inquiry — Can we tell if an animal is an herbivore, carnivore, or omnivore by looking at its teeth? What other adaptations can be inferred by examining an animal skull? Students will learn about canine, molar, and incisor teeth. They will also look at other skull characteristics to determine an **animal's place in the food web. Pairs of students examine and explore skulls in detail to come up with** ideas about what the animal eats and how it is adapted to survive. A large skull collection provides a variety of skulls for students to handle.

Snowshoeing — Students learn about the history of snowshoes and how they work. Students will have a chance to try out snowshoes on a short hike (depends on reasonable snow).

Soils — **What's the difference between muck and mud, loam and sand? Students examine different soils** and learn about soil science using equipment on a hike.

Survival — Learn what it takes to survive, then work with a team to engineer a shelter in the forest and start a campfire.

Teambuilding — A great introduction for a group just beginning to work together. Students must use teamwork to complete several challenges designed to reveal leadership qualities, team dynamics, and the fun of working with a group.

Trees — Use math skills to count, estimate, and measure big trees. Hike to see the diversity of trees in the forest and learn to classify them by leaves, branches, and bark.

Water Cycles — Where is water found on earth and how is it recycled again and again? Students become a water drop and play an active inside game to find out what path they each take. A naturalist-led walk explores where water is found in the park in each of its three forms: solid, liquid, and gas.

Wetlands in Winter — **How are Minnesota's wetlands classified? What are the main characteristics of some of our state's more common wetland types, and what do wetlands provide? During cold weather,** students can walk through several wetlands in the park and look for indicator plants and animal signs.