FIELD TRIPS TO GRASS RIVER
WOODLAND AND WETLAND CURRICULUM

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FIELD TRIP OPTIONS

OPTION	HOURS	COST/STUDENT	# STUDENTS
single class	1 to 1.5	$5.00	up to 30
half day	2 to 2.5	$7.00	15 to 60
full day	4 to 4.5	$10.00	15 to 60

Teachers and Chaperones are free of charge

Dear Educator,

We're getting ready for another great year of **field trips** to Grass River! Our *Woodland and Wetland Curriculum* strives to provide engaging, hands-on programs in the outdoors that complement classroom concepts and give your students a one-of-a-kind experience. Each program we offer is correlated to the Next Generation Science Standards and designed to be uniquely meaningful and interactive for every age level. At Grass River, students don't just learn the standards, they experience them!

While at Grass River, your students may dip aquatic nets into Finch Creek, learn to use binoculars to go birding along the boardwalks, sweep plants with insect nets, search for salamanders in the wetlands, or enjoy a hike to Grass River. A "field trip" to Grass River is a true field experience. Or, ask us about our **outreach programs** and we can come to you!

It is our vision, that together with our community and schools, we can offer outstanding science-based programs to create knowledgeable learners that are comfortable and confident in the outdoors.

We hope to see you this year at Grass River Natural Area.

Sincerely,

James Dake
Education Director

One of Michigan's Premier Nature Preserves

Grass River Natural Area is one of Michigan's premier nature preserves, established by the community for the community. The Grass River Natural Area, Inc. (GRNA Inc.), was founded in 1979 to manage the Grass River Natural Area, conserve and protect its watershed and provide opportunities that increase knowledge, appreciation and community-wide stewardship of the natural environment.

Located along Antrim County's Chain of Lakes, the Grass River Natural Area's wetlands act as a filter for millions of gallons of water flowing into East Grand Traverse Bay and Lake Michigan, and is a peaceful place that is home to hundreds of species of plants and animals, living amid floating sedges and marshy bogs.

While there are many land protection organizations, there are only a few who have education as an integral part of their mission. The vision of GRNA Inc. is to be a role model for environmental stewardship and science based conservation while serving as a center for learning and research among students, researchers, and other environmental groups.

Outreach: Want us to come to you? We also offer a variety of outreach programs where a naturalist will travel to your classroom and bring nature to you! These programs are great during the colder months. Visit **www.grassriver.org/education-outreach** for more information and contact **james@grassriver.org** with questions or to book a program.

FIELD TRIP INFORMATION

Lesson Selection: Rank five lessons you are most interested in for your class. Based on your class size and time spent at Grass River, we will customize the lesson to fit your needs.

Grades: Designed for Grades K-12, each lesson will be adapted and taught with the students' developmental needs in mind. Vocabulary and concepts will be grade appropriate.

Group size: Because we believe that smaller groups make for more effective programs, your class will be divided into groups and rotated through the lessons that you select.

Location/Weather: All classes will primarily be held outdoors at Grass River Natural Area—rain or shine, warm or cold. Please come prepared for any weather.

Lunch: If you plan to stay for lunch we have picnic tables under a pavilion at the Center. *Please plan to pack out any garbage* from your lunches with you in a garbage bag.

Seasonal, Custom, or Outreach Programs: Your students can enjoy GRNA year round. Learn the science of tapping maple trees, find insects in the heat of summer, or search for animal tracks in the winter snow. Also, we can come to your classroom! *If you don't see the program you are looking for here, contact us and we will design a program to meet your needs.*

To Register: Contact James Dake, Education Director, by phone at (231) 350-9461 or by email at james@grassriver.org

COURSE DESCRIPTIONS

1. Grass River Hike :: *Nature walk and observation*

No Grass River field trip is complete without a **hike out to the dock** to see the Grass River and Clam Lake. Younger students will be encouraged to use their observation skills to look for special plants and habitat features along the way. Older students will learn about ecosystems, the function of wetlands, and Grass River's place in the **Chain of Lakes** Watershed.	**ESS2.A** **ESS2.C** **LS1.A** **LS1.D** **LS2.A** **LS4.D**

2. Perception Pathway :: *Senses and Observation*

Students will **use their senses to observe** and identify plants. Using the *Perception Pathway*, a sensory-guided trail on the boardwalks, students will experience wetlands and make observations through **touch, smell, sight, and hearing**. At their destination, students may describe, draw, and record the variety of plants they see in a restricted space. On the return trip, sight will be used to discover the diversity of color in the natural environment.	**LS1.A** **LS1.D** **LS4.C** **LS4.D**

3. Tracks, Scats, and Signs :: *Mammal & Animal Signs*

In this lesson students will **discover and identify signs** of wetland mammal & **animal life** along the trails. Based on the observable evidence and clues they will discuss what the animal is, what it eats, and how it survives in a woodland or wetland environment.	**LS1.A** **LS1.D** **LS4.C** **LS4.D**

4. Dip Nets in Finch Creek :: *Stream Study, Aquatic Organisms*

This lesson introduces the concept of ecosystem health through the investigation of aquatic insects. Students will learn to **use dip nets** to find and examine **invertebrates** in the stream. **Water quality** and stream health will be determined based on the organisms that students find. Older students may use chemical tests to find the water quality of Finch Creek or Grass River.	**LS1.A** **LS1.B** **LS1.C** **LS2.A** **LS2.C** **LS4.C** **LS4.D**

5. Case of the Disappearing Log :: *Decomposers and Food Webs*

Students will **explore fallen logs** and search for evidence for what happened to them. Students learn about log **decomposers** and use a key to identify evidence of different organisms and other impacts on logs. Using observations and reasoning students will create explanations about what has happened to the log and explore wetland **food webs**.	**LS1.C** **LS2.A** **LS2.B** **LS2.C** **LS4.D**

6. Skin and Scales :: *Reptiles and Amphibians*

Students will learn about **reptiles & amphibians** and compare, contrast, and classify animals according to their characteristics. Students my explore life cycles as they examine pond water. An **animal safari** will reinforce learning about salamanders, frogs, snakes, & turtles and their habitats as students get a chance to **go off trail and search** under logs.	**LS1.A** **LS1.B** **LS2.A** **LS4.C** **LS4.D**

7. Animal Construction :: *Animal characteristics, adaptations, and survival*

The physical characteristics of an animal have a great deal to do with its **survival** and where it lives. Students may compare and contrast several animal groups and **construct a mystery animal** to demonstrate its adaptations and how it is built to survive.	**LS1.A** **LS2.D** **LS4.C** **LS4.D**

8. Insect Collecting :: *Insects and Arthropods*

This class explores the world of insects. Students will learn about the basic **anatomy** and **physiology of insects** and how to identify them. They will consider insects' relationship and importance to plant and animal life. They will **use insect nets** and go on a bug hunt. On cooler days insects will be found in the streams.

ESS3.A
LS1.A
LS1.B
LS2.A
LS2.D
LS4.C
LS4.D

9. Birding on the Boardwalks :: *Birds, Adaptations, & Habitat*

This lesson will focus on birds and students may **use binoculars** in the field on a bird walk. Migration, field identification, habitats, songs, niches and instinctive behavior may be discussed depending upon grade level and time of year. Students will learn about the physical **characteristics of birds** and features that make flight possible.

ESS3.C
LS1.A
LS1.B
LS1.D
LS2.D
LS4.C
LS4.D

10. Up a Tree :: *Seeds, Plants, and Trees*

This lesson covers tree anatomy and physiology. Students will be able to identify the different parts of trees and understand how those parts work, and the importance of **soil** for plants. Students will compare what humans need to survive to what trees need. Tree structure and function will also be related to human anatomy and physiology. They will **collect leaves, twigs, fruit** or **flowers** of trees to help identify some trees.

ESS3.A
LS1.A
LS1.B
LS1.C
LS2.A
LS2.B
LS4.D

11. Vernal Pond Detectives :: *Wetland Animals & Plants*

This lesson introduces the concept of water and wetlands through the investigation of a vernal pond. Students will learn to **use small nets** to find and examine **invertebrates** and other animals in the ponds. The exploration will be used to discuss the importance of wetlands to plants, animals, and our local ecosystems. This program is weather dependent.

ESS1.C
ESS2.A
ESS2.C
ESS3.C

12. The Earth Beneath Our Feet :: *Soil, Rocks, and Fossils*

This lesson looks at why the land around us looks the way it does and how it changes over time. We will **use soil samplers** or look under logs to investigate soil and we will look at Michigan **rocks and fossils** to understand the life and land of the past.

ESS1.C
ESS2.A
ESS2.B
LS4.A

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GRASS RIVER
NATURAL AREA

Ask us about our additional Outreach Programs. We can travel to you!