

# **HURON-CLINTON METROPARKS**

## **EDUCATIONAL PROGRAM GUIDE**



[METROPARKS.COM/EDUCATION](https://www.metroparks.com/education)

The Huron-Clinton Metroparks consist of 13 beautiful parks, covering 25,000 acres throughout Southeast Michigan, encompassing Wayne, Oakland, Macomb, Washtenaw, and Livingston counties, drawing over seven million visitors annually.

## WHO WE ARE

The Huron-Clinton Metroparks Interpretive Department boasts one of the largest interpretive programs in the nation. It has been recognized for its professional leadership, educational programs, expertise of staff, and commitment to the natural and cultural environment.

## WHAT WE OFFER

Educational programs provide environmental, cultural, and natural science literacy. These programs support the new Michigan Science Standards and/or Grade Level Content Expectations for Social Studies curriculum in content, methodology, and technology use. Structured to facilitate inquiry-based learning, these programs incorporate science, technology, reading, engineering, art, and mathematics components and are taught by professional Interpreters who are knowledgeable in the latest content and school requirements.

## WHEN WE OFFER EDUCATIONAL PROGRAMS

Educational programs and field trips are available year-round.

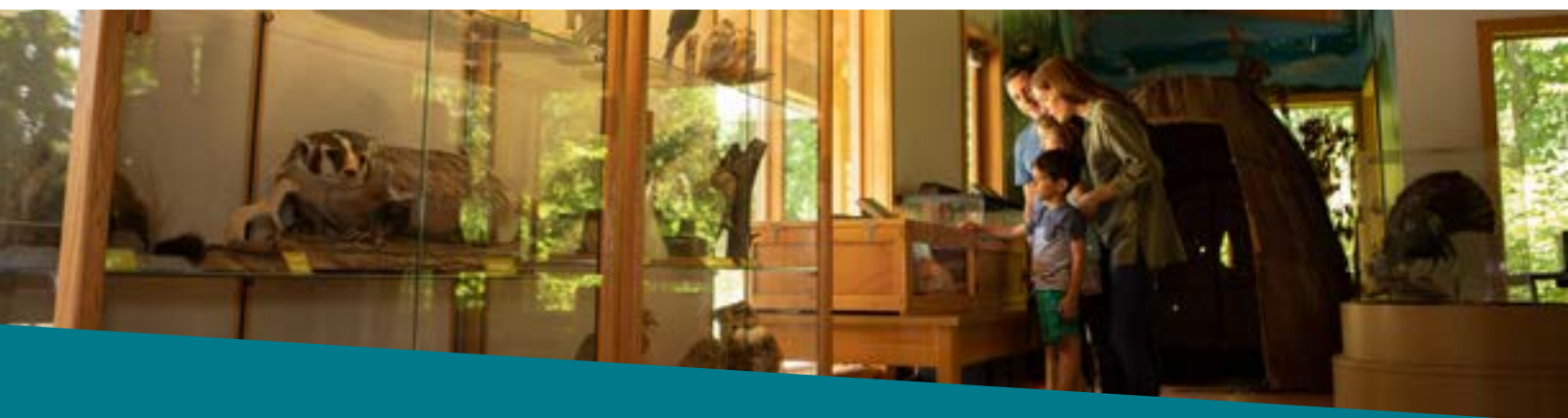
## WHERE ARE WE

Our Interpretive Centers are located in 10 Metroparks, along with extensive Educational Outreach Programs for Southeast Michigan.

- Hudson Mills Metropark Activity Center
- Indian Springs Metropark Environmental Discovery Center
- Kensington Metropark Farm and Nature Center
- Lake Erie Metropark Marshlands Museum
- Lake St. Clair Metropark Nature Center
- Oakwoods Metropark Nature Center
- Stony Creek Metropark Nature Center
- Wolcott Mill Metropark Farm and Historic Center

## WHY SCHEDULE AN EDUCATIONAL PROGRAM

Research shows that children's social, psychological, academic, and physical health is positively impacted when they have daily contact with nature. Environmental education has been proven to engage students in learning and to raise test scores. Additionally, MDE states that students need to be prepared to apply basic scientific knowledge to their lives regardless of whether they are planning STEM- based careers or not, and they need to be engaged in doing science through the same practices used by scientists and engineers. Standards also call for students to be made aware of their changing cultural and physical environments to help them prepare to be social-minded citizens. Metroparks educational programs are designed to meet these learning expectations for Michigan's students. Using methods such as position-driven discussions to forge connections, students are engaged in "figuring out instead of just learning about" Michigan science and history topics.



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# GETTING STARTED

Group reservations can be made by calling or emailing individual centers. It is recommended that program reservations be made at least two weeks in advance.

TO SCHEDULE A PROGRAM, HAVE THE FOLLOWING INFORMATION READY:

- A few potential dates and times you would like to have your program
- Number of children
- Program you would like to schedule
- School address, email address, and phone number

## CONFIRMATION

A confirmation email with important details regarding your visit will be sent to you after you schedule an appointment.

# PRICING

## FIELD TRIP COST

- These programs are at the park.
- One-hour programs are \$3 per student, \$45 minimum charge
- 1½ hour programs are \$4.50 per student, \$60 minimum charge
- 2-hour programs are \$6 per student, \$90 minimum charge
- Voyageur Canoe programs are \$75 per ride, 12 person minimum and 18 person maximum
- For schools outside of Livingston, Macomb, Oakland, Washtenaw, and Wayne counties, programs are \$4 per student per hour.
- Due to program cost, some fees may vary - See program listings
- Vehicle Pass required for park entry, excluding school buses.

## EDUCATIONAL OUTREACH PROGRAM COST

- These programs are at your school.
- Cost is \$100 for the first program, \$75 for additional programs the same day.
- There is a maximum of four programs per day with 30 students per program - Subject to change due to topic choice.
- Includes schools within Wayne, Oakland, Livingston, Macomb, and Washtenaw counties
- Different fees apply for counties outside of those previously listed.
- Due to program cost, some fees may vary - See program listings
- Limit to one program type per visit

## SCHOLARSHIP OPPORTUNITIES

The Metroparks offer a variety of scholarship opportunities. These range from transportation and field trip funding to outreach programming. Please refer to our website for current opportunities. If you are interested in sponsoring these educational opportunities, please visit the Metroparks Scholarship & Grant Opportunities page on the website at [metroparks.com/scholarship](http://metroparks.com/scholarship).





# HUDSON MILLS METROPARK ACTIVITY CENTER

**734-426-8211 • 8801 N. TERRITORIAL ROAD, DEXTER, MI 48130**  
**HM.INTERPRETER@METROPARKS.COM**

The Huron River is often called the cleanest urban river in the United States. This pristine river meanders through the heart of Hudson Mills Metropark's 1,500 acres. Located just twelve miles northwest of Ann Arbor, the park's trails give easy access to serene woods and waters. Using these beautiful natural communities as an outdoor classroom, school programs at Hudson Mills explore the biological diversity and cultural history of the area.

The Interpretive program is based out of the Activity Center, which is located at the head of the two-mile nature trail. School programs combine an indoor component with outdoor exploration time. Popular topics include maple sugaring, river ecology, plant and animal adaptations, and the Michigan fur trade. Program content and activities are adjusted to meet the needs of preschool through elementary school. Pre- and post-visit materials are available upon request. Groups may also participate in self-guided activities such as t-shirt making and scavenger hunts. Enquire during registration for more details. Playfields, playgrounds and a food bar are also available from the Activity Center.

To schedule a program, please contact us by phone 734-426-8211 or email [hm.interpreter@metroparks.com](mailto:hm.interpreter@metroparks.com).

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.

## ALL GRADE LEVELS

### MAPLE SUGARING

MARCH • INDOOR & OUTDOOR • ALL GRADES • 1 HOUR

Experience how maple syrup has been made over the years. This unique program includes tapping a maple tree, visiting an evaporator to watch the process of turning sap into syrup and getting a sweet taste at the end. They're not just hearing about it! Your students will get the chance to see and possibly taste the liquid sap seeping from the tapped tree. As we visit different trees in search of a maple tree, students will learn about the parts of a tree and their functions.

To enhance your experience, consider PEOPLE OF THE THREE FIRES at your school from the Educational Outreach Programs.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-LS1-1, 1-LS1-1, 4-LS1-1, 5-PS3-1

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing  
Matter and Energy in Organisms and Ecosystems

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** K-H2.0.1, K-G5.0.1, 3-H3.0.4, 3-G5.0.2, 5-U1.1.2

Living and Working Together | The History of Michigan (Through Statehood) | Environment and Society | Integrated\* U.S. History

### SEASONAL HIKE

YEAR-ROUND • OUTDOOR • ALL GRADES • 1 HOUR

Take a hike to see, hear and smell the signs of the season. Learn the basic needs of the plants and animals of the park. Students will compare different habitats and the animals that are adapted to live there. Students will note changes in each habitat by observing foliage, plant growth, animal diversity, and length of daylight. Bring your students back for each season so they can compare the data they gather.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS1-1, 1-LS1-2, 1-ESS1-2, 2-LS2-2, 2-LS4-1, 3-LS1-1, 3-LS2-1, 3-LS4-3, 4-LS1-1, 5-PS3-1, 5-LS2-1

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing  
Space Systems: Patterns and Cycles | Inheritance and Variation of Traits: Life Cycles and Traits | Interdependent Relationships in Ecosystems  
Interdependent Relationships in Ecosystems: Environmental Impacts on Organisms | Matter and Energy in Organisms and Ecosystems

## PRESCHOOL - KINDERGARTEN

### THE SENSE OF NATURE

YEAR-ROUND • OUTDOOR • PRESCHOOL • 1 HOUR

Let's explore, examine, and exclaim over the things we find. Your students will use their eyes, ears, nose and fingers to discover nature. We'll look for the color of flowers, the sounds of birds, the roughness of tree bark, and the smells of the pond. Bring your students out for this chance to truly explore Hudson Mills Metropark. Focus for Early Learners: characteristics, habitats, life requirements, adaptations



## PRESCHOOL POND LIFE

FALL & SPRING • INDOOR & OUTDOOR • PRESCHOOL & KINDERGARTEN • 1 – 1 ½ HOURS

Build a pond as we discover who lives there and what they need to survive. Students will be a part of a pond model as they create a habitat that some animals are adapted to live in. Students will engage through activities to learn about the life cycles of some of these common animals. Your students will get a chance to see and feel some animal artifacts, then go outside to find and listen for these pond personalities.

To enhance your experience, consider these programs: WE'RE FOND OF PONDS, SHELLS, SCALES AND POLLYWOG TAILS, CRAWLING CUTIES or LIFE CYCLES: WHEN I WAS A BABY at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS3-1

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment

## HABITAT EXPLORATION

YEAR-ROUND • OUTDOOR • PRESCHOOL & KINDERGARTEN • 1 – 1 ½ HOURS

Bring your students out to explore the habitats found in Hudson Mills. Students will seek out small critters by rolling a log over, digging through leaves and sweeping a net through the long grass. Your students will keep track of what they find and compare who lives in each habitat. We'll examine their body parts and discover the differences between insects, worms, spiders, millipedes, and all other tiny critters we find.

To enhance your experience, consider CRAWLING CUTIES at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, KESS3-3

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment

## ANIMALS IN WINTER

WINTER • INDOOR & OUTDOOR • PRESCHOOL & KINDERGARTEN • 1 – 1 ½ HOURS

Students will compare how animals survive winter through activities such as conducting an experiment on the principles of insulation. Your students will get a chance to see and feel animal artifacts as they discover the adaptations that make winter survival possible. Students will discover first-hand how animals survive during a short hike in search of animal homes and the signs left by animals.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment

## KINDERGARTEN - SECOND GRADE

### PLANT PARTS & THEIR CYCLES

SPRING, SUMMER & FALL • INDOOR & OUTDOOR • KINDERGARTEN - SECOND GRADE • 1 – 1 ½ HOURS

Plant roots absorb moisture and nutrients, conduct the moisture and nutrients to the stem, store food and best of all, anchor them to the ground. They can't run away. Your students will get up-close to compare these plant parts and observe their functions. Through hands-on activities, your students will get an appreciation of plants and what they do for us. Students will discover why flowers are all so different and what role those flowers play in a plant's life cycle. They'll also observe differences in seed shapes and how plants help their seeds disperse.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS3-1, K-ESS3-3, 1-LS1-1, 2-LS2-2, 2-LS4-1

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

Interdependent Relationships in Ecosystems



## INSECT INVESTIGATIONS

SPRING, SUMMER & FALL • INDOOR & OUTDOOR • KINDERGARTEN - SECOND GRADE • 1 ½ - 2 HOURS

Your students will get a chance to use different techniques and tools to collect and observe insects, their adaptations and explore their role in the habitats they live in. They'll compare the critters they find to identify which ones are insects. As they sample sites in an ecosystem, they'll record what organisms they find and discuss their data. Through hands-on activities, students will discover the life cycles of common insects they could find in their school playground.

To enhance your experience, consider CRAWLING CUTIES at your school from the Educational Outreach Programs.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS3-1, 1-LS1-1, 2-LS2-2, 2-LS4-1

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing  
Interdependent Relationships in Ecosystems

## STREAM DISCOVERIES

FALL & SPRING • OUTDOOR • FIRST & SECOND GRADE • 1 - 1 ½ HOURS

Your students will use tools to search a small stream to collect and identify macroinvertebrates. Adaptations of these animals will be observed using magnifiers. Students will discover how water moves and how the stream they are in is connected to the Huron River Watershed. Students will be able to determine how healthy this stream water is by the organisms they find.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS1-1, 2-LS4-1

Structure, Function, and Information Processing | Interdependent Relationships in Ecosystems

## SECOND - FIFTH GRADE

## VERNAL POND INVESTIGATIONS

FALL & SPRING • OUTDOOR • SECOND - FIFTH GRADE • 1 ½ - 2 HOURS

Students will understand the importance of these vernal wetlands as they explore this unique ecosystem. They will gather data, such as ambient air and water temperatures, water depth and water turbidity as well as use magnifiers to view the macroinvertebrates that live in these wetlands. Students will get close observations of some animal and plant structures that help them survive in wetlands that are not wet year-round. They will explore where the energy comes from to support these ecosystems and how this energy is moved to the surrounding forest.

To enhance your experience, consider COLD-BLOODED CREATURES at your school from the Educational Outreach Programs.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, 3-LS1-1, 3-LS4-3, 3-LS4-4, 4-LS1-1, 5-PS3-1, 5-LS2-1, 5-ESS3-1

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits  
Interdependent Relationships in Ecosystems: Environmental Impacts on Organisms | Structure Function and Information Processing  
Matter and Energy in Organisms and Ecosystems | Earth's Systems





## FRENCH VOYAGEURS & THE GREAT LAKES FUR TRADE

YEAR-ROUND • INDOOR • THIRD GRADE • 1 - 1 ½ HOURS

Go back in time and explore Michigan during the fur trade. We'll follow the life of a French Voyageur and the work they did. Students will discover what role Michigan played during this time-period and the things that have endured from that time. During this hands-on program, students will get a chance to see and feel some furs and trade goods, learn a song and perform an actual dance enjoyed by French Voyageurs.

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### Connections to MDE Academic Standards

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MICHIGAN K-12 SOCIAL STUDIES STANDARDS: 3 – H3.0.5, H3.0.6, E1.0.3, G5.0.1, G4.0.2

The History of Michigan (Through Statehood) | Human Systems | Environment and Society | Market Economy

## ANIMAL ADAPTATIONS & STRUCTURES

YEAR-ROUND • INDOOR & OUTDOOR • THIRD & FOURTH GRADE • 1 - 1 ½ HOURS

Adaptations are physical or behavioral characteristics that help an animal survive. Your students will get a chance to observe and feel some of these animal adaptations. They will compare adaptations between different animals and make connections to how those animals live and their adaptations. During a high-energy game, the students will mimic the adaptations of an animal to see if they really will help them survive.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS2-1, 3-LS4-3, 4-LS1-1

Interdependent Relationships in Ecosystems: Environmental Impacts on Organisms | Structure Function and Information Processing

## FISHING THE HURON RIVER

SPRING • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 1 HOUR

How do fish survive in constantly flowing water? Through a hands-on activity, they'll explore and compare why fish look the way they do. Your students will get the chance to catch a fish living in the Huron River. They'll observe the adaptations that make living in a river possible and where they fit in a food chain. Students will learn about real-life issues that affect these fish and what communities are doing to help protect this valuable resource.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS2-1, 3-LS4-3, 3-LS4-4, 4-LS1-1, 5-ESS3-1

Interdependent Relationships in Ecosystems: Environmental Impacts on Organisms | Structure Function and Information Processing | Earth's Systems

## PREDATOR PREY CSI

YEAR-ROUND • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 1 - 1 ½ HOURS

Some aspects of the life of an animal can be predicted by looking at their adaptations. Students will observe a mystery object to deduce what it is and what role it plays in an ecosystem. Through the clues they gather, students will discover what all animals need to survive and how those needs are met in an ecosystem. Through a game, your students will experience the needs of a predator while learning about carrying capacity and the impacts humans have.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-4, 4-LS1-1, 5-PS3-1

Interdependent Relationships in Ecosystems: Environmental Impacts on Organisms | Structure Function and Information Processing

Matter and Energy in Organisms and Ecosystems

## HURON RIVER TRIBUTARY INVESTIGATION

SPRING & FALL • OUTDOOR • THIRD - FIFTH GRADE • 1 - 1 ½ HOURS

Students will learn about the Huron River Watershed and how water moves through the land. Your students will use tools to actively search a tributary of the Huron River to collect and identify macroinvertebrates. Adaptations of these animals will be observed using magnifiers. Students will be able to determine how healthy this tributary water is by the organisms they find. They will discover how this water affects the Huron River and ultimately the Great Lakes and what communities are doing to help protect this valuable resource.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-3, 4-LS1-1, 5-ESS3-1

Interdependent Relationships in Ecosystems: Environmental Impacts on Organisms | Structure Function and Information Processing | Earth's Systems

## RIVERINE ECOSYSTEM EXPLORATION

SPRING & FALL • OUTDOOR • FIFTH GRADE • 2 HOURS

Fifth grade students will be visiting the Huron River to gather water quality parameters (dissolved oxygen, nitrogen, phosphates, pH) as well as ambient air and water temperatures, water depth, current speed, and water turbidity. They will also complete a macroinvertebrate study by using dip nets, a kick net, magnifiers, and ID charts. Students will learn what a watershed is, how water moves through an ecosystem and how people influence the quality of water. They will be following food chains and energy flow found throughout a riverine ecosystem.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 5-ESS3-1

Earth's Systems

## THIRD - FIFTH GRADE SPRINGBOARD SERIES

Make progressive aptitude building part of your field trips at Hudson Mills. The Springboard Series work well as standalone experiences but are designed to be complimentary programs for year-to-year learning within these grade levels.

### SPRINGBOARD SERIES: STREAM LIFE

SPRING AND FALL • OUTDOOR • THIRD GRADE • 1 ½ HOURS

Students will observe and explore a tributary of the Huron River to discover the abundance of wildlife that uses it. During this hands-on program, students will get a chance to wade into the water to sample for fish, record the wildlife they observe, and complete a plant survey. During their tributary exploration, students will learn how this stream is important to wildlife and plant life cycles. Students will be adding to this data each year as they revisit this ecosystem. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS4-3

From Molecules to Organisms: Structures and Processes | Interdependent Relationships in Ecosystems



## SPRINGBOARD SERIES: MACROINVERTEBRATE STREAM EXPLORATION\*

SPRING AND FALL • OUTDOOR • FOURTH GRADE • 1 ½ HOURS

Students will continue their exploration of the Huron River Tributary. They will observe and record a habitat assessment for this tributary. Through this hands-on program, they will learn about water quality and water movement through this watershed. They will also complete a macroinvertebrate study by entering the water and using dip nets, a kick net, magnifiers, and ID charts. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

\*Prerequisite: Previous participation in SPRINGBOARD SERIES: STREAM LIFE is highly recommended

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 4-LS1-1, 4-ESS2-1

Structure, Function, and Information Processing | Earth's Systems

## SPRINGBOARD SERIES: STREAM WATER QUALITY\*

SPRING AND FALL • OUTDOOR • FIFTH GRADE • 1 ½ HOURS

Fifth grade students will be visiting the Huron River Tributary to gather water quality parameters (dissolved oxygen, nitrogen, phosphates, and pH) as well as ambient air and water temperatures, water depth, and water turbidity. They will be following food chains and energy flow found throughout a riverine ecosystem. Students will revisit what a watershed is, how water moves through an ecosystem and how people influence the quality of water. Finally, students will be determining the impacts people have on the Huron River Watershed and how surrounding communities protect this valuable resource. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

\*Prerequisite: Previous participation in SPRINGBOARD SERIES: STREAM LIFE and SPRINGBOARD SERIES: MACROINVERTEBRATES STREAM EXPLORATION is highly recommended

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 5-PS2-1, 5-PS3-1, 5-LS2-1, 5-ESS3-1

Matter and Energy in Organisms and Ecosystems | Earth's Systems | Space Systems





A photograph of the Indian Springs Metropark Environmental Discovery Center building, a long, modern structure with a wooden facade and large glass windows, set against a clear blue sky. The building is partially obscured by tall grass in the foreground.

# INDIAN SPRINGS METROPARK ENVIRONMENTAL DISCOVERY CENTER

**248-625-7280 • 5200 INDIAN TRAIL, WHITE LAKE, MI 48386**  
**EDC@METROPARKS.COM**

Use science to explore nature at the Indian Springs Environmental Discovery Center! Your students will experience engaging, interactive and educational programs in the premier place to explore the wealth of ecosystems in southeast Michigan. Each program is designed with indoor and outdoor program components. Program content and activities are adjusted to meet the needs of preschool through high school. Pre- and post-visit materials are available upon request.

The award-winning EDC building contains classrooms, a biology lab, and a 200-person event room used for a variety of school, scout and public programs. The interactive exhibits highlight the diversity of the park's ecosystems. The underwater pond viewing room gives a below-the-water peek at pond life. While at the park, visit the Splash Pad, Adventure Play Area, maze, sand play area, sand volleyball court, and baseball diamond.

To schedule a program, please contact us by phone at 248-625-7280 or email [edc@metroparks.com](mailto:edc@metroparks.com).

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.



## PRESCHOOL - KINDERGARTEN

### SEASONAL EXPLORATIONS: "FALL"ING FOR NATURE

FALL • INDOOR & OUTDOOR • PRESCHOOL & KINDERGARTEN • 1 - 1 ½ HOURS

Hike the trails, breathe in the crisp air, and look for signs of fall. Students take part in a dramatization to learn the parts of a tree and the processes that cause leaves to change color in the fall, then head out on a hike to observe and collect leaves. Participants may also make an optional leaf-print t-shirt with stamps.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, K-ESS3-3, K-PS3-1, K-LS1.C, K-ESS2.E, K-ESS3.A, K-ESS3.C

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Weather and Climate

### SEASONAL EXPLORATIONS: ANIMALS IN WINTER

WINTER • INDOOR & OUTDOOR • PRESCHOOL & KINDERGARTEN • 1 - 1 ½ HOURS

Learn how different animals live in the winter by investigating animal tracks indoors and on a trail hike to look for signs of animals in the park. Participants may also make an optional animal track t-shirt with stamps.

To enhance your experience, consider LIFE WHEN IT'S SNOWY at your school from the Educational Outreach Programs.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-LS1.C, K-ESS2.E

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment

### SEASONAL EXPLORATIONS: PONDERING WETLANDS

SPRING • INDOOR & OUTDOOR • PRESCHOOL & KINDERGARTEN • 1 - 1 ½ HOURS

Wetlands come alive in the spring! Investigate pond water up-close, learn about amphibian life cycles, and go on a wetland trail hike. Participants may add time to make a frog life-cycle t-shirt.

To enhance your experience, consider these programs: WE'RE FOND OF PONDS, LIFE CYCLES – WHEN I WAS A BABY, or SHELLS, SCALES & POLLYWOG TAILS at your school from the Educational Outreach Programs.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-LS1.C

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment

## FIRST - TWELFTH GRADE

### LIFE SCIENCE - PLANTS AND ANIMALS

### AUTUMN ECO-ADVENTURE

FALL • INDOOR & OUTDOOR • FIRST - THIRD GRADE • 1 ½ HOURS

Explore the season with a woodland hike. Back at the building students will identify and label the leaves in a collection booklet to take home. Learn processes and changes over time in trees with the "Lifecycle of a Tree" presentation. Young grades may also make an optional leaf-print t-shirt with stamps.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS3-1, 2-LS4-1, 3-LS1-1, 1-LS1.A, 1-LS1.D, 2-LS4.D, 3-LS1.B

Structure, Function, and Information Processing | Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits

## PLANT PARTS & THEIR CYCLES

YEAR-ROUND • INDOOR & OUTDOOR • FIRST - FIFTH GRADE • 1 ½ HOURS

In this introduction to how plants work, students will learn about and model plant lifecycles, go on a plant discovery hike, and complete a seed dispersal lab. Younger grades may add the optional plant life cycle t-shirt stamping activity.

To enhance your experience, consider these programs: PLANT PARTS AND SEED DISPERSAL, ECOSYSTEM EXPLORATION FOCUS: ECOSYSTEM COMPARISON, or ECOSYSTEM EXPLORATION FOCUS: SOIL AND THE FOREST FLOOR at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 2-LS2-2, 2-LS4-1, 3-LS1-1, 1-LS1.A, 1-LS1.B, 1-LS1.D, 2-LS2.A, 2-LS4.D

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits

## MAPLE SUGARING

MARCH • INDOOR & OUTDOOR • KINDERGARTEN - FIFTH GRADE • 1 ½ HOURS

Combine science and social studies as you learn maple sugaring techniques from Native American times to present day, indoors. Then hike outside to the sugarbush, tap a tree and see the boiling process. Everyone gets a chance to taste pure maple syrup.

To enhance your experience, consider PEOPLE OF THE THREE FIRES at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-ESS2-1, K-ESS3-1, 3-ESS2-1, 5-PS3-1, 5-LS2-1, ESS3.A, LS2.B, H3.0.5

Weather and Climate | Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Matter and Energy in Organisms and Ecosystems

MICHIGAN K-12 SOCIAL STUDIES STANDARDS: K - H2.0.1, K - G5.0.1, 3 - H3.0.4, 3 - G5.0.2, 5 - U1.1.2

Living and Working Together | The History of Michigan (Through Statehood) | Environment and Society | Integrated\* U.S. History

## INCREDIBLE INSECTS

SPRING & FALL • INDOOR & OUTDOOR • FIRST - THIRD GRADE • 1 ½ HOURS

Examine land insects in this introduction to their life cycles. Learn about the special characteristics that all insects have and then use sweep nets in the prairie grasses for a "catch and release" investigation. Younger grades may add the optional insect life cycle t-shirt stamping activity.

To enhance your experience, consider CRAWLING CUTIES at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 1-LS3-1, 3-LS1-1, 1-LS1.A, 1-LS1.B, 1-LS1.D, 1-LS3.B, 2-LS4.D, 3-LS1.B

Structure, Function, and Information Processing | Inheritance and Variation of Traits: Life Cycles and Traits



## POND STUDY

SPRING & FALL • INDOOR & OUTDOOR • FIRST - THIRD GRADE • 1 ½ HOURS

Students will investigate aquatic creatures from the pond, then sort and identify them using dichotomous keys. Students 3rd grade and older will use pond dip nets to collect pond water samples themselves, while younger grades will sort and identify creatures in pre-collected tubs. An interpreter-led hike near the pond will allow students to observe and learn about the plants and animals that call it home. Amphibian lifecycles will be addressed in a presentation with examples of frog calls and discussion about the growth and development of amphibians during the year. An optional frog life-cycle t-shirt stamping activity may be added for younger grades.

To enhance your experience, consider WE'RE FOND OF PONDS at your school from the Educational Outreach Programs

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS3-1, 2-LS4-1, 3-LS4-3, 3-LS1-1, 3-LS3-2, 1-LS1.A, 1-LS1.B, 1-LS1.D, 1-LS3.B, 2-LS4.D, 3-LS4.C, 3-LS4.D, 3-LS1.B, 3-LS3.A, 3-LS3.B

Structure, Function, and Information Processing | Interdependent Relationships in Ecosystems | Independent Relationships in Ecosystems

Inheritance and Variation of Traits: Life Cycles and Traits

## ANIMAL CLASSIFICATION

YEAR-ROUND • INDOOR & OUTDOOR • FIRST - FIFTH GRADE • 2 HOURS

Enjoy a presentation and hands-on study of the five vertebrate families, including skins and skulls of each. Students will also take an outdoor trail hike to search for signs of animals in different habitats.

To enhance your experience, consider these programs: MICHIGAN MAMMALS, COLD-BLOODED CREATURES, or BIRDS OF PREY at your school from the Educational Outreach Programs.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-3, 4-LS1-1, 5-PS3-1, 5-LS2-1, 1-LS1.A, 2-LS4.D, 3-LS4.C, 3-LS4.D, 4-LS1.A, 4-LS1.D, 5-LS1.C, 5-LS2.A, 5-LS2.B

Independent Relationships in Ecosystems | Structure, Function, and Information Processing | Matter and Energy in Organisms and Ecosystems

## MAPLE SUGARING SWEET SCIENCE

MARCH • INDOOR & OUTDOOR • FIFTH - EIGHTH GRADE • 2 HOURS

Students will explore the science and technology of maple syrup through hands-on experiments and demonstrations. Experiments touch on subjects like transpiration, surface tension, capillary action, viscosity, and cell structure. We will end the program with a hike to the sugar bush to tap a tree and see the boiling process.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): MS-LS1-7, MS-LS1-1

From Molecules to Organisms: Structures & Processes



### ECOSYSTEM DISCOVERY

YEAR-ROUND • INDOOR & OUTDOOR • FIRST - FOURTH GRADE • 2 ½ HOURS

Students will hike to a prairie, forest and wetland to investigate the plants and animals in each. We will see adaptations that allow plants and animals to survive in different conditions. We will look for examples of ecosystem dynamics such as succession, erosion and invasive species and discuss how those changes may affect organisms who live there. Tools such as data loggers, may be used collect information to introduce a quantitative approach to understanding the ecosystem. Students will also take part in ecosystem games to model population dynamics in changing environments.

To enhance your experience, consider these programs: ECOSYSTEM EXPLORATION – FOCUS: ECOSYSTEM COMPARISON, ECOSYSTEM EXPLORATION – FOCUS: SOIL AND THE FOREST FLOOR, or ECOSYSTEM EXPLORATION – FOCUS: TEST A HYPOTHESIS at your school from the Educational Outreach Programs.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS2-1, 3-LS3-2, 1-LS1.A, 1-LS1.B, 1-LS1.D, 1-LS3.B, 2-LS4.D, 3-LS2.C, 3-LS2.D, 3-LS4.C, 3-LS4.D, 3-LS4.D, 3-LS1.B, 3-LS3.A, 3-LS3.B  
Independent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits

### ECOSYSTEM ECOLOGY

SPRING & FALL • INDOOR & OUTDOOR • SECOND - FIFTH GRADE • 2 HOURS

Take an interpretive hike to the Huron Swamp forest, tall and short grass prairies, and variety of wetlands in the park. Investigate the biodiversity at Indian Springs in a “search and sample” activity and learn about the food webs present in the different ecosystems. Teachers may choose to add ecosystem games to model population dynamics.

To enhance your experience, consider these programs: ECOSYSTEM EXPLORATION – FOCUS: ECOSYSTEM COMPARISON or ECOSYSTEM EXPLORATION – FOCUS: SOIL AND THE FOREST FLOOR at your school from the Educational Outreach Programs.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, 3-LS3-2, 5-PS3-1, 5-LS2-1, 2-LS4.D, 5-PS3.D, 5-LS1.C, 5-LS2.A, 5-LS2.B  
Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Matter and Energy in Organisms and Ecosystems

### WINTER ECO-ADVENTURE

WINTER • INDOOR & OUTDOOR • SECOND - FIFTH GRADE • 2 HOURS

Enjoy a hands-on indoor presentation with animal mounts and pelts to discuss adaptations and strategies for surviving winter. Take an ecosystem hike to search for signs of animal life and decide what strategies the animal is using to make it through the cold months. Students will also take part in the “bottle animal” lab, where they create an insulative covering for their model animal and see how well it maintains its temperature in the outdoor elements.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, 3-LS3-2, 5-PS3-1, 5-LS2-1, 2-LS4.D, 5-PS3.D, 5-LS1.C, 5-LS2.A, 5-LS2.B  
Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Matter and Energy in Organisms and Ecosystems





## ECOSYSTEM INVESTIGATION

YEAR-ROUND • INDOOR & OUTDOOR • FOURTH - TWELFTH GRADE • 2 - 3 HOURS

Immerse yourself in our native ecosystems! Students will visit the prairie, wetland and forest where abiotic and biotic components such as temperature, humidity, light intensity, and windspeed will be analyzed using electronic data loggers. We will look for examples of ecosystem dynamics such as succession, erosion and invasive species and discuss how those changes may affect organisms who live there. Aquatic ecosystem diversity will be studied in-depth in our microscope lab where students will use dissecting microscopes to identify and inventory aquatic organisms to assess the biodiversity and health of the pond. Teachers may choose to add ecosystem games to model population dynamics.

To enhance your experience, consider these programs: ECOSYSTEM EXPLORATION – FOCUS: ECOSYSTEM COMPARISON, ECOSYSTEM EXPLORATION – FOCUS: SOIL AND THE FOREST FLOOR, or ECOSYSTEM EXPLORATION – FOCUS: TEST A HYPOTHESIS at your school from the Educational Outreach Programs.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, 3-LS4-3, 3-LS4-2, 4-LS1-1, 5-LS2-1, MS-LS2-1, MS-LS2-3, MS-LS2-4, HS-LS2-6, HS-LS2-7, 2-LS4.D, 3-LS2.C, 3-LS4.C, 3-LS4.B, 5-LS2.A, LS2.A, LS1.C, LS2.C,

Interdependent Relationships in Ecosystems | Independent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits  
Structure, Function, and Information Processing | Matter and Energy in Organisms and Ecosystems  
Life Sciences – Matter and Energy in Organisms and Ecosystems | Life Sciences – Interdependent Relationships in Ecosystems

## WETLANDS & WATER QUALITY

SPRING & FALL • INDOOR & OUTDOOR • FOURTH - TWELFTH GRADE • 2 - 3 HOURS

Wetlands improve our water quality! Take a trail hike to compare the marsh, fen, vernal pond and swamp, focusing on organisms and dynamics of each. Investigate aquatic benthic macro-invertebrates up-close in the microscope lab to complete a biological water quality assessment of the pond. Measure dissolved oxygen, pH, turbidity, temperature, and nutrients to assess the suitability of pond habitat for different organisms. You may also search for aquatic organisms in the pond with dip nets (optional, extra time required).

To enhance your experience, consider ECOSYSTEM EXPLORATION – FOCUS: WATER QUALITY AND ENVIRONMENTAL CHEMISTRY at your school from the Educational Outreach Programs.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, 3-LS4-3, 3-LS3-2, MS-LS2-4, MS-ESS3-3, MS-ESS3-4, 2-LS4.D, 3-LS2.C, 3-LS4.D, 3-LS1.B, MS-ESS2.C, MS-ESS2.A, MS-ESS3.C

Interdependent Relationships in Ecosystems | Independent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits  
Life Sciences – Matter and Energy in Organisms and Ecosystems | Earth and Space Sciences – Human Impacts



### WEATHER OF THE SEASONS

YEAR-ROUND • INDOOR & OUTDOOR • KINDERGARTEN - SECOND GRADE • 1 - 1 ½ HOURS

Students will make and use a simple tool to measure the weather. We'll learn about and measure basic weather phenomena while on a trail hike.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-PS3-1, K-ESS2-1, 1-ESS1-1, 3-ESS2-1, K-PS3.B, K-ESS2.D, 1-ESS1.A, 1-ESS1.B, 3-ESS2.D

Weather and Climate | Space Systems: Patterns and Cycles

### INFLATABLE CUBEX PLANETARIUM

YEAR-ROUND • INDOOR & OUTDOOR • FIRST - FOURTH GRADE • 1 HOUR

Students can experience the night sky, indoors in our Cubex inflatable planetarium! We'll explore constellations, tell star stories, and explain day, night and seasonal cycles. An optional constellation t-shirt activity may be added for younger grades.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-ESS1-1, ESS1.A

Space Systems: Patterns and Cycles

### LANDFORMS: THE SURFACE OF THE EARTH

YEAR-ROUND • INDOOR & OUTDOOR • SECOND - FOURTH GRADE • 1½ - 2 HOURS

Indoors, students will learn how Michigan landforms have been formed and are still being shaped through different erosional process. Processes will be modeled using the stream table and "Glacial Goo". Outdoors, we will hike to different park landforms to explore how humans and nature have changed Michigan's surface.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-ESS2-1, 2-ESS2-3 \*MI, 4-ESS2-1, 5-ESS3-1, 2-ESS1.C, 2-ESS2.A, 2-ESS2.B, 2-ESS2.C, 4-ESS2.A, 5-ESS3.C

Earth's Systems: Processes that Shape the Earth

### WATER CYCLE

YEAR-ROUND • INDOOR & OUTDOOR • SECOND - FOURTH GRADE • 2 - 2 ½ HOURS

Students will model the journey of a water drop through the water cycle as a solid, liquid and a gas. Through interactive presentations we'll see where all the water in the world resides, and how much is available to us, then discuss ways we can keep it clean. A stream table presentation will demonstrate how water helps shape our landscapes. Students will also compare the river, ponds and wetlands on a hike through the nature study area.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-ESS2-3 \*MI, 2-ESS2.A, 2-ESS2.B, 2-ESS2.C

Earth's Systems: Processes that Shape the Earth



## MICHIGAN GEOLOGY: IMPACT OF GLACIERS

YEAR-ROUND • INDOOR & OUTDOOR • SECOND - EIGHTH GRADE • 2 - 2 ½ HOURS

The effects of Michigan's glacial history are everywhere. Students will have fun indoors while we discuss how glaciers formed during Michigan's last ice age, and the evidence they left on the landscape. Students will predict and model glacial movement during hands-on "Glacial Goo" demonstrations, and hike outdoors to look for evidence that glaciers were once here. An optional segment may be added to discuss how our water resources are related to our glacial history, with stream table and groundwater model demonstrations.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-ESS2-1, 4-ESS2-1, MS-ESS2-2, 2-ESS1.C, 2-ESS2.A, 2-ESS2.B, 2-ESS2.C, 4-ESS2.A,

Earth's Systems: Processes that Shape the Earth | Earth and Space Sciences – History of Earth

## MICHIGAN GEOLOGY: FOSSIL FOCUS

YEAR-ROUND • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 2 HOURS

Fossils are fascinating! Outdoors, students will investigate areas of geologic interest on an interpretive fossil hike. In the lab, students will compare actual fossils with organisms alive today and do hands-on fossil identification.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-1, 4-ESS1-1 \*MI, MS-ESS2-3, 3-LS4.A, 4-ESS1.C

Independent Relationships in Ecosystems | Earth's Systems: Processes that Shape the Earth | Earth and Space Sciences – History of Earth

## MICHIGAN GEOLOGY: ROCKS!

YEAR-ROUND • INDOOR & OUTDOOR • THIRD - SIXTH GRADE • 2 - 3 HOURS

Students will discover why Michigan rocks through interactive lab activities, where they will model the rock cycle and use geologic samples to understand how sedimentary, metamorphic and igneous rocks are formed and change over time. On a trail hike, we will find examples of geology in action. Students will also explore the exhibit area to find examples of earth materials used in everyday life.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 4-ESS2-2, 5-ESS2-1, MS-PS1-3, 2-ESS1.C

Earth's Systems: Processes that Shape the Earth | Physical Science – Structure and Properties of Matter

## WEATHER & CLIMATE

YEAR-ROUND • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE • 1 - 1 ½ HOURS

Students will use data loggers and other tools to measure weather conditions including air temperature, wind speed, barometric pressure, relative humidity and cloud cover, then discuss the impact of microclimate on these conditions.

### OPTIONAL ADD-ON: NOAA WEATHER STATION TOUR & MEET A METEOROLOGIST

YEAR-ROUND • INDOOR • THIRD & OLDER • 1 HOUR • 25 students at a time maximum

Students will tour the National Weather Service Forecast office and experience how meteorologists gather information and forecast our weather. EDC staff will coordinate your appointment.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-ESS2-1, 3-ESS2.D

Weather and Climate





## ENERGY IN MOTION

YEAR-ROUND • INDOOR & OUTDOOR • FOURTH - SIXTH GRADE • 1 - 1 ½ HOURS

Trace energy transformations in hands-on lab activities where we make an apple battery, try-out a forever flashlight, compare how well different metals can transfer heat, investigate the efficiency of light bulbs and investigate sustainability. Explore energy transformations in nature as we look at food-chains and discuss energy flow through different parts of the ecosystem. We'll also model renewable and non-renewable energy sources through interactive games.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 4-PS3-2, 4-ESS3-1, 4-PS3-4, 5-PS1-3, 5-PS3-1, 5-LS2-1, 4-PS3.A, 4-PS3.B, 4-PS3.D, 4-ESS3.A, 5-LS2.A, 5-PS2.B, 5-PS3.D, 5-LS1.C, 5-LS2.B

Energy | Structure and Properties of Matter | Matter and Energy in Organisms and Ecosystems

## MICHIGAN GEOLOGY: SOIL SCIENCE

YEAR-ROUND • INDOOR & OUTDOOR • SIXTH - TWELFTH GRADE • 2 - 2 ½ HOURS

Get your hands dirty while we explore soil! In the lab, students will analyze soil samples at stations for texture, pH, organisms, nutrients and carbonates to see how these factors vary across ecosystems. On the trail, we will visit different ecosystems to compare soil samples and see some of the effects on vegetation that are impacted by the soil present.

To enhance your experience, consider ECOSYSTEM EXPLORATION – FOCUS: SOIL AND THE FOREST FLOOR at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): MS-LS2-3, MS-ESS2-2, HS-ESS2-5, HS-ESS2-6

Life Sciences – Matter and Energy in Organisms and Ecosystems | Earth and Space Sciences – Matter and Energy in Organisms and Ecosystems  
Earth and Space Sciences – Earth's Systems







# KENSINGTON METROPARK NATURE CENTER

**810-227-8917 • 2240 WEST BUNO ROAD, MILFORD, MI 48380**  
**[KENSINGTON.NATURECENTER@METROPARKS.COM](mailto:KENSINGTON.NATURECENTER@METROPARKS.COM)**

You don't have to travel far to enjoy the best of Michigan's great outdoors. Conveniently situated off I96 between Brighton, Milford and South Lyon, Kensington Metropark is one of the most popular parks in Michigan. At the western edge of Kensington's beautiful Kent Lake sits the hub of seven miles of nature trails: the Kensington Nature Center. The diverse wetland and woodland habitats are home to an abundance of wildlife and the activities and exhibits of the center are designed to help explore the wildlife of the park.

The Nature Center's school programs are great examples of STEM-based environmental education, with hands-on activities, cooperative learning, and critical thinking discussions. Program content and activities are adjusted to meet the needs of preschool through middle school classes. School programs can be indoor, outdoor, or combined to include both components. Popular topics include seasonal live animal adaptation programs, wetland exploratory hikes, pond dipping for macroinvertebrates, and plant structures and life cycles. Groups may also participate in self-guided hikes and exploration of our newly renovated Nature Center. While at the park take just a short drive to visit our picnic areas, playgrounds, splash park, and Farm Center. Pre- and post-visit materials are available upon request.

To schedule a program, please contact us by phone 810-227-8917 or email [kensington.naturecenter@metroparks.com](mailto:kensington.naturecenter@metroparks.com).

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.

## PRESCHOOL

### LITTLE CRITTER NATURE HOUR

YEAR-ROUND • INDOOR • PRESCHOOL • 1 HOUR

Students will experience the needs of animals and their survival strategies as they prepare for the changing of the seasons. Working together, the class will create a map of where different species will be found during the current season. Students will have a chance to interact with live animals. We will have songs and puppets. Topics will correspond with the current season.

Focus for Early Learners: characteristics • habitats • classification • life requirements • adaptations • ecosystems

### LITTLE CRITTER NATURE WALK

YEAR-ROUND • OUTDOOR • PRESCHOOL • 1 HOUR

It sure is noisy out there and it is all due to the weather. Discover the sounds, sights, and smells of nature throughout the seasons on this outdoor nature walk. Experience the changes of plants and animals while hiking through several different habitats. Topics will correspond with the current season.

Focus for Early Learners: identify the needs of plants • habitats • ecosystems • life requirements • adaptations

## KINDERGARTEN – SECOND GRADE

### POND ECOSYSTEMS & LIFE CYCLES FOR YOUNGER GRADES

MAY 1 – SEPTEMBER 31 • INDOOR & OUTDOOR • KINDERGARTEN - SECOND GRADE • 1 HOUR

Inside, through hands-on experience and models, students will discover the adaptations of animals and how those adaptations help them survive in their pond habitat. Through live animal demonstrations and models, students will look at the life cycles of animals that live in a pond ecosystem. Outside, the class will learn about animal structure and classification by using a dichotomous key to determine patterns in the macroinvertebrate populations that live in our ponds. Students will then use scientific tools to sample macroinvertebrates. The class will discuss how humans can impact these habitats and communicate solutions for the future of a pond ecosystem.

To enhance your experience, consider these programs: WE'RE FOND OF PONDS, LIFE CYCLES: WHEN I WAS A BABY, or SHELLS, SCALES AND POLLYWOG TAILS at your school from the Educational Outreach Programs.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-ESS3-3, K-LS1-1, K-LS1.C, K-ESS3-1, K-ESS3.A, 1-LS1.A, 1-LS1.B, 1-LS3-1, 1-LS3.B, 2-LS4-1, 2-LS4.D

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

Interdependent Relationships in Ecosystems





## PLANT PARTS & LIFE CYCLES FOR YOUNGER GRADES

YEAR-ROUND • INDOOR • KINDERGARTEN - SECOND GRADE • 1 HOUR

We will explore the life cycle of a plant by dressing up a student as a flower and modeling the plant's structures and functions. Interpreters will dramatize a pollinators role in how flowers turn into seeds. Next explore the unique way that plant seeds are dispersed. Students will discover how humans mimic some of these amazing techniques to help in their everyday life. As a class the students will create a model to explore the parts of a tree and the role each part plays in the tree's survival. Students will plant a seed to take home, to continue their investigation of what a plant needs to grow.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS3-1, K-ESS3.A, 1-LS1-1, 1-LS1.A, 1-LS1.B, 2-LS2-1, 2-LS2.A, 2-LS2-2, 2-LS2.A

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

Interdependent Relationships in Ecosystems

## FOOD CHAINS: WHAT'S FOR DINNER FOR YOUNGER GRADES

YEAR-ROUND • INDOOR • KINDERGARTEN - SECOND GRADE • 1 HOUR • ALSO AVAILABLE IN-SCHOOL

Discover the parts of a food chain and what different types of plants and animals need to live and grow. Students will act out the parts of a food chain to build a model of a Michigan food web, including a dramatization of how humans can impact the environment. Observe live animal interactions to gain an understanding of the connections between parts of a food chain. This program features a visit with Ranger, a live red-tailed hawk.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-LS1.C, K-ESS3-1, K-ESS3.A, 1-LS1.A

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

## BUILD A BIRD: BIRD ADAPTATIONS FOR YOUNGER GRADES

YEAR-ROUND • INDOOR • KINDERGARTEN - SECOND GRADE • 1 HOUR • ALSO AVAILABLE IN-SCHOOL

Using mounted specimens, we'll investigate the various adaptations that birds rely on to survive in their precise habitat. Based on their observations, students will work together to design a bird for a specified habitat. The class will then present the evidence for why their bird is best adapted to the given habitat. We will use Ranger, our live red-tailed hawk, to demonstrate the unique adaptations specific to birds of prey.

To enhance your experience, consider OUTSTANDING OWLS at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-LS1.C, K-ESS3-1, K-ESS3.A, 1-LS1.A, 1-LS1.D, 2-LS4-1, 2-LS4.D

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment

Structure, Function, and Information Processing

Interdependent Relationships in Ecosystems

## HABITAT HIKE FOR YOUNGER GRADES

YEAR-ROUND • OUTDOOR • KINDERGARTEN - SECOND GRADE • 1 HOUR

Explore the various habitats of the Kensington Nature Area. Students will use their observational skills to discover the plants and animals that call these habitats their home. Investigate how certain plants can be used as indicator species for specific habitats. Students will be able to use evidence to determine which habitats surround the Nature Area. Topics will correspond with the current season.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-LS1.C, K-ESS3-1, K-ESS3.A, 1-LS1.A, 2-LS4-1, 2-LS4.D

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

Interdependent Relationships in Ecosystems

## ANIMAL ADVENTURE: HABITATS & ADAPTATIONS FOR YOUNGER GRADES

YEAR-ROUND • INDOOR • KINDERGARTEN - SECOND GRADE • 1 HOUR

Using mounts, dramatization, and hands-on activities, we'll look at how adaptations and habitat help shape the way an animal looks and acts. Learn about the basic needs of animals and the characteristics and behaviors that help them survive. Working together, the class will create a map of where different species will be found during the current season. Students will have a chance to interact with live reptiles and amphibians. Topics will correspond with the current season.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-LS1.C, K-ESS3-1, K-ESS3.A, 1-LS1.A, 1-LS1.B, 1-LS1.D, 2-LS4-1, 2-LS4.D

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing  
Interdependent Relationships in Ecosystems

## THIRD - FIFTH GRADE

### POND ECOSYSTEMS & LIFE CYCLES FOR OLDER GRADES

MAY 1 - SEPTEMBER 31 • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 1 HOUR

Inside, through hands-on experience and models, students will discover the adaptations of animals and how those adaptations help them survive in their pond habitat. Through live animal demonstrations and models, students will look at the life cycles of animals that live in a pond ecosystem. Outside, the class will learn about animal structure and classification by using a dichotomous key to determine patterns in the macroinvertebrates that live in our ponds. Students will then use scientific tools to sample macroinvertebrates. Students will investigate water quality based on the indicator species that they find in the pond. Class will discuss how humans can impact these habitats and communicate solutions for the future of a pond ecosystem.

To enhance your experience, consider COLD-BLOODED CREATURES at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-3, 3-LS4.C, 3-LS1-1, 3-LS1.B, 4-LS1-1, 4-LS1.A

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing

### PLANT PARTS & LIFE CYCLES FOR OLDER GRADES

YEAR-ROUND • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 1 HOUR

We will explore the life cycle of a plant by dressing up a student as a flower and modeling the plant's structures and functions. Interpreters will dramatize a pollinators role in how flowers turn into seeds. Next, the class will explore the unique way that plant seeds are dispersed. Students will discover how humans mimic some of these amazing techniques to help in their everyday life. As a class, the students will create a model to explore the parts of a tree and the role each part plays in the trees survival. Students will participate in the Pollinator Speed Dating Activity to explore how certain plant structures are adapted to attract specific pollinators.

To enhance your experience, consider PLANTS PARTS AND SEED DISPERSAL at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS1.B, 3-LS4-2, 3-LS4.B, 4-LS1-1, 4-LS1.A, 5-LS1-1, 5-LS1.C, MS-LS1-6, MS-LS1.C

Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing  
Matter and Energy in Organisms and Ecosystems | Matter and Energy in Organisms and Ecosystems (MS)





## FOOD CHAINS: WHAT'S FOR DINNER FOR OLDER GRADES

YEAR-ROUND • INDOOR • THIRD - FIFTH GRADE • 1 HOUR • ALSO AVAILABLE IN-SCHOOL

Discover how energy flows through the parts of a food chain. Discuss what different types of plants and animals need to survive and grow. Students will act out the function of producers, consumers, and decomposers to build a model of a Michigan food web, including a dramatization of how humans can impact the environment. Observe live animal interactions to gain an understanding of the connections between parts of a food chain. This program features a visit with Ranger, a live red-tailed hawk.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4.B, 3-LS2-1, 3-LS2.C, 3-LS2.D, 4-LS1-1, 4-LS1.A, 5-PS3-1, 5-PS3.D, 5-LS1.C, 5-LS2-1, 5-LS2.A, 5-LS2.B, MS-LS1-6, MS-LS2-3, MS-LS2.B, MS-LS2-4, MS-LS2.C

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing  
Matter and Energy in Organisms and Ecosystems | Matter and Energy in Organisms and Ecosystems (MS)

## BUILD A BIRD: BIRD ADAPTATIONS FOR OLDER GRADES

YEAR-ROUND • INDOOR • THIRD - FIFTH GRADE • 1 HOUR • ALSO AVAILABLE IN-SCHOOL

Using mounted specimens, we'll investigate the various adaptations that birds rely on to survive in their precise habitat. Based on their observations, students will work together to design a bird for a specified habitat. The class will then present the evidence for why their bird is best adapted to the chosen habitat. We will use Ranger, our live red-tailed hawk, to demonstrate the unique adaptations specific to birds of prey.

To enhance your experience, consider BIRDS OF PREY at your school from the Educational Outreach Programs.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-2, 3-LS4.B, 3-LS4-3, 3-LS4.C, 3-LS4.D, 4-LS1-1, 4-LS1.A, 4-LS1-2, 4-LS1.D

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing

## FISHING THE HURON RIVER

MAY 1 - SEPTEMBER 30 • OUTDOOR • THIRD - FIFTH GRADE • 1 HOUR

Discover the fish that call Kent Lake and the Huron River their home and how humans changing the habitat can affect the sport of fishing. While learning the catch and release fishing method, explore the physical structures that help fish survive. Learn proper casting technique and then go fishing with the nature center's rods and reels. This program takes place at the West Boat Launch.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4.D, 4-LS1-1, 4-LS1.A

Interdependent Relationships in Ecosystems | Structure, Function, and Information Processing

## HABITAT HIKE FOR OLDER GRADES

YEAR-ROUND • OUTDOOR • THIRD - FIFTH GRADE • 1 HOUR

Explore the various habitats of the Kensington Nature Area. Students will use their observational skills to discover the plants and animals that call these habitats their home. Investigate how certain plants reproduce and can be used as indicator species for specific habitats. While hiking through different habitats, students will see how animals use different survival strategies through the changing seasons. Topics will correspond with the current season.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS2-1, 3-LS2.D, 3-LS4-2, 3-LS4.B, 3-LS2.C, 4-LS1-1, 4-LS1.A

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing



## ANIMAL ADVENTURE: HABITATS & ADAPTATIONS FOR OLDER GRADES

YEAR-ROUND • INDOOR • THIRD - FIFTH GRADE • 1 HOUR

Using mounts, dramatization, and hands-on activities, we'll look at how adaptations and habitat help shape the way an animal looks and acts. Learn about the basic needs of animals and the characteristics and behaviors that help them survive. Class will discuss the various survival techniques used by animals throughout the changing seasons. Students will have a chance to interact with live reptiles and amphibians. Topics will correspond with the current season.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS1.B, 3-LS2-1, 3-LS2.D, 3-LS2.C, 4-LS1-1, 4-LS1.A, 4-LS1-2, 4-LS1.D

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits  
Structure, Function, and Information Processing

## THIRD - FIFTH GRADE SPRINGBOARD SERIES

Make progressive aptitude building part of your field trips at Kensington. The Springboard Series work well as stand-alone experiences but are designed to be complimentary programs for year-to-year learning within these grade levels.

### SPRINGBOARD SERIES: WILD BIRDS & ECOSYSTEMS @ KENSINGTON NATURE CENTER

YEAR-ROUND • INDOOR & OUTDOOR • THIRD GRADE • 1 HOUR

Inside, students will discover the different species of birds that live around Kensington Metropark Nature Center. Using this new knowledge interpreters will guide students through predictions of bird species that may be spotted in two different habitats surrounding the nature center. Outside, we will visit study sites to observe, investigate, and record the bird species in those habitats. Back in the nature center classroom the group will tabulate species found in each habitat. Working as a class we will create graphs to compare or contrast the bird species in the various habitats. Students will discover which species survive better in certain ecosystems and why. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS2-1, 3-LS4-3, 3-LS4-4, 3-5-ETS1-3

Interdependent Relationships in Ecosystems | Engineering Design

### SPRINGBOARD SERIES: WILD BIRDS & INHERITED TRAITS @ KENSINGTON NATURE CENTER

YEAR-ROUND • INDOOR • THIRD GRADE • 1 HOUR

Using mounted specimens, students will discover how different physical traits of various birds are important to the survival of the animal. Students will participate in a demonstration of how genes passed from parent to offspring are expressed in the offspring. Students will graph their results to show the distribution of inherited traits in a normal population. Using our local screech-owl as an example, students will discuss how different genetic traits can help individuals in a population survive. Then, while observing a live red-tailed hawk, Ranger, important traits of birds of prey will be discussed. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS3-2, 3-LS4-2, 3-5-ETS1-3

Inheritance and Variation of Traits: Life Cycles and Traits | Engineering Design



**SPRINGBOARD SERIES: DOMESTIC BIRDS & ANATOMY\* @ KENSINGTON FARM CENTER**

YEAR-ROUND • INDOOR & OUTDOOR • FOURTH GRADE • 1 HOUR

Observing live poultry, students will explore the history and genetics behind the domestication of chickens, ducks, and geese. Students will learn the basic principles of genetics, discover how fertilized eggs develop into chicks, and observe and compare the adaptations of domestic birds. They will explore how domesticated birds perceive the world and compare it to their own senses and those of other farm animals. Students will walk away with a deeper appreciation of where their food comes from, from some of our most interesting farm residents. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

\*Prerequisite: Previous participation in SPRINGBOARD SERIES: WILD BIRDS & ECOSYSTEMS or SPRINGBOARD SERIES: WILD BIRDS & INHERITED TRAITS is highly recommended

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS):4-LS1-1, 4-LS1-2, 3-5-ETS1-3

Structure, Function, and Information Processing  
Engineering Design

**SPRINGBOARD SERIES: WILD BIRDS & FOOD CHAINS\* @ KENSINGTON NATURE CENTER**

YEAR-ROUND • INDOOR & OUTDOOR • FIFTH GRADE • 1 HOUR

Discover how energy flows through the parts of a food chain during a trophic transfer activity. Students will model the function of producers, consumers, and decomposers in a southeast Michigan ecosystem to discover how energy originating from the sun moves through a food chain. Students will use the data they record during the activity to create a graph. Then observe live animal interactions to gain a deeper understanding of the connections between parts of a food chain. This program features a visit with Ranger, a live red-tailed hawk. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

\* Previous participation in SPRINGBOARD SERIES: WILD BIRDS & ECOSYSTEMS or SPRINGBOARD SERIES: WILD BIRDS & INHERITED TRAITS and SPRINGBOARD SERIES: DOMESTIC BIRDS & ANATOMY are highly recommended

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 5-PS3-1, 5-LS2-1, 3-5-ETS1-3

Matter and Energy in Organisms and Ecosystems | Engineering Design







# KENSINGTON METROPARK FARM CENTER

**248-684-8632 • 2240 WEST BUNO RD., MILFORD, MI 48380**  
**KENSINGTON.FARM@METROPARKS.COM**

Located within Kensington Metropark, the Farm Center is a 100-acre interpretive farm focused on helping youth gain an appreciation, awareness, and understanding of agricultural methods of the past and present. The majority youth and families in our urban and suburban region are disconnected from the farming systems that provide the food for their tables. This makes the Farm Center a unique place for students to engage, interact, and connect with the domesticated animals and plants that are the vital living basis of the U.S. food system.

While visiting or taking part in one of our S.T.E.M. based educational programs, students will take in the sights, smells and sounds of life on the farm and meet face-to-face with farm animals like chickens, sheep, goats, cattle, and draft horses. Students are free to pet the animals that approach the fences, but we ask that they not feed the animals.

The Farm Center's program offerings vary by season and are designed to encompass a wide range of hands-on educational opportunities for all ages. Program content and activities are adjusted to meet the needs of preschool through middle school. Pre- and post-visit materials are available upon request.

To enhance your students' experience, consider booking programs at both the Kensington Farm Center and Nature Center, or consider having the Community Outreach Interpreter visit your classroom before or after your program at the Farm Center.

To schedule a program, please contact us by phone 248-684-8632 or email [kensington.farm@metroparks.com](mailto:kensington.farm@metroparks.com).

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.



## ALL GRADES

### BEES! AGRICULTURE'S HARDEST WORKERS

MAY - OCTOBER • OUTDOOR • ALL GRADES • 1 HOUR

Bees are a critical but threatened part of natural and agricultural ecosystems. Your students will explore the lives and roles of social bees like the imported western honey bees as well as native solitary bees like leafcutter and mason bees. They will learn about bees' vital part in producing the crops they eat, and how they can help bees survive and thrive. Students will also try their hands at being a bee as they pollinate flowers and explore the flowers' structures and functions.

Focus for Early Learners: relationships of organisms, life cycle, seasons • how people use the environment.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, K-ESS3-3, 1-LS1-1, 1-LS3-1, 2-LS2-2, 2-LS4-1, 3-LS4-3, 3-LS1-1, 3-5-ETS1-2, 4-LS1-1, 4-LS1-2, 5-PS3-1, 5-LS-1, MS-LS1-6, MS-LS2-1, MS-LS2-4, MS-LS2-2, MS-LS2-5, MS-LS1-4, MS-ESS3-3

Human Impacts | Matter and Energy in Organisms and Ecosystems | Interdependent Relationships in Ecosystems  
Structure, Function, and Information Processing | Inheritance and Variation of Traits: Life Cycles and Traits

## PRESCHOOL - SECOND GRADE

### FUN ON THE FARM

YEAR-ROUND • INDOOR & OUTDOOR • PRESCHOOL • 1 1/2 HOUR • \$5 PER CHILD

The Fun on the Farm program is a popular series of programs designed especially for the little ones. We will have story time, a craft and an activity all focused around a farm theme of your choice. Possible themes include farm animals like horses, cows, chickens, sheep, goats, and pigs to farm tractors. Seasonal themes such as maple sugaring, spring farm babies, and pumpkins may also be possibilities depending on the timing of the event.

Focus for Early Learners: Can be customized to fit the interests or curriculum of the group or class.

### FARM ANIMAL TOUR FOR LITTLE ONES

YEAR-ROUND • OUTDOOR • PRESCHOOL - SECOND GRADE • 1 HOUR

What does a sheep feel like, why does a rooster crow and how many babies can a pig have? Your students will discover the answers to these questions and many more as they explore each animal's "Job" on the farm. This program is a memorable experience for early learners as they investigate farm life through interactive sounds, sights, and hands-on contact.

Focus for Early Learners: life requirements • structures and functions • life cycles of animals.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, 1-LS1-2, 1-LS3-1, 2-LS2-2

Interdependent Relationships in Ecosystems | Structure, Function, and Information Processing



## MAPLE SUGARING FOR LITTLE ONES

MARCH • OUTDOOR • PRESCHOOL - SECOND GRADE • 1 HOUR

Explore how the weather, seasons, and a maple tree's needs and structures combine to produce sap. Your students will use all their senses as they discover the steps it takes to get from maple sap to tasty maple syrup. They will also learn how this process has changed over time as they visit Native American and pioneer sugaring camps. Consider capping off your exploration with a pancake breakfast at the Farm Grille for an additional fee.

Focus for Early Learners: Seasons • Plant parts & functions • Identify the needs of plants • American Indian stories

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS3-1, 1-LS1-1, 1-LS3-1

Interdependent Relationships in Ecosystems | Structure, Function, and Information Processing

MICHIGAN K-12 SOCIAL STUDIES STANDARDS: K-H2.0.1, K-G5.0.1, 1-G5.0.1, 1-G5.0.2

Living and Working Together | Environment and Society

## SECOND - SIXTH GRADE

### FARM INVADERS

YEAR-ROUND • OUTDOOR • SECOND - SIXTH GRADE • 2 HOURS

Farmers are stewards of their land and animals, and frankly there are a lot of organisms out there that love to cause problems for both. During this program, students will dive into topics of predation, pests, diseases, native versus invasive plants and animals, and sustainability. They will learn how to identify problem organisms and devise new ideas on how to deal with unwanted guests on the farm.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, K-2-ETS1-1, 3-LS4-4, 3-5-ETS1-2, 4-LS1-1, 5-PS3-1, 5-LS1-1, 5-LS2-1, 5-ESS3-1, MS-LS2-4, MS-LS2-5, MS-LS1-4

Interdependent Relationships in Ecosystems | Engineering Design | Matter and Energy in Organisms and Ecosystems | Earth's Systems

Growth, Development, and Reproduction of Organisms

### WINTER ADVENTURE

NOVEMBER - FEBRUARY • OUTDOOR • SECOND - SIXTH GRADE • 2 HOURS

Winter's snowy blanket does not end work on the farm. During this special two-hour program students will have a hands-on learning experience as they participate in winter activities around the Farm Center. Examples of possible activities include exploring how animals and farmers adapt to and plan for winter, discovering dormancy in plants, examining the history of ice harvesting, and taking sleigh/hayrides. Ask for details about this year's winter activities when making your booking.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS2-1, 2-LS2-2, 3-LS2-1, 3-LS1-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, 3-ESS3-1, 4-LS1-1, 4-LS1-2, 4-ESS3-2, 5-PS3-1, 5-LS1-1, 5-LS2-1, MS-LS1-7, MS-LS2-3, MS-LS1-4, MS-LS1-5

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing

Matter and Energy in Organisms and Ecosystems | Growth, Development, and Reproduction of Organisms | Earth's Systems: Processes that Shape the Earth



## SPRING ADVENTURE

APRIL - JUNE • OUTDOOR • SECOND - SIXTH GRADE • 2 HOURS

Spring means growing plants, flowers, and baby animals! During this special two-hour program students will have a hands-on learning experience as they participate in springtime activities around the Farm Center. Examples of possible activities include planting seeds, investigating herbs, exploring growing plants, interacting with baby animals, and hayrides. Ask for details about this year's spring activities when making your booking.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 2-LS2-1, 2-LS2-2, 3-LS2-1, 3-LS1-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, 3-ESS3-1, 4-LS1-1, 4-LS-2, 5-PS3-1, 5-LS1-1, 5-LS2-1, MS-LS1-6, MS-LS2-3, MS-LS1-4, MS-LS1-5, MS-LS4-5

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing  
Matter and Energy in Organisms and Ecosystems | Growth, Development, and Reproduction of Organisms

## FARM ANIMAL TOUR

YEAR-ROUND • OUTDOOR • THIRD- SIXTH GRADE • 1 HOUR

Many children have never set foot on a working farm or know where their food and fiber come from. In this program students will interact with the animals living on the farm, learn their contributions to society, and gain a deeper appreciation of agriculture. Students will examine the animals face-to-face and discuss how the animal's structures relate to their functions, both for the animal and for people. Students will learn about the basic needs all animals and the similarities and differences between mammals and birds. Students will also find out what it means to be domesticated and see how parental traits can be observed in their young.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS1-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, 4-LS1-1, 4-LS1-2, 5-PS3-1, 5-LS2-1, MS-LS2-2, MS-LS2-5, MS-LS3-1, MS-LS4-5

Inheritance and Variation of Traits: Life Cycles and Traits | Interdependent Relationships in Ecosystems | Structure, Function, and Information Processing  
Matter and Energy in Organisms and Ecosystems | Growth, Development, and Reproduction of Organisms

## AGRICULTURAL SUSTAINABILITY: "GREEN" BUILDINGS, ENERGY, AND NUTRIENT MANAGEMENT

YEAR-ROUND • OUTDOOR • THIRD - SIXTH GRADE • 1 HOUR

Explore a unique "green" building constructed using local materials as your students explore topics related to sustainability, on the farm and at home. The Kids' Cottage features a straw bale wall covered with earthen plaster, compressed earth block and wattle & daub walls, wooden timbers and a thatched roof. Through active exploration and hands-on learning, our curriculum offers students awareness of natural building practices and the principles of sustainable agriculture.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS1-1, 3-LS4-4, 4-ESS3-1, 5-LS1-1, 5-LS2-1, 5-ESS3-1, 3-5-ETS1-2, MS-LS1-6, MS-LS1-7, MS-LS2-3, MS-LS2-5, MS-ESS3-5

Interdependent Relationships in Ecosystems | Energy | Weather and Climate | Matter and Energy in Organisms and Ecosystems | Earth's Systems





## MAPLE SUGARING

MARCH • OUTDOOR • THIRD - SIXTH GRADE • 1 HOUR

Discover the science and history of maple sugaring. This program includes finding and tapping a maple tree, tour Native American and pioneer sugaring camps, watching the process of turning sap into syrup and tasting the sweet results. As we visit different trees in search of a maple tree, students will learn about the parts of a tree and their functions. Your students will see, touch, and taste as they achieve a higher level of understanding and respect toward the environment and the contributions of Native American people. Cap off your exploration with a pancake breakfast at the Farm Grille for an additional fee.

To enhance your experience, consider PEOPLE OF THE THREE FIRES at your school from the Educational Outreach Programs.

### Connections to MDE Academic Standards

**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS4-4, 4-LS1-1, 5-PS3-1, 5-LS1-1

Interdependent Relationships in Ecosystems | Structure, Function, and Information Processing | Matter and Energy in Organisms and Ecosystems

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** 3-H3.0.4, 3-G5.0.1, 3-G5.0.2, 4-G5.0.1, 5-U1.1.3, 5-U2.3.3, 6-G2.1.1, 6-G3.2.2, 6-G5.1.1

History of Michigan (Through Statehood) | Environment and Society | American Indian Life in the Americas | Life in Colonial America

Physical Characteristics of Place | Ecosystems | Humans and the Environment

## AGRICULTURE IN A CHANGING CLIMATE

YEAR-ROUND • OUTDOOR • THIRD - SIXTH GRADE • 2 HOURS

As farms and cities spread in Michigan, our region's ecosystems and climate changed and still are today. Your students will explore the history behind our patchwork landscape and observe what that has meant for the flora and fauna of Michigan. Students will learn what farmers in Michigan are doing to mitigate and adapt to our changing climate and come up with ideas to increase sustainability in our food supply.

### Connections to MDE Academic Standards

**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS1-1, 3-LS4-4, 3-ESS3-1, 4-ESS3-1, 4-LS1-1, 4-ESS3-2, 3-5-ETS1-2, 5-LS1-1, 5-LS2-1, 5-ESS2-1, 5-ESS3-1, MS-PS1-3, MS-LS1-6, MS-LS1-7, MS-LS2-3, MS-LS2-4, MS-LS2-5, MS-ESS3-5

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Energy | Engineering Design

Structure, Function, and Information Processing | Weather and Climate | Matter and Energy in Organisms and Ecosystems | Earth's Systems



## IMMERSIVE PROGRAMS

### FARMER JUNIOR

JUNE - NOVEMBER • INDOOR & OUTDOOR • FIRST - THIRD GRADE • 3 HOURS (12pm – 3pm) • \$30 PER CHILD

Educational and fun, this hands-on immersive program allows young students the chance to help our farmers take care of animals. Each program includes a chance to meet the farm's animals as they feed, groom, and care for animals behind the scenes. A variety of hands-on S.T.E.M. activities are mixed in throughout the day and can be customized to any interests or grade curriculum. Perfect for homeschool groups! Minimum 5 students.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): CAN BE CUSTOMIZED TO FIT THE INTERESTS OR CURRICULUM OF THE GROUP OR CLASS.

### SUMMER ADVENTURE

JUNE - SEPTEMBER • OUTDOOR • SECOND - EIGHTH GRADE • 3 HOURS

Summer time is a busy season at the farm taking care of animals and crops. During this special extended three-hour adventure program students will have a hands-on learning experience as they participate in summer activities around the farm. Examples of possible activities include exploring animal adaptations, cleaning animal pens, grooming animals, scavenger hunts, or hayrides. Students should wear shoes and clothes that can get dirty. Ask for details about this year's summer activities when making your booking.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS2-1, 2-LS2-2, 3-LS2-1, 3-LS1-1, 3-LS3-1, 3-LS-2, 3-LS4-2, 3-ESS3-1, 4-LS1-1, 4-LS-2, 5-PS3-1, 5-LS1-1, 5-LS2-1, MS-LS1-6, MS-LS2-3, MS-LS1-4, MS-LS1-5

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing  
Matter and Energy in Organisms and Ecosystems | Growth, Development, and Reproduction of Organisms

### HARVEST ADVENTURE

SEPTEMBER & OCTOBER • OUTDOOR • SECOND - SIXTH GRADE • 2 HOURS

Explore the changes and chores associated with harvest time on the farm. During this special two-hour program students will have a hands-on learning experience as they participate in multiple fall activities around the Farm Center. Examples of possible activities include grinding grain, pressing cider, harvesting crops, and hayrides. Ask for details about this year's harvest activities when making your booking.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS2-1, 2-LS2-2, 3-LS2-1, 3-LS1-1, 3-LS3-1, 3-LS-2, 3-LS4-2, 3-ESS3-1, 4-LS1-1, 4-LS-2, 5-PS3-1, 5-LS1-1, 5-LS2-1, MS-LS1-6, MS-LS2-3, MS-LS1-4, MS-LS1-5

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function, and Information Processing  
Matter and Energy in Organisms and Ecosystems | Growth, Development, and Reproduction of Organisms

### THE SCIENCE OF SOIL

APRIL – NOVEMBER • INDOOR & OUTDOOR • THIRD – EIGHTH GRADE • 2 HOURS

Protecting and improving soil is fundamental to sustainable agriculture. Your students will explore the physical, chemical, and biotic components of soil and how they affect the soils properties. They will sample and examine the soils from a variety of cropping systems around the farm. Their hands-on exploration of soil will also examine the effects of human usage on soil and the agricultural practices being used to restore and protect our soils.

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#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-3, 3-LS4-4, 3-LS1-1, 3-5-ETSI-2, 4-LS1-1, 4-ESS3-2, 5-PS1-3, 5-LS2-1, 5-ESS2-1, 5-ESS3-1, MS-PS1-3, MS-LS1-6, MS-LS2-3, MS-LS2-4, MS-LS1-5, MS-ESS2-1, MS-ESS3-3, MS-ESS3-4

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Engineering Design  
Structure, Function, and Information Processing | Earth's Systems: Processes that Shape the Earth | Structure and Properties of Matter  
Matter and Energy in Organisms and Ecosystems

## FARMER FOR A DAY

JUNE – NOVEMBER • INDOOR/OUTDOOR • THIRD – EIGHTH GRADE • 5 HOURS (10am – 3pm) • \$40 PER CHILD

Educational and fun, this hands-on immersive program allows students the chance to work alongside our farmers taking care of animals. Each program includes a chance to meet all the farm's animals as they feed, water, and groom animals; muck stalls; and work behind the scenes. A variety of hands-on S.T.E.M. activities are mixed in throughout the day and can be customized to any interests or grade curriculum. Perfect for homeschool groups! Minimum 5 students.

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Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): CAN BE CUSTOMIZED TO FIT THE INTERESTS OR CURRICULUM OF THE GROUP OR CLASS.

## GRADES THIRD - FIFTH SPRINGBOARD SERIES

Make progressive aptitude building part of your field trips at Kensington. The Springboard Series work well as standalone experiences but are designed to be complimentary programs for year-to-year learning within these grade levels.

### SPRINGBOARD SERIES: WILD BIRDS & ECOSYSTEMS @ KENSINGTON NATURE CENTER

YEAR-ROUND • INDOOR & OUTDOOR • THIRD GRADE • 1 HOUR

Inside, students will discover the different species of birds that live around Kensington Metropark Nature Center. Using this new knowledge interpreters will guide students through predictions of bird species that may be spotted in two different habitats surrounding the nature center. Outside, we will visit study sites to observe, investigate, and record the bird species in those habitats. Back in the nature center classroom the group will tabulate species found in each habitat. Working as a class we will create graphs to compare or contrast the bird species in the various habitats. Students will discover which species survive better in certain ecosystems and why. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

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Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS2-1, 3-LS4-3, 3-LS4-4, 3-5-ETS1-3

Interdependent Relationships in Ecosystems | Engineering Design

### SPRINGBOARD SERIES: WILD BIRDS & INHERITED TRAITS @ KENSINGTON NATURE CENTER

YEAR-ROUND • INDOOR • THIRD GRADE • 1 HOUR

Using mounted specimens, students will discover how different physical traits of various birds are important to the survival of the animal. Students will participate in a demonstration of how genes passed from parent to offspring are expressed in the offspring. Students will graph their results to show the distribution of inherited traits in a normal population. Using our local screech-owl as an example, students will discuss how different genetic traits can help individuals in a population survive. Then, while observing a live red-tailed hawk, Ranger, important traits of birds of prey will be discussed. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

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Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS3-2, 3-LS4-2, 3-5-ETS1-3

Inheritance and Variation of Traits: Life Cycles and Traits | Engineering Design

### SPRINGBOARD SERIES: DOMESTIC BIRDS & ANATOMY\* @ KENSINGTON FARM CENTER

YEAR-ROUND • INDOOR & OUTDOOR • FOURTH GRADE • 1 HOUR

Observing live poultry, students will explore the history and genetics behind the domestication of chickens, ducks, and geese. Students will learn the basic principles of genetics, discover how fertilized eggs develop into chicks, and observe and compare the adaptations of domestic birds. They will explore how domesticated birds perceive the world and compare it to their own senses and those of other farm animals. Students will walk away with a deeper appreciation of where their food comes from, from some of our most interesting farm residents. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

\*Prerequisite: Previous participation in SPRINGBOARD SERIES: WILD BIRDS & ECOSYSTEMS or SPRINGBOARD SERIES: WILD BIRDS & INHERITED TRAITS is highly recommended



## SPRINGBOARD SERIES: WILD BIRDS & FOOD CHAINS\* @ KENSINGTON NATURE CENTER

YEAR-ROUND • INDOOR & OUTDOOR • FIFTH GRADE • 1 HOUR

Discover how energy flows through the parts of a food chain during a trophic transfer activity. Students will model the function of producers, consumers, and decomposers in a southeast Michigan ecosystem to discover how energy originating from the sun moves through a food chain. Students will use the data they record during the activity to create a graph. Then observe live animal interactions to gain a deeper understanding of the connections between parts of a food chain. This program features a visit with Ranger, a live red-tailed hawk. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program.

\* Previous participation in SPRINGBOARD SERIES: WILD BIRDS & ECOSYSTEMS or SPRINGBOARD SERIES: WILD BIRDS & INHERITED TRAITS and SPRINGBOARD SERIES: DOMESTIC BIRDS & ANATOMY are highly recommended

## PROGRAM ENHANCEMENTS:

Optional program enhancements may be added to any of the school tours for an additional cost. Extend your visit to the Farm Center by adding a charter hayride or bonfire to your outing.

## CHOW TIME ON THE FARM

AVAILABILITY: WEEKDAYS 3 P.M. – 4 P.M. • \$5 PER CHILD

Help the farm staff feed pigs, goats, cows, horses, and more! During this hands-on program young farmers will learn what each animal eats and why. A great capstone to a Farm Tour program and perfect for homeschool groups as well.

## HAY & SLEIGH RIDES

AVAILABILITY: WEEKDAYS 10 A.M. – 4 P.M. • \$50 PER ½ HOUR RIDE

Pile into our straw-filled wagon for a rustic ride pulled by a team of draft horses or tractor. In winter\*, enjoy an old-fashioned sleigh ride instead. Hayrides are wheelchair accessible and are subject to being tractor-drawn at any time. To schedule, please call the Farm Office at 248-684-8632 a minimum of 10 days in advance. The hay wagons can accommodate approximately 20 passengers per ride and the sleigh can seat 12.

\*Minimum base layer of 6 to 8 inches of packed snow.

During the month of October, chartered Pick-Your-Own Pumpkin hay rides will be offered Monday – Friday between 10am and 2pm. Pumpkins and gourds are priced according to size. All weekday pumpkin hayrides are tractor-drawn.

## BONFIRE PIT RENTAL

AVAILABILITY: 9 A.M. – 5 P.M. EVERY DAY • \$50

Want a crackling fire with your next gathering? The Farm Center has four bonfire pits available for rent along the Huron River. Firewood is included in the cost of the rental.

## RENTAL SPACE

AVAILABILITY: 9 A.M. – 5 P.M. • \$50 PER HR (2 HOUR MINIMUM), ALL DAY: \$300

The Farm Center has both a classroom and the upper floor of the main barn available for rent. To schedule, please call the Farm Office at 248-684-8632 a minimum of 10 days in advance. The heated/air-conditioned classroom can comfortably seat 60-80 people and its available tables and chairs can be configured how you like. The room has a kitchenette, white-board and projector screen. The upper floor of the barn is heated, and its wood floors and exposed beams make it a perfect venue for a Square Dance or country-themed party.



# LAKE ERIE METROPARK MARSHLANDS MUSEUM

**734-379-5020 • 32481 W. JEFFERSON, BROWNSTOWN, MI 48173**  
**MARSHLANDS.MUSEUM@METROPARKS.COM**

Offering spectacular views of the Detroit River and Lake Erie, Lake Erie Metropark is home to the Marshlands Museum, where nature and history come to life. The Museum hosts programs for school groups, homeschoolers, families, scouts, adults and community groups. Programs are by appointment and are usually offered year-round, unless otherwise noted. After your Museum visit, enjoy activities such as picnicking, the pool, the tot-lot and more.

To schedule a program, please contact us by phone at 734-379-5020 ext. 6836.

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.

ALL GRADE LEVELS

SURVIVING THE SNOW

WINTER • INDOOR • ALL GRADES • 1 HOUR

Winter is a tough season for wildlife. Students will discover the different strategies and adaptations plants and animals use to survive these harsh conditions. Strategies discussed will include hibernation, migration and dormancy. Students will learn about how animals stay warm and locate food. Students will also learn the physical changes plants and animals undergo during the winter.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS-2, K-ESS3-1, 1-LS1-1, 2-LS2-1, 2-LS4-1, 3-LS1-1, 3-LS4-4, 4-LS1-1, 4-LS1-2, 5-LS2-1, MS-LS2-1, MS-LS2-4, HS-LS2-1, HS-LS2-2, HS-LS4-3,

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Earth's Systems | Ecosystems: Interaction, Energy, & Dynamics

PRESCHOOL - KINDERGARTEN

FROG FUN

YEAR-ROUND • INDOOR • PRESCHOOL - KINDERGARTEN • 1 HOUR

Jump into this program and discover the frogs that live in the marsh! Students will learn about the types of habitats frogs like to live in and the requirements they need to survive. Students will also discover frog life cycles and adaptations. Students will explore the topic of camouflage by participating in a predator "hide and find" activity. They will compare the physical characteristics of different frog species found in the area.

To enhance your experience, consider these programs: WE'RE FOND OF PONDS or SHELLS, SCALES AND POLLYWOG TAILS at your school from the Educational Outreach Programs.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS-2, K-ESS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes

WETLAND EXPLORATIONS

SPRING & FALL • INDOOR & OUTDOOR • PRESCHOOL - KINDERGARTEN • 1 HOUR

Explore the wonderful world of wetlands! In this program, students will be introduced to the marsh habitat and discover the variety plants and wildlife living there. Students will participate in wetland themed activities modeling plant and animal relationships.

To enhance your experience, consider these programs: WE'RE FOND OF PONDS or SHELLS, SCALES AND POLLYWOG TAILS at your school from the Educational Outreach Programs.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS-2, K-ESS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes

Ecosystems: Interaction, Energy, & Dynamics | Heredity: Inheritance and Variation of Traits | Earth's Systems





## TURTLES & SNAKES: SCALY ENCOUNTERS

YEAR-ROUND • INDOOR • PRESCHOOL- KINDERGARTEN • 1 HOUR

Many different turtles and snakes can be found in our area. Students will discover the unique adaptations these animals have for survival. Live animals will be used to introduce students to specific reptile species. Students will observe the physical characteristics of reptiles and snakes.

To enhance your experience, consider these programs: WE'RE FOND OF PONDS or SHELLS, SCALES AND POLLYWOG TAILS at your school from the Educational Outreach Programs.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS-2, K-ESS3-1

From Molecules to Organisms: Structures & Processes | Earth's Systems | Earth & Human Activity

## FIRST - SECOND GRADE

### HOME SWEET HABITAT

YEAR-ROUND • INDOOR • FIRST - SECOND GRADE • 1 HOUR

Students will learn what a habitat is and determine what it needs to provide for successful animal survival. They will also learn that marshes are a type of wetland habitat found in the area. Students will better understand the importance of wetlands through an activity that demonstrates marshes are beneficial to both animals and humans. Students will discover the plants and animals found in the marsh by observing different plant specimens, pelts and animal mounts. Students will then participate in an activity where, as a group, they must create a simple habitat design for an animal.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS1-1, 2-LS2-1, 2-LS4-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics

### FURRY FRIENDS

YEAR-ROUND • INDOOR • FIRST - SECOND GRADE • 1 HOUR

Our marshes are home to many mammals, big and small! From muskrats to minks and raccoons to opossums, we'll discover what makes these furry animals unique. Students will learn the four main characteristics of mammals and explore the adaptations of mammals found at Lake Erie Metropark. Inheritance and variation of traits will be discussed as the students examine and match images of young and adult mammals and explain their similarities.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS1-1, 1-LS1-2, 1-LS3-1, 2-LS4-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Heredity: Inheritance and Variation of Traits



## GREEN SCENE

SPRING & FALL • INDOOR • FIRST - SECOND GRADE • 1 HOUR

Plants are important for both humans and animals alike. Life would be impossible without them! In this program, students will explore plant parts and identify their functions. They will learn about how plants obtain food through the process of photosynthesis. Students will identify the stages of plant lifecycles and learn the different methods of seed dispersal. Students will also learn about the many products humans get from plants by examining them and determining which ones are made from plants.

To enhance your experience, consider PLANT PARTS AND SEE DISPERSAL at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 1-LS1-1, 2-LS2-1, 2-LS2-2, 2-LS4-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics

## THIRD - TWELFTH GRADE

### GOING BUGGY

YEAR-ROUND • INDOOR • THIRD - FIFTH GRADE • 1 HOUR

Come see what the buzz is all about and explore the amazing world of insects! The program will begin by having students rate their reactions to specific insects and explain their reasoning behind their choice. Then they will learn about insect body parts and functions. Students will learn about the different types of metamorphosis. The diversity of insects will be discussed using various insect specimens.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS1-1, 3-LS2-1, 3-LS4-2, 3-LS4-4, 4-LS1-1, 4-LS-2

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes

### FEATHERED FRIENDS

YEAR-ROUND • INDOOR • THIRD - TWELFTH GRADE • 1 HOUR

Explore the amazing world of birds! In this program students will learn that having feathers is what makes birds unique from all other animals. Other physical characteristics of birds will be discussed including bone structure, eggs and beak types. Students will learn about the behaviors, traits and adaptations of some bird species that can be found at Lake Erie Metropark. Students will then participate in an activity where they will create their own bird and provide reasons for the traits and adaptations they have chosen.

To enhance your experience, consider BIRDS OF PREY at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS3-1, 3-LS3-2, 3-LS4-2, 3-LS4-3, 3-LS4-4, 4-LS1-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Heredity: Inheritance and Variation of Traits



## EAT OR BE EATEN

YEAR-ROUND • INDOOR • THIRD - TWELFTH GRADE • 1 HOUR

It's all about survival of the fittest in this predator-prey focused program. Students will learn the definitions of predator and prey and how to differentiate between the two by identifying specific physical characteristics unique to each role. Students will discover how predators use a combination of physical characteristics (claws, teeth, etc.) and various hunting techniques to capture prey and how prey use their keen senses and defensive behaviors to escape predators. Students will then work in groups to create the ultimate predator or prey animal.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS3-2, 3-LS4-2, 3-LS4-3, 4-LS1-1, 4-LS1-2

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics | Heredity: Inheritance and Variation of Traits

## WOODLAND INDIAN WAYS

YEAR-ROUND • INDOOR • THIRD - TWELFTH GRADE • 1 HOUR

Discover the lives of the Woodland Indians as they were a thousand years ago. Students will learn about the different Native American tribes that lived during the woodland period. Students will also learn about their clothing, hunting-gathering techniques and home structures.

To enhance your experience, consider PEOPLE OF THE THREE FIRES at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** 3 – H3.0.5

Michigan History Standards | History of Michigan (Through Statehood) | The World in Spatial Terms | Places and Regions | Human Systems  
Environment and Society

## ANIMAL FORENSICS

YEAR-ROUND • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE • 1 HOUR

Student detectives wanted! In this program students will discover how specific features of skulls can provide insight into animals' diet and behavior. They will learn how to identify herbivores, omnivores and carnivores by examining teeth. Students will determine if an animal is a predator or prey and nocturnal or diurnal by examining eye socket placement and size. They will work in teams to identify an animal using skulls, pelts and other clues and communicate their observations to the entire group.

To enhance your experience, consider MICHIGAN MAMMALS at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 5-PS3-1, MS-LS1-1, MS-LS1-3, MS-LS2-1, MS-LS2-2, MS-LS3-1

Energy | From Molecules to Organisms: Structures & Processes | Ecosystems: Interaction, Energy, & Dynamics | Heredity: Inheritance and Variation of Traits





## WATER INVESTIGATIONS

SPRING & FALL • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE • 1 HOUR

Students will explore the world of aquatic systems as they collect macroinvertebrate samples and measure water quality parameters such as pH, nitrates, phosphates and turbidity. Students will also identify the macroinvertebrates collected and determine their pollution tolerance levels. Students will then analyze the combined data to assess the overall health of the sample location.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 5-LS2-1, 5-ESS2-1, 5-ESS3-1, MS-LS2-3, MS-LS2-4, MS-LS2-5, MS-ESS3-3

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics | Heredity: Inheritance and Variation of Traits | Earth's Systems

## FIFTH - TWELFTH GRADE

### ECOSYSTEM ENERGY EXCHANGE

SPRING & FALL • INDOOR & OUTDOOR • FIFTH - TWELFTH GRADE • 1 HOUR

In this program, students will understand how energy is transferred between organisms within ecosystems. They will learn that ecosystems contain multiple trophic levels and organisms classified into these levels are based feeding behavior. Students will create food webs to model the connection between organisms. Human impact on ecosystems will also be explored.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 5-LS1-1, 5-LS2-1, 5-ESS2-1, 5-ESS3-1, 5-PS3-1, MS-LS2-1, MS-LS2-2, MS-LS2-3, MS-LS2-4

From Molecules to Organisms: Structures & Processes | Ecosystems: Interaction, Energy, & Dynamics | Earth's Systems  
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

### SOIL SCIENCE

SPRING & FALL • INDOOR & OUTDOOR • FIFTH - TWELFTH GRADE • 1 HOUR

Get the dirt on soil! Students dig deep to discover soil's importance to habitats and wildlife. By exploring topics such as permeability, composition, texture and color, students will discover the diversity of soil. Students will examine samples to determine the type of soil found in the park and identify the micro-fauna and other wildlife that live in it. Students will work in groups to collect and analyze samples.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 5-LS2-1, 5-ESS2-1, 5-ESS3-1, MS-LS2-3, MS-LS2-4, MS-LS2-5, MS-ESS3-3

From Molecules to Organisms: Structures & Processes | Ecosystems: Interaction, Energy, & Dynamics | Earth's Systems  
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment





# LAKE ST. CLAIR METROPARK NATURE CENTER

**586-463-4332 • 31300 METRO PARKWAY, HARRISON TOWNSHIP, MI 48045**  
**LSC.NATURE@METROPARKS.COM**

A visit to Lake St. Clair Metropark Nature Center offers visitors access to Lake St. Clair and the surrounding wetland ecosystems, including a coastal marsh. The nature center provides school programs that help to reinforce Michigan Science and Social Studies standards in fun and entertaining ways. With the use of live exhibit animals, guided trail walks, and hands-on activities, the park interpreter will spend time with your class focusing on concepts that best fit your curriculum such as life cycles, habitats, food webs, plant and animal adaptations, classification and human impact on the environment.

To schedule a program, please contact us by phone 586-463-4332 or email [lsc.nature@metroparks.com](mailto:lsc.nature@metroparks.com). If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.

Make a day of it! While at the park, visit the Play Area, Squirt Zone, beach, and picnic areas.

## ALL GRADE LEVELS

### NATURE IN SEASON

YEAR-ROUND • INDOOR & OUTDOOR • ALL GRADES • 1 ½ HOURS

No matter what time of year it is there is always something to see out on the trails! Spring brings birds and babies. Summer is a great time for reptiles and insects. In fall our plants and animals get ready for winter. Animal tracks are best seen in the cold winter season. Students will use their observational skills to learn about and enjoy nature in any season. Indoors we will enhance the learning experience with live animals, furs, and mounts.

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#### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-ESS3-1, 1-LS1-1, 2-LS4-1, 3-LS4-3, 4-LS1-1, 5-PS3-1

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing

From Molecules to Organisms: Structures and Processes: Structure & Processes | Matter and Energy in Organisms and Ecosystems

### MEET THE NATURE CENTER ANIMALS

YEAR-ROUND • INDOOR • ALL GRADES • 1 HOUR

Here at Lake St. Clair Nature Center children and adults alike will have the opportunity to interact with our live Michigan reptiles and amphibians. Learn about their unique characteristics, special abilities, and importance to Michigan ecosystems. Add a Nature Hike to search for animals on the nature trail for an additional ½ hour.

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#### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-ESS3-1, 1-LS3-1, 2-LS4-1, 3-LS2-1, 4-LS1-1

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing

From Molecules to Organisms: Structures and Processes: Structures & Processes

### MAGICAL MONARCHS

SEPTEMBER • INDOOR & OUTDOOR • ALL GRADES • 1-1 ½ HOURS

Beautiful orange and black monarch butterflies undertake a fascinating journey from Michigan to Mexico this time of year! Learn about the transformation of a tiny egg to a big bright butterfly. Find out how and why these delicate insects travel such a long distance. When adult butterflies are available, students can observe them being tagged for scientific study and can help send them on their way south. Our naturalist-led hike will help you identify the habitat components necessary for Monarch survival; on the trail we will look for things that can help or harm monarchs in the wild.

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#### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, 1-LS3-1, 3-LS1-1, 4-LS1-2

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing | Inheritance and Variation of Traits

From Molecules to Organisms: Structures and Processes

## PRESCHOOL

### FIVE SENSES NATURE DISCOVERY

YEAR-ROUND • INDOOR & OUTDOOR • PRESCHOOL • 1-1 ½ HOUR

Exploring with our five senses increases our awareness and enjoyment of the natural world around us. Our naturalist will provide opportunities for your children to focus on their senses individually. We will sit quietly with our eyes closed in a habitat and listen to the variety of nature sounds, we will compare the different textures of animal outer coverings by using live animals and mounts, we will stop to smell the flowers, and we will keep in mind our colors and shapes as we hike our nature trails.

Focus for Early Learners: expanding observation skills, characteristics of different seasons, familiar plants and animals, habitats, plant and animal relationships



## ANIMAL BABIES

SPRING & SUMMER • INDOOR & OUTDOOR • PRESCHOOL • 1-1 ½ HOUR

Spring is the season of new life; many animals have their young as the days are getting warmer and plenty of food is available. Seeing wild animals, especially baby animals, in nature can become a child's most treasured memory. Your children will have the opportunity to interact with one of our live nature center animals, and we will encourage wildlife sightings during our guided nature hike. Our Naturalist will help children grow in their awareness and interest in animals by searching for differences and similarities between wild animals and ourselves when it comes to the basic needs of survival (food, water, shelter) and raising babies!

Focus for Early Learners: basic needs of living things, life cycles, making predictions, familiar plants and animals, expanding observation skills

## KINDERGARTEN - FOURTH GRADE

### WHEN I GROW UP

SPRING – FALL • INDOOR & OUTDOOR • KINDERGARTEN & FIRST GRADE • 1 ½ HOURS

All living things grow and develop in their own unique way. While some animals hatch from eggs and are on their own from day one, others have dedicated parents to raise them. We'll look at the life cycles of common animals found in Michigan through demonstrations and outdoor exploration.

To enhance your experience, consider SHELLS, SCALES & POLLYWOG TAILS at your school from the Educational Outreach Programs.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-LS1.C, 1-LS1.B, 1-LS3-1, 1-LS3.A

Interdependent Relationships in Ecosystems: Animals, Plants & Their Environment | Structure, Function, and Information Processing

### IT'S A SMALL WORLD

YEAR-ROUND • OUTDOOR • KINDERGARTEN - SECOND GRADE • 1 – 1 ½ HOUR

Bring your students out to explore the habitats found in Lake St. Clair Metropark. Students will seek out small critters by rolling a log over, digging through leaves and searching through the long grass. Your students will keep track of what they find and compare who lives in each habitat. We'll examine their body parts and discover the differences between insects, worms, spiders, millipedes, and all other tiny critters we find.

To enhance your experience, consider CRAWLING CUTIES at your school from the Educational Outreach Programs.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-ESS3-1, 1-LS1-1, 2-LS4-1

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing



## POND LIFE

SPRING – FALL • INDOOR & OUTDOOR • KINDERGARTEN - SECOND GRADE • 1 ½ HOURS

Many familiar animals live in the pond. Students will get a chance to learn more about these beloved favorites, as well as get acquainted with some less familiar pond life! Learn how baby turtles survive, what ducklings eat, and how frogs talk to each other. We will interact with one of our live animals in the nature center and play games to learn about pond animal life cycles. Following the indoor activities, we will hike the nature trail to view pond life in its wetland habitat.

To enhance your experience, consider WE'RE FOND OF PONDS at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS3-1, 1-LS1-1, 2-LS4-1

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing

## WINTER WILDLIFE

WINTER • INDOOR & OUTDOOR • KINDERGARTEN - SECOND GRADE • 1 ½ HOURS

Michigan animals have special adaptations or behaviors that help them survive our harsh winters. Whether our wildlife migrates, hibernates, or stays active throughout the winter, they have what it takes to survive. Find out just how our animals survive the cold months. Outdoors a naturalist will guide students on a search for animal tracks and signs.

To enhance your experience, consider LIFE WHEN IT'S SNOWY at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS1-1, 2-LS4-1

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing

## HOME SWEET HABITAT

YEAR-ROUND • INDOOR & OUTDOOR • KINDERGARTEN - FOURTH GRADE • 1 ½ HOURS

Every living thing needs the basics- food, water and shelter. Habitats provide all these things and more for our plants and animals. During this program, find out how local plants and animals obtain what they need and the amazing ways they do it! Use investigative skills during our hike to find animal habitats on the trail.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-ESS3-3, 2-LS4-1, 3-LS4-4, 4-LS1-1

Interdependent Relationships in Ecosystems | From Molecules to Organisms: Structures and Processes | Matter and Energy in Organisms and Ecosystems

## ANIMAL CLASSIFICATION

YEAR-ROUND • INDOOR & OUTDOOR • FIRST - FOURTH GRADE • 2 HOURS

Students will learn the major differences between the five vertebrate classes of animals and how they compare to invertebrate animals. Using animal mounts, skeletons, displays, and pelts students will uncover what makes each of the animal groups unique and the adaptations they possess. Students will also get to meet live animals from the nature center during this program.

To enhance your experience, consider MICHIGAN MAMMALS at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 1-LS1-1, 2-LS4-1, 3-LS4-2, 4-LS1-1

Structure, Function, and Information Processing | Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits  
From Molecules to Organisms: Structures and Processes



## PLANTS AND SEEDS

YEAR-ROUND • INDOOR & OUTDOOR • SECOND & THIRD GRADE • 1 ½ HOURS

Have you ever wondered how plants move from one spot to the next? All plants produce seeds and have different methods of dispersal to help them spread. Students will have the chance to explore the ways in which plants disperse their seeds through hands-on activities and models. We'll take a short hike to examine local flora, what habitat they grow in, and how they disperse their seeds.

To enhance your experience, consider PLANT PARTS AND SEED DISPERSAL at your school from the Educational Outreach Programs.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS2-2, 2-LS4-1, 3-LS1-1, 3-LS4-3

Interdependent Relationships in Ecosystems

## POLLINATORS

SPRING-SUMMER • INDOOR & OUTDOOR • SECOND & THIRD GRADE • 1 ½ HOURS

Pollinators play a vital role in the success of our plants. Learn about what pollination is through hands-on activities and demonstrations. Discover how our native pollinators such as bees and butterflies pollinate plants and why. Out on the trail students will search for our local pollinators and learn to identify common plants.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS2-2, 3-LS4-4

Interdependent Relationships in Ecosystems

## THIRD - TWELFTH GRADES + COLLEGE

### ANIMAL ADAPTATIONS

YEAR-ROUND • INDOOR & OUTDOOR • THIRD & FOURTH GRADE • 1 ½ HOURS

Animals have special structures or behaviors that help them find food, build shelters and to protect themselves. Learn about animal adaptations indoors using taxidermy mounts and activities, then hike the trails in search of animals in their environment to see how they use these adaptations for survival.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-2, 3-LS4-3, 4-LS1-1, 4-LS1-2

Inheritance and Variation of Traits | Independent Relationships in Ecosystems | From Molecules to Organisms: Structures and Processes

### INCREDIBLE INSECTS

SPRING – FALL • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 2 HOURS

Let's explore the incredible world of insects! Learn about special insect adaptations, life cycles, unique sounds and how they impact the environment. Students will be able to view insects up close and walk the trails to search for insects in their natural habitats. Practice using observation tools such as sweep nets, magnifying glasses, and identification keys during a catch and release insect activity.

To enhance your experience, consider INSECTS ARE EVERYWHERE at your school from the Educational Outreach Programs.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS4-3, 4-LS1-1, 4-LS1-2, 5-LS2-1

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing | Inheritance and Variation of Traits

From Molecules to Organisms: Structures and Processes

### AQUATIC ADVENTURES





SPRING – FALL • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 2 HOURS

Take a closer look at what lives in our pond and marsh. With the use of magnifying glasses, dichotomous keys, and other investigative equipment, explore the world of macroinvertebrates and aquatic plants! Students will have an opportunity to pond dip and investigate what they sample. Students will compare aquatic life at different depths and in different zones of the wetlands.

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**Connections to MDE Academic Standards**

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-LS1-1, K-ESS3-1, 1-LS3-1, 2-LS4-1, 3-LS1-1, 3-LS4-4, 4-LS1-1, 5-LS2-1

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing | Inheritance and Variation of Traits  
From Molecules to Organisms: Structures and Processes | Matter and Energy in Organisms and Ecosystems

## **PREDATOR – PREY ADVENTURE**

FALL & WINTER • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 2 ½ – 3 HOURS

Students are challenged to use their “nature detective” skills, following a series of biological clues to gain a better understanding of predator/prey characteristics and ultimately the identity of a mystery animal. Students will have the opportunity to role play in a game of survival, becoming the mystery animal they must compete for a limited resource and discover how resource availability influences carrying capacity. On a guided hike students, will search for evidence of both predators and prey living in their natural habitat and identify the necessary resources for survival (food, water, shelter). Students will use their observation skills to solve a mystery predator/prey interaction that has been staged on the trail using tracks/scat/and other clues.

To enhance your experience, consider BIRDS OF PREY at your school from the Educational Outreach Programs.

OPTION 1: Participate in all components of program the same day at the nature center – 3 HOURS

OPTION 2: School visit: We can bring the “Nature Detective Mystery” and the “Carrying Capacity Game” to your school, provided you have a large open space (library or gym). We will bring a live animal (reptile or amphibian) and will include a short video (if audio visual is available) of how the introduction of a Predator changed the entire ecosystem of one of our most valued National Parks in the United States. This is not an assembly program. We would ask to rotate classes one at a time throughout the day – 1 ½ HOURS

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**Connections to MDE Academic Standards**

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS3-2, 3-LS4-2, 3-LS2-1, 3-LS4-3, 3-LS4-4, 4-LS1-1, 4-LS1-2, 5-PS3-1, 5-LS2-1

Inheritance and Variation of Traits | Interdependent Relationships in Ecosystems | From Molecules to Organisms: Structures and Processes  
Matter and Energy in Organisms and Ecosystems

## **FUR TRADE ERA & VOYAGEUR HISTORY**

YEAR-ROUND • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE + COLLEGE • 1 ½ HOURS

The French Voyageurs brought the explorers, missionaries, fur traders and settlers to the Michigan land. The daily lives of the voyageurs and the importance of their contributions to Michigan's history will be presented. Using objects, artifacts and clothing students will be able to imagine what life was like for the French Voyageurs. Students will have the opportunity to try their hand at different voyageur skills and games teaching them about the fur trade.

To enhance your experience, consider THE FRENCH & THE FUR TRADE at your school from the Educational Outreach Programs.

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**Connections to MDE Academic Standards**

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**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** H3.0.5, H3.0.6

History of Michigan



## VOYAGEUR CANOE EXPERIENCE

LATE APRIL - OCTOBER • OUTDOOR • THIRD - TWELFTH GRADE + COLLEGE • 1 ½ HOURS

Get ready to paddle through our marsh in a 34-foot replica voyageur canoe! Learn about the history of the French voyageurs and the role they played in Michigan history. While canoeing through the marsh discover the local wetland flora and fauna. Weather permitting. PFD's and paddles provided. 18 people maximum per canoe, with a minimum 6 adults required. Groups of more than 18 people would need to schedule multiple canoe trips. Groups will also have the option of scheduling onshore activities or a nature center program for an additional fee.

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### Connections to MDE Academic Standards

**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS4-3, 4-LS1-1, 5-LS1-1

Interdependent Relationships in Ecosystems | From Molecules to Organisms: Structures and Processes | Matter and Energy in Organisms and Ecosystems

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** H3.0.5, H3.0.6

History of Michigan

## ULTIMATE VOYAGEUR EXPERIENCE

SPRING & FALL • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE + COLLEGE • 3 HOURS

Before visiting the Nature Center for your Voyageur Experience field trip, receive a visit from our Community Outreach Interpreter for an introductory program designed to set the stage for your upcoming outing. "THE FRENCH & THE FUR TRADE" program utilizes role play, activities and even songs. Students will discover Michigan's place in the fur trade during the French period of Great Lakes History. This program requires an additional fee.

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### Connections to MDE Academic Standards

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** 3-H3.0.3, 3-H3.0.5, 3-G4.0.3, 3-G4.0.4, 3-G5.0.1, 3-EI.0.3, 4-H3.0.5, 4-G4.0.3, 4-G5.0.1, 5-U1.1.2, 5-U1.1.3, 5-U1.4.1, 5-U1.4.3

History of Michigan (Through Statehood) | Market Economy | Geography – World in Spatial Terms | Geography- Human Systems

Environment and Society

## WETLANDS ARE WONDERFUL

SPRING & SUMMER • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE + COLLEGE • 1 ½ HOURS

Water covers more than 2/3 of the Earth's surface and wetlands are the place where that water meets the land. These wetlands have many important functions that are essential to wildlife, people, and the quality of water. Students will have the opportunity to assess the characteristics of different types of wetlands in the park with an emphasis on our great lakes coastal marsh. While on a hike, students can search for the variety of plants and animals that make these wetlands their home and how they interact with one another.

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### Connections to MDE Academic Standards

**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS1-1, 3-LS3-2, 3-LS4-3, 4-LS1-1, 5-LS1-1, 5-LS2-1

Inheritance and Variation of Traits | Independent Relationships in Ecosystems | From Molecules to Organisms: Structures and Processes

Matter and Energy in Organisms and Ecosystems

**\*\*4TH GRADE & UP: TO ENHANCE AND EXPAND YOUR WETLANDS ARE WONDERFUL PROGRAM, CONSIDER OUR COLLABORATIVE GREAT LAKES EDUCATIONAL PROGRAM (GLEP) WITH MICHIGAN SEA GRANT. ASK ABOUT THIS WHEN YOU SCHEDULE.**

**\*\*MIDDLE SCHOOL & UP: TO ENHANCE AND EXPAND YOUR WETLANDS ARE WONDERFUL PROGRAM, CONSIDER OUR COLLABORATIVE HEALTHY URBAN WATERS (HUW)/HEARTLAB. ASK ABOUT THIS WHEN YOU SCHEDULE.**



## EXAMINING AN ECOSYSTEM

YEAR-ROUND • INDOOR & OUTDOOR • FOURTH - TWELFTH GRADE + COLLEGE • 2 HOURS

Ecosystems are defined by the living and nonliving features in an area. How do we determine one ecosystem from another? During our program students will have the opportunity to examine biotic and abiotic factors that make up two or three unique ecosystems. Students will collect data to examine characteristics of the ecosystem such as temperature, humidity, light intensity, soil texture, water pH and temperature, and record observations about what flora and fauna are associated in each ecosystem.

After field exploration, students will discuss the results of their data and compare each ecosystem: the species components of each, how the living and nonliving world is connected, and how the plants and animals interact and depend on one another.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 5-LS2-1, 5-LS2.A, 5-LS2.B, MS-LS2-1, MS-LS2-3, MS-LS2-4, HS-LS2-6, HS-LS2-7

From Molecules to Organisms: Structures and Processes | Matter and Energy in Organisms and Ecosystems

Ecosystems: Interactions, Energy and Dynamics | Interdependent Relationships in Ecosystems

## MICHIGAN SEA GRANT'S GREAT LAKES EDUCATION PROGRAM (GLEP)

SPRING & FALL • INDOOR & OUTDOOR • FOURTH - TWELFTH GRADE + COLLEGE • 2 HOURS EACH PORTION

Enjoy an educational boat cruise on the Clinton River and Lake St. Clair where students examine plankton and benthic samples, test water clarity, practice marine knot tying, take air and water temperature reading and more. The cruise length 2-2 ½ hours. There will be a shoreside wetland exploration at Lake St. Clair Metropark Nature Center. Metropark interpreters lead investigations of marshland plants and animals using taxidermic mounts, trail walks and/or live animals. Students will learn how wetlands, specifically our great lakes coastal marsh, have many important functions that are essential to wildlife, people, and the quality of water. Nature Center program length 2 hours.

<https://www.michiganseagrant.org/great-lakes-education-program/>

## HEALTHY URBAN WATERS (HUW)/HEART LAB

SPRING - FALL • INDOOR & OUTDOOR • SEVENTH - TWELFTH GRADE + COLLEGE

The Huron to Erie Alliance for Research and Training (HEART) Lab is a field study site used by researchers from Wayne State University. It is equipped to study aquatic ecology and ecosystem restoration, water monitoring technology development, analysis of coastal bacterial communities, and research on the effects of environmental stressors on water quality. Visits to the HEART lab are limited and would need to be scheduled with the Healthy Urban Waters Program Coordinator Jamie Steis Thorsby, P.E. 313-577-3842. <https://huw.wayne.edu/>





A photograph of the Oakwoods Metropark Nature Center building, a modern structure with large glass windows and a dark roof, surrounded by lush green trees and a wooden fence in the foreground.

# OAKWOODS METROPARK NATURE CENTER

**734-782-3956 • 32911 WILLOW RD., NEW BOSTON, MI 48164**  
**OAKWOODS.NATURE@METROPARKS.COM**

Situated along the beautiful Huron River, the Oakwoods Metropark Nature Center offers an “Up-North” feel in the heart of southeast Michigan. The Nature Center hosts programs for school groups, homeschoolers, families, scouts, adults, and community groups. Programs are by appointment and are usually offered year-round, unless otherwise noted. Your group can also visit nearby Willow Metropark and enjoy activities such as picnicking, the pool, the tot-lot, and more.

To schedule a program, please contact us by phone at 734-782-3956.

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.

## ALL GRADE LEVELS

### ANIMALS OF OAKWOODS

YEAR-ROUND • INDOOR • ALL GRADES • 1 HOUR

Get to know the animals that live right in your own backyard as we use mounts, study skins and live animals to get acquainted with our Nature-based neighbors. Habitats, adaptations, observable traits and more will be covered through this program.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS1-1, 2-LS2-1, 3-LS1-1, 4-LS1-1, 4-LS1-2, 5-LS2-1, MS-LS2-1, MS-LS2-4, HS-LS2-1, HS-LS2-2, Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Earth's Systems | Earth & Human Activity | Ecosystems: Interaction, Energy, & Dynamics

### MAPLE SUGARING

MARCH • INDOOR & OUTDOOR • ALL GRADES • 1 ½ HOURS

Discover the rich (and sweet) history of Maple Sugaring in Michigan. Though the process of collecting sap and making syrup has not changed much over time, the equipment has evolved. We will explore the origins of maple sugaring through legend and lore and journey through time to the present day to get a taste of how maple syrup is made.

To enhance your experience, consider THE PEOPLE OF THE THREE FIRES at your school from the Educational Outreach Programs.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-LS1-1, 3-LS1-1, 3-LS1-1, 4-LS1-1, 5-PS3-1  
From Molecules to Organisms: Structures & Processes | Energy | Ecosystems: Interaction, Energy, & Dynamics  
**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** I-G5.0.1, I-G5.0.2, 3-G5.0.1, 3-G5.0.2, 4-E1.0.4  
From Molecules to Organisms: Structures & Processes | Energy

### AUTUMN ADVENTURE

FALL • INDOOR & OUTDOOR • ALL GRADES • 1 ½ HOURS

Immerse your students in the sights, smells, and tastes of autumn. Enjoy a hayride, cider pressing, leaf printing, and donuts during this interactive program. Have more time? Add a fall hike to your day for a small fee. We can accommodate up to 60 kids per day for this program.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-ESS2-2, K-ESS2-1, 4-LS1-1, 5-LS1-1, MS-LS1-6, MS-LS2-1, MS-LS2-4, MS-ESS2-1, HS-LS1-6, HS-LS2-6, HS-LS2-8, Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Earth's Systems | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics

## PRESCHOOL - KINDERGARTEN

### TURTLES & SNAKES: SCALY ENCOUNTERS

YEAR-ROUND • INDOOR • PRESCHOOL- KINDERGARTEN • 1 HOUR

Many different turtles and snakes can be found in our area. Students will discover the unique adaptations these animals have for survival. Live animals will be used to introduce students to specific reptile species. Students will observe the physical characteristics of reptiles and snakes.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-LS1-1, K-ESS-2, K-ESS3-1  
From Molecules to Organisms: Structures & Processes | Earth's Systems | Earth & Human Activity

FIRST - SECOND GRADE

HOME SWEET HABITAT

YEAR-ROUND • INDOOR • FIRST - SECOND GRADE • 1 HOUR

Home is where your food is! We will investigate some of the habitats of Oakwoods Metropark and discuss the adaptations each animal has that make these areas suitable for them to survive. We will focus on food webs, animal life cycles and succession during this program.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS1-1, 2-LS2-1,  
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics

FUR, FEATHERS, & SCALES

YEAR-ROUND • INDOOR • FIRST - SECOND GRADE • 1 HOUR

Is that a reptile, or an amphibian? What makes a mammal, a mammal? Let’s explore the animals of our area a little closer, by looking at their designs and placing them in their proper groups. We will introduce concepts such as metamorphosis, animal classifications, and adaptations during our time together.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS1-1, 1-LS3-1,  
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Heredity: Inheritance and Variation of Traits

THIRD - TWELFTH GRADE

ANIMAL ADAPTATIONS

YEAR-ROUND • INDOOR • THIRD - TWELFTH GRADE • 1 HOUR

Every animal has a unique set of characteristics that allow it to survive. Whether it be their vision, coloration, or just how they spend their day, it all works to help them succeed. We will investigate the traits that make each animal so special and discover how these traits determine where they fit in the food chain.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS2-1, 3-LS3-2, 3-LS4-2, 4-LS1-1, 4-LS-2  
Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics | Heredity: Inheritance and Variation of Traits





## EAT OR BE EATEN

YEAR-ROUND • INDOOR • THIRD - TWELFTH GRADE • 1 HOUR

It's all about survival of the fittest in this predator-prey focused program. Students will learn the definitions of predator and prey and how to differentiate between the two by identifying specific physical characteristics unique to each role. Students will discover how predators use a combination of physical characteristics (claws, teeth, etc.) and various hunting techniques to capture prey and how prey use their keen senses and defensive behaviors to escape predators. Students will then work in groups to create the ultimate predator or prey animal.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS3-2, 3-LS4-2, 3-LS4-3, 4-LS1-1, 4-LS1-2

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics | Heredity: Inheritance and Variation of Traits

## WOODLAND INDIAN WAYS

YEAR-ROUND • INDOOR • THIRD - TWELFTH GRADE • 1 HOUR

Discover the lives of the Woodland Indians as they were a thousand years ago. Students will learn about the different Native American tribes that lived during the woodland period. Students will also learn about their clothing, hunting-gathering techniques and home structures.

To enhance your experience, consider THE PEOPLE OF THE THREE FIRES at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** 3-H3.0.5, 3-G4.0.3, 3-G4.0.4, 3-G5.0.1, 3-E1.0.3, 4-G4.0.3, 4-G5.0.1, 5-U1.1.3, 5-U1.4.3

Michigan History Standards | History of Michigan (Through Statehood) | The World in Spatial Terms | Places and Regions | Human Systems  
Environment and Society

## WETLAND EXPLORATIONS

SPRING & FALL • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE • 2 HOURS

Explore the wonderful world of wetlands! In this program, students will be introduced to different wetland habitats and discover the variety plants and wildlife found in each. Students will participate in wetland themed activities modeling plant and animal relationships during this hands-on, interactive program.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS4-2, 5-ESS2-2, MS-LS2-1, MS-LS2-4, MS-LS2-5, HS-LS2-7, HS-ESS2-5

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | From Molecules to Organisms: Structures & Processes  
Ecosystems: Interaction, Energy, & Dynamics | Heredity: Inheritance and Variation of Traits | Earth's Systems



## SUCCESSION EXPLORATIONS

SPRING & FALL • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE • 2 HOURS

Student will travel through forest, edge, and field ecosystems gathering data and discussing the processes of succession. We will explore how human activity can/has impacted the natural change of certain areas; and determine whether these impacts have had a positive or negative effect.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 5-LS2-1, MS-LS2-2, MS-LS2-4, MS-LS2-5

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Ecosystems: Interaction, Energy, & Dynamics | Earth's Systems

## RIVER ECOLOGY EXPERIENCE

SPRING & FALL • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE • 1 ½ HOURS

Explore the flora and fauna of the Lower Huron River from our 34ft. replica Voyageur canoe. Once on shore, we will investigate further the producers, consumers and decomposers of the river by discovering some of the macroinvertebrates found in the waters. Classes of 18 or more will be divided into two smaller groups for this program.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-2, 4-LS1-1, 5-PS3-1, 5-LS2-1, 5-LS2-2, MS-LS2-1, MS-LS2-4, MS-LS2-2, MS-LS1-5, MS-ESS2-1, HS-LS2-1, HS-LS2-3, HS-LS4-4, HS-LS4-5

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Heredity: Inheritance and Variation of Traits  
From Molecules to Organisms: Structures & Processes | Energy | Ecosystems: Interaction, Energy, & Dynamics

## VOYAGEUR EXPERIENCE

SPRING & FALL • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE • 1 ½ HOURS

Ply the waters of the Huron River in our 34ft. replica Voyageur canoe while learning of the everyday life of a Voyageur during the Fur Trade Era. Trade routes, clothing, trade items and more will be discussed during this highly interactive program. Classes of 18 or more will be divided into two smaller groups for this program.

### Connections to MDE Academic Standards

MICHIGAN K-12 SOCIAL STUDIES STANDARDS: 3-H3.0.3, 3-H3.0.5, 3-G4.0.3, 3-G4.0.4, 3-G5.0.1, 3-E1.0.3, 4-H3.0.5, 4-G4.0.3, 4-G5.0.1, 5-U1.1.2, 5-U1.1.3, 5-U1.4.1, 5-U1.4.3

History of Michigan (Through Statehood) | Market Economy | Geography – World in Spatial Terms | Geography- Human Systems | Environment and Society

## ULTIMATE VOYAGEUR EXPERIENCE

SPRING & FALL • INDOOR & OUTDOOR • THIRD - SIXTH GRADE • 3 HOURS

Before visiting the Nature Center for your Voyageur Experience field trip, receive a visit from our Community Outreach Interpreter for an introductory program designed to set the stage for your upcoming outing. "THE FRENCH & THE FUR TRADE" program utilizes role play, activities and even songs. Students will discover Michigan's place in the fur trade during the French period of Great Lakes History. This program requires an additional fee.

### Connections to MDE Academic Standards

MICHIGAN K-12 SOCIAL STUDIES STANDARDS: 3-H3.0.3, 3-H3.0.5, 3-G4.0.3, 3-G4.0.4, 3-G5.0.1, 3-E1.0.3, 4-H3.0.5, 4-G4.0.3, 4-G5.0.1, 5-U1.1.2, 5-U1.1.3, 5-U1.4.1, 5-U1.4.3

History of Michigan (Through Statehood) | Market Economy | Geography – World in Spatial Terms | Geography- Human Systems | Environment and Society

## WINTER ADVENTURE

WINTER • INDOOR & OUTDOOR • THIRD - SIXTH GRADE • 3 HOURS

Begin the day with a winter ecology hike and follow it up with winter related activities including a winter pond study and building the ultimate winter animal. This program includes a significant amount of time outdoors. Proper winter attire is required.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS2-1, 3-LS3-2, 3-LS4-2, 3-ESS3-1, 4-LS1-1, 4-ESS3-2, 5-ESS2-1, MS-LS2-1, MS-LS2-4, MS-LS2-2, MS-LS1-5, MS-LS4-4, MS-ESS3-1, MS-ESS3-5, HS-LS2-6, HS-LS2-7, HS-LS2-8, HS-LS4-4, HS-LS4-5

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Ecosystems: Interaction, Energy, & Dynamics | Earth's Systems  
Heredity: Inheritance and Variation of Traits | Earth & Human Activity





# STONY CREEK METROPARK NATURE CENTER

**586-781-9113 • 4300 MAIN PARK ROAD, SHELBY TOWNSHIP, MI 48316**  
**[SC.INTERPRETER@METROPARKS.COM](mailto:SC.INTERPRETER@METROPARKS.COM)**

A visit to the Stony Creek Metropark Nature Center offers visitors access to explore the Stony Creek, a tributary of the Clinton River, and the surrounding ecosystems such as the floodplain, and upland forests and meadows. The nature center provides School programs that help to reinforce Michigan Science and Social Studies standards in fun and entertaining ways. With the use of live exhibit animals, guided trail walks, and hands-on activities, the park Interpreter will spend time with your class focusing on concepts that best fit your curriculum such as life cycles, habitats, food webs, plant and animal adaptations, classification and human impact on the environment.

To schedule a program, please contact us by phone 586-781-9113 or email [sc.interpreter@metroparks.com](mailto:sc.interpreter@metroparks.com). If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.

Make a day of it! While at the park, visit the Play Area at Eastwood Beach or have a picnic by the lake.



PRESCHOOL - KINDERGARTEN

LIFE IN A POND

SPRING, SUMMER, FALL • INDOOR & OUTDOOR • PRESCHOOL – KINDERGARTEN • 1 ½ HOURS

Students will learn life cycles of aquatic insects and amphibians and visit with some of the Nature Center exhibit animals. After an outdoor hike, students will explore aquatic life of vernal and permanent ponds by searching for macroinvertebrates and vertebrates in pre-dipped pond pans.

To enhance your experience, consider these programs: WE'RE FOND OF PONDS or SHELLS, SCALES AND POLLYWOG TAILS at your school from the Educational Outreach Programs.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-LS1.C

Independent Relationships in Ecosystems: Animals, Plants and their Environment | Structure, Function and Information Processing

Interdependent Relationships in Ecosystems

KINDERGARTEN - TWELFTH GRADE

SPRING TO LIFE

SPRING • INDOOR & OUTDOOR • PRESCHOOL – THIRD GRADE • 1 ½ HOURS

Students will search for spring life, from amphibians and reptiles, to plants, and nesting birds. Students will learn about their life cycles as they meet some of the Nature Center exhibit animals and enjoy an outdoor hike through the woods, along the river and pond.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-LS1.C, 1-LS1-1, 1-LS1-2, 1-ESS1-2, 2-LS2-2, 2-LS4-1, 3-LS1-1, 3-LS2-1, 3-LS4-3

Structure and Function | Organization for Matter and Energy Flow in Organisms | Interdependent Relationships in Ecosystems

Social Interactions and Group Behavior

AUTUMN ADVENTURE

FALL • INDOOR & OUTDOOR • KINDERGARTEN – FIFTH GRADE • 3 ½ - 4 HOURS

Experience the changing of the seasons in our Northern Hemisphere. Students will learn how a leaf functions, where leaves fit into the Food Chain, and paint colorful fall leaves on t-shirts (students provide their own shirt). A hike through the woods will teach students to identify various species of trees. They will collect several leaves to make their own leaf ID booklet. The history of apples, cider and the use of cider in American History is presented as students grind and press apples to experience making real apple cider. Students will enjoy a fresh cup of cider and a donut. A relaxing tractor-drawn wagon ride along the trail ends the day. One or two classes (maximum of 50 students) may be scheduled for this program

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS3-1, 2-LS4-1, 3-LS1-1, 1-LS1.A, 1-LS1.D, 2-LS4.D, 3-LS1.B

Structure, Function and Information Processing | Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits



## WINTER ADVENTURE: ANIMALS IN WINTER

LATE FALL, EARLY SPRING, WINTER • INDOOR & OUTDOOR • KINDERGARTEN - THIRD GRADE • 2 HOURS

How do animals survive without our help in the cold winter? Students will discover the many adaptations and tactics wild animals employ to make it through long snowy months of cold. Students will learn to identify and print wildlife tracks on t-shirts (students provide their own shirt). Outdoors, students will search for wildlife signs – tracks, scat, browsing and shelter use by animals. For a fee of \$3.00 per person, students & adults can enjoy a hot dog roast over a campfire. Includes: a hot dog, organic carrots with dip, hot cocoa and a s'more.

To enhance your experience, consider LIFE WHEN IT'S SNOWY at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

**MICHIGAN SCIENCE STANDARDS (MSS):** K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS1.B, 2-LS4-1, 3-LS4-2

Obtaining, Evaluating and Communicating Information | Analyzing and Interpreting Data | Planning and Carrying out Investigations

## MAPLE SUGARING

MARCH • INDOOR & OUTDOOR • KINDERGARTEN - FIFTH GRADE • 2 HOURS

Experience the wonder of transforming maple sap into delicious syrup! Students will learn how the First Peoples tapped maples and boiled the sap into sugar, sharing this knowledge with European settlers. Students will learn to identify and select a maple, proper tapping method and gathering of the sap. After tapping their tree, students will gather at the campfire to carve their own spiles and observe the pioneer method of boiling sap and try a taste of pure maple syrup.

To enhance your experience, consider THE PEOPLE OF THREE FIRES at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

**MICHIGAN SCIENCE STANDARDS (MSS):** K-ESS2-1, K-ESS3-1, 3-ESS2-1, 5PS3-1, 5-LS2-1, ESS3.A, LS2.B, H3.O.5

Independent Relationships in Ecosystem: Animals, Plants and their Environment | Structure, Function and Information Processing  
Matter and Energy in Organisms and Ecosystems

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** K - H2.O.1, K - G5.O.1, 3 - H3.O.4, 3 - G5.O.2, 5 - U1.1.2

Living and Working Together | The History of Michigan (Through Statehood) | Environment and Society | Integrated\* U.S. History





## AN INSECT'S LIFE

SPRING, SUMMER, FALL • INDOOR & OUTDOOR • KINDERGARTEN - FOURTH GRADE • 2 HOURS

Students will discover this branch of the Arthropods according to their grade level. Insect life cycles, adaptations, habitats and interesting facts will be the focus. After an indoor discussion with various insect examples, students will go outdoors on a catch and release insect hunt.

To enhance your experience, consider INSECTS ARE EVERYWHERE at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS3-1, 1-LS1-1, 2-LS2-2, 2-LS4-1, 3-LS3-1, 4-LS1-2, 4-LS1.A, 4-LS1.D

Independent Relationships in Ecosystems: Animals, Plants and their Environment | Structure and Function | Interdependent Relationships in Ecosystems

## PLANTS AND INSECTS

SPRING, SUMMER, FALL • INDOOR & OUTDOOR • KINDERGARTEN - THIRD GRADE • 2 HOURS

Students will discover flowers are not just pretty, they have a job to do, and they often need help from insects. Students will learn how many types of flowers and insects have adapted to work together in a symbiotic relationship through indoor examples and hiking to observe plant and insect pollination adaptations.

To enhance your experience, consider PLANT PARTS AND SEED DISPERSAL at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, 1-LS1-1, 2-LS2-2, 2-LS2.A, 2-LS4, 3-LS2.C, 3-LS4-2, 3-LS4-3, 3-LS4-4

Ecosystem Dynamics, Functioning and Resilience | Organization for Matter and Energy Flow | Structure and Function  
Interdependent Relationships in Ecosystems

## POND STUDY

SPRING, SUMMER, FALL • INDOOR & OUTDOOR • FIRST - THIRD GRADE • 2 - 3 HOURS

Students will use dip nets, pans and magnifiers to observe aquatic insects, amphibians and other wildlife that call Vernal Ponds and Permanent Ponds home. Indoors, students will learn the life cycles of aquatic insects and amphibians and will visit with some of the Nature Center exhibit animals. Students will hike to the pond and be shown how to use nets and other equipment to collect, observe and identify aquatic macroinvertebrates using simple keys.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 1-LS3-1, 2-LS4-1, 3-LS4-3, 3LS1-1, 3LS3-2, 1-LS1.A, 1-LS1.B, 1-LS1.D, 1-LS3.B, 2-LS4.D, 3-LS4-C, 3-LS4.D, 3-LS1.B, 3-LS3.A, 3-LS3.B

Structure, Function and Information Processing | Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits





## CLASSIFICATION

YEAR ROUND • INDOOR & OUTDOOR • FIRST – FIFTH GRADE • 2 HOURS

Students will discover the unique physical adaptations in the five vertebrate classes, with comparisons to invertebrates. Mounts of local wildlife, including some of the Nature Center exhibit animals, along with pelts and skulls will enhance the students' experience. Students will hike in search of examples of local wildlife by observing the animals and looking for signs of animal activity.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS4-3, 4-LS1-1, 5-PS3-1, 5-LS2-1, 1-LS3-1, 1-LS1.A, 2-LS4.D, 3-LS3-1, 3-LS4.C, 3-LS4.D, 4-LS1.A, 4-LS1.D, 5-LS1.C, 5-LS2.A, 5-LS2.B  
Inheritance of Traits | Independent Relationships in Ecosystems | Structure, Function, and Information Processing  
Matter and Energy in Organisms and Ecosystems

## WINTER ADVENTURE: FIRST PEOPLES OF THE GREAT LAKES

FALL, WINTER, SPRING, SUMMER • INDOOR & OUTDOOR • THIRD - SIXTH GRADE • 2 HOURS

Discover how the First People in this area lived. How did they obtain food, make their clothing, build their homes? Students will gain an understanding of how these people lived off the land, adapting to the wilderness they called home. The "Circle of Life" will enable students to handle artifacts, tools and other items the First Peoples utilized. Students will enjoy trying their hand at drilling wood with pump drills, throwing atlatls and playing a game of Snow Snakes. For a fee of \$3.00 per person, students & adults can enjoy a hot dog roast over a campfire. Includes: a hot dog, organic carrots with dip, hot cocoa and a s'more.

To enhance your experience, consider these programs: NATIVE AMERICAN ARTS & CRAFTS or PEOPLE OF THE THREE FIRES at your school from the Educational Outreach Programs.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** H3.0.5, 4-ESS3.A, 4-ESS1-1, 5-ESS3-1, MS-ESS3-4

Constructing Explanations and Designing Solutions | Obtaining, Evaluating and Communicating Information | Asking Questions and Defining Problems

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** 3-H3.0.5, 3-G4.0.3, 3-G4.0.4, 3-G5.0.1, 3-E1.0.3, 4-G4.0.3, 4-G5.0.1, 5-U1.1.3, 5-U1.4.3

Michigan History Standards | History of Michigan (Through Statehood) | The World in Spatial Terms | Places and Regions | Human Systems  
Environment and Society

## MARVELOUS MAMMALS

YEAR ROUND • INDOOR & OUTDOOR • THIRD – EIGHTH GRADE • 2 HOURS

Students will learn about the Orders of Michigan mammals, their characteristics and adaptations. Mounts of mammals, pelts and skulls will enhance the students' hands-on learning. An interactive activity will teach students the balance of Predator-Prey relationships. Older grades may conduct a habitat survey or pellet survey for a specific species of mammal.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS4.2, 3-LS4.B, 3-LS4-3, 3-LS4.C, 3-LS4.D, 4-LS1-1, 4-LS1.A, 4-LS1-2, 4-LS1.D

Ecosystem Dynamics, Functioning and Resilience | Natural Selection | Adaptation | Structure and Function | Information Processing



## LIFE AMONG THE LOGS

SPRING, SUMMER, FALL • INDOOR & OUTDOOR • THIRD – FIFTH GRADE • 2 HOURS

Students will discover the myriad of life on the forest floor, exploring the forest soil and decaying logs. Students will learn life cycles, the forest Food Chain and identify the species they find. Students will conduct a worm experiment and learn why worms are detrimental to North American woodlands. Indoors, students will examine lifeforms under microscopes.

### Connections to MDE Academic Standards

**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS4-2, 3-LS4-3, 3-LS4-4, LS2.C, LS4.B, LS4.C, LS4.D, 4-LS1-1, 4-LS1.A, 4-LS1.D, 5-LS1-1, 5-PS3-1, 5-ESS3.C

Ecosystem Dynamics, Functioning and Resilience | Structure and Function | Analyzing and Interpreting Data

Organization for Matter and Energy Flow in Organisms | Energy in Chemical Processes | Human Impacts on Earth's Systems

## VOYAGEUR CANOE EXPERIENCE

LATE APRIL - OCTOBER • OUTDOOR • THIRD - TWELFTH GRADE • 1 ½ HOURS

Michigan history comes alive as students paddle a 34-foot canoe, 18-passenger replica of a Voyageur canoe around the island in Stony Creek lake. Artifacts and props help participants learn about the importance of the beaver to the French fur trade era. Weather permitting. PFD's and paddles provided. 18 people maximum per canoe, with a minimum 6 adults required. Groups of more than 18 people would need to schedule multiple canoe trips.

### Connections to MDE Academic Standards

**MICHIGAN SCIENCE STANDARDS (MSS):** 3-LS4-3, 4-LS1-1, 5-LS1-1

Interdependent Relationships in Ecosystems | From Molecules to Organisms: Structures and Processes | Matter and Energy in Organisms and Ecosystems

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** H3.0.5, H3.0.6

History of Michigan (Through Statehood) | Market Economy | Geography – World in Spatial Terms | Geography- Human Systems

Environment and Society

## ULTIMATE VOYAGEUR EXPERIENCE

SPRING & FALL • INDOOR & OUTDOOR • THIRD - TWELFTH GRADE • 3 HOURS

Before visiting the Nature Center for your Voyageur Experience field trip, receive a visit from our Community Outreach Interpreter for an introductory program designed to set the stage for your upcoming outing. "THE FRENCH & THE FUR TRADE" program utilizes role play, activities and even songs. Students will discover Michigan's place in the fur trade during the French period of Great Lakes History. This program requires an additional fee.

### Connections to MDE Academic Standards

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** 3-H3.0.3, 3-H3.0.5, 3-G4.0.3, 3-G4.0.4, 3-G5.0.1, 3-E1.0.3, 4-H3.0.5, 4-G4.0.3, 4-G5.0.1, 5-U1.1.2, 5-U1.1.3, 5-U1.4.1, 5-U1.4.3

History of Michigan (Through Statehood) | Market Economy | Geography – World in Spatial Terms | Geography- Human Systems

Environment and Society



## WINTER ADVENTURE: SURVIVAL

WINTER • INDOOR & OUTDOOR • FOURTH – SIXTH GRADE • 2 HOURS

Students will learn the basics of what to do in an outdoor survival situation, then team up to choose essential items from a survival scenario. Students will practice basic knots used in survival. Outdoors, student will divide into three teams and use these same knots to construct a pole sled (travois) large enough to ride on and then transform into a shelter. For a fee of \$3.00 per person, students & adults can enjoy a hot dog roast over a campfire. Includes: a hot dog, organic carrots with dip, hot cocoa and a s'more.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 4-ESS2.A, 5-ESS3-1, MS-LS4.C

Planning and Carrying out Investigations | Obtaining, Evaluating and Communicating Information

## MACROS AND MICROSCOPES

LATE WINTER, SPRING, SUMMER, FALL • INDOOR & OUTDOOR • FOURTH – TWELFTH GRADE • 2 – 3 HOURS

Students will use dip nets and other equipment to observe aquatic macroinvertebrates, amphibians and other species that inhabit Vernal Ponds and Permanent Ponds. Students will hike to the pond and be shown how to use nets and other equipment to collect macroinvertebrates. Students will make observations and key out various aquatic macroinvertebrate species in collection pans. Indoors, students will separate and observe macroinvertebrates under microscopes, using a key to further identify the species.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, 2-LS4-3, 3-LS4-2, 4-LS1-1, 5-LS2-1, MS-LS2-1, MS-LS2-3, MS-LS2-4, HS-LS2-4, HS-LS2-6, HS-LS2-7, 2-LS4.D, 3-LS2.C, 3-LS4.B, 5-LS2.A, LS1.C, LS2.C

Interdependent relationships in Ecosystems | Independent relationships in Ecosystems | Inheritance and Variation of traits: Life Cycles and Traits  
Structure, Function and Information Processing

## WATER QUALITY

SPRING, SUMMER, FALL • OUTDOOR • FOURTH – TWELFTH GRADE • 1 HOUR

From the river and wetlands of Stony Creek to your faucet, students will discover what makes a wetland “healthy” and how our decisions can impact the quality of our water. Through scientific methods and data collection, students will learn about pH, dissolved oxygen, and dissolved solids, and what those aspects mean for the Ecosystem.

### Connections to MDE Academic Standards

2-LS4-1, 3-LS4-3, 3-LS3-2, MS-LS2-4, MS-ESS3-3, MS-ESS3-4, 2-LS4.D, 3-LS2.C, 3-LS4.D, 3-LS1.B, MS-ESS2.C, MS-ESS2.A, MS-ESS3.C

Interdependent Relationships in Ecosystems | Independent Relationships in Ecosystems

## ECOSYSTEMS STUDIES

SPRING • OUTDOOR • FOURTH – TWELFTH GRADE • 2 HOURS

Using data loggers, students will visit a field, a forest and a wetland to obtain data from each ecosystem. After field exploration, students will discuss their results from each ecosystem: the species components of each, how the living and nonliving world is connected, and how these groups interact and depend on one another.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 4-LS1-1, 5-LS2-1, MS-LS2-1, MS-LS2-3, MS-LS2-4, HS-LS2-6, HS-LS2-7, 2-LS4.D, 3-LS2.C, 3-LS4.C, 3-LS4.B, 5-LS1.C, 5-LS2.A, LS2.A, LS1.C, LS2.C

Interdependent relationships in Ecosystems | Independent relationships in Ecosystems | Inheritance and Variation of traits: Life Cycles and Traits  
Structure, Function and Information Processing







# WOLCOTT MILL METROPARK FARM CENTER

**586-752-5932 • 65775 WOLCOTT RD RAY, MI 48096**  
**WOLCOTT.FARM@METROPARKS.COM**

Wolcott Mill Metropark Farm Center is one of the few working dairy farms in Macomb County that is open for schools to come and explore. Students who visit the Farm Center will be able to experience agriculture up close and personal and will encounter all the sights, sounds, and smells of farm life. Through a variety of interactive adventures, students will learn how agriculture impacts their lives, and will explore the journey that many of their favorite foods take from the farm to their home. The Farm Center is home to many different farm animal species, each with their own unique contributions to the food and fiber chain, and students will gain an appreciation for how agriculture impacts themselves, their families, and their communities.

To schedule a program, please contact us by phone (586) 752-5932 or email [wolcott.farm@metroparks.com](mailto:wolcott.farm@metroparks.com)

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.

## PRESCHOOL - SECOND GRADE

### READ A BOOK SERIES

YEAR-ROUND • INDOOR/OUTDOOR • PRESCHOOL • 1 HOUR • \$5 PER CHILD

The Read a Book program is a popular series of programs designed especially for the little ones. We will have story time, a meet and greet, and an activity all focused around a farm theme of your choice. Possible themes include farm animals like horses, cows, chickens, sheep, goats, and pigs, or even farm tractors. Seasonal themes such as maple sugaring, spring farm babies, and pumpkins may also be possibilities depending on the timing of the event.

### SPROUTS GREENHOUSE AND GARDENS

APRIL-JUNE & SEPTEMBER-OCTOBER • OUTDOOR • PRESCHOOL – SECOND GRADE • 1 HOUR

Come out and explore the Greenhouse in this hands-on program that will introduce students to indoor and outdoor growing methods, including sprouting from seed and hydroponics. Students will discover the basic needs of plants and will be able to describe patterns in the requirements of what plants need to survive. Through hands on learning experiences, students will gather knowledge of how plants adapt and survive in different growing conditions, and what the plants life cycle looks like. They will learn how a greenhouse functions to extend the growing season in a Michigan climate and explore the benefits of fresh food in a healthy diet. A hands-on activity will allow the students to create a sprout and grow kit to take home.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, 1-LS3-1, 2-LS2-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

### SPROUTS FOOD AND FIELDS

JUNE - OCTOBER • OUTDOOR • PRESCHOOL – SECOND GRADE • 1 HOUR

Where would we be without seeds? Students will climb aboard a tractor drawn wagon for a trip out to the fields to explore the variety of crops grown on the farm. The wagon will stop, allowing students to make observations of the plants in various stages of growth. Students will observe germination of different types of seed and learn how to transplant seed or seedling into soil.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, 1-LS3-1, 2-LS2-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

### FARM TOUR FOR THE LITTLE ONES

YEAR-ROUND • OUTDOOR • PRESCHOOL – SECOND GRADE • 1 HOUR

Where does milk come from? How does a milking machine work? What does a goat eat? How many eggs will a chicken lay in a year? Your students will be able to answer these questions and more as they get up close to the animals on a working farm. By asking questions based on experiences and observations, students will be able to identify the physical needs of domesticated farm animals, both mammal and fowl, and recognize products from the farm as goods they use or consume at home. Students will also discover how changes in technology have made modern farming what it is today.

Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, 1-LS3-1, K-2-ETS1-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing



## THIRD - TWELFTH GRADE

### GREENHOUSE AND GARDENS

APRIL-JUNE & SEPTEMBER-OCTOBER • OUTDOOR • THIRD – FIFTH GRADE • 1 ½ HOURS

Come out and explore the Greenhouse in this hands-on program that will introduce students to indoor and outdoor growing methods. Students will explore hydroponics and discover how and why plants are able to grow without soil. Students will understand the basic needs that plants have for survival, and how hydroponics systems mimic the structure and function of soil, with non-soil growing methods. Through hands on learning experiences, students will gather knowledge of how plants adapt and survive in different growing conditions, and what the plants life cycle looks like. They will learn how a greenhouse functions to extend the growing season in a Michigan climate and explore the benefits of fresh food in a healthy diet.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS3-2, 4-LS1-1, 5-PS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing  
Inheritance and Variation of Traits: Life Cycles and Traits | Matter and Energy in Organism and Ecosystems

### FOOD AND FIELDS

JUNE - OCTOBER • OUTDOOR • THIRD - FIFTH GRADE • 1 HOUR

Students will climb aboard a tractor drawn wagon for a trip out to the fields to explore the variety of crops grown on the farm. The wagon will make a stop allowing students to feel the soil and take a closer look at plants in various stages of growth, as well as discovering how well plants grow in different soil conditions. Students will get to experience the adaptations in farming technology that allow for modern agriculture to survive. A hands-on activity will challenge students to identify the plant sources of items in their everyday lives.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS3-2, 3-LS4-3, 4-LS1-1, 5-PS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing  
Inheritance and Variation of Traits: Life Cycles and Traits | Matter and Energy in Organisms and Ecosystems

### FARM TOUR

YEAR-ROUND • OUTDOOR • THIRD - TWELFTH GRADE • 1 HOUR

Through observation and hands on experiences, students will learn about the job that each specific animal does on the farm as well as where food and fiber come from. Students will examine the animals face to face and discuss how the animal's specific structures relate to their individual functions. Students will discover how parental traits can be observed in their young, and what changes occur as animals age. A hands-on activity will allow students to see, feel, and smell, the different animal feeds and identify their source.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS3-1, 4-LS1-1, 5-PS3-1, 3-5-ETS1-1

Inheritance and Variation of Traits: Life Cycles and Traits  
Matter and Energy in Organisms and Ecosystems  
Structure, Function, and Information Processing





## PROGRAM ADD-ONS

Optional program enhancements may be added to any of the school tours for an additional cost.

### ICE CREAM:

Finish off your tour with a tasty treat. Locally made vanilla ice cream cups are available for purchase to enjoy at the end of your tour. Ice cream must be ordered at least 30 days in advance of tour.

### TRACTOR-DRAWN WAGON RIDES:

Students will climb aboard our tractor drawn wagon to take a ride out and around our farm fields. Students will get to see the crops at various stages of growth and see where the food for the farm animals gets its start. Wagon rides take an additional 30 minutes per group, maximum group size 35 people. Weather permitting.







# **WOLCOTT MILL METROPARK HISTORIC CENTER**

**586-752-5932 • 64162 KUNTSMAN RD RAY, MI 48096**  
**WOLCOTT.FARM@METROPARKS.COM**

The Historic Center, located on the banks of the Clinton River, is one of the few fully intact Grist Mills in the State of Michigan. Built in 1847, the Grist Mill stands as a pillar of the local community, and a representation of the adaptations of agriculture through time. Come experience agriculture's past, while gaining an appreciation for the hard work and dedication the Wolcott Family put in to operating this facility for nearly 90 years.

To schedule a program, please contact us by phone (586) 752-5932 or email [wolcott.farm@metroparks.com](mailto:wolcott.farm@metroparks.com)

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.

## KINDERGARTEN - FIFTH GRADE

### GRIST MILLING AT WOLCOTT MILL

YEAR-ROUND • INDOOR & OUTDOOR • KINDERGARTEN - FOURTH GRADE • 1 HOUR

The Grist Mill was an important structure in the development of the local community, as well as a critical resource for local farmers and families. Students will explore how the Grist Mill takes water from the Clinton River and turns it in to mechanical power. They will gain an appreciation for how people and machines provided food to farming families, livestock, and businesses around the region. Students will discover the history of the Wolcott family and the hard work they put into running the mill for nearly 90 years. Students will also test out different hands on machines and conduct experiments to see how different methods of grain processing effect the final product.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-2 ETS1-1, K-ESS2-2

Engineering Design | Earth's Systems

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** K-H.2.0.3, K-G5.0.1, 1-H.2.0.2, 1G5.0.1, 1E1.0.3, 2H2.0.4, 2G4.0.2, 2E1.0.2, 2E1.0.4

Human Systems | History of Michigan | Economics | Living/Working Together in A Community

### SETTLERS IN THE LOCAL COMMUNITY

APRIL – NOVEMBER • INDOOR & OUTDOOR • KINDERGARTEN – FIFTH GRADE • 2 HOURS

Students will discover what early settlers to Ray Township would have encountered as they worked to turn rustic wilderness into valuable farm land. Learn about the history of the Grist Mill site, while engaging in activities early settlers would have experienced. Students will participate in a variety of activities including candle dipping, butter churning, rope making, and completing household chores without the use of electricity, and will learn how all of these skills were critical to the survival of the local community.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-2-ETS1-1

Engineering Design

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS:** K-G5.0.1, 2-G 5.0.1

Environment and Society | History of Michigan (Through Statehood)

### THE CLINTON RIVER: HARNESSING THE WATER AND PROTECTING THE RESOURCE

APRIL - OCTOBER • INDOOR & OUTDOOR • KINDERGARTEN - FIFTH GRADE • 1 ½ HOURS

Students will go for a hike along the North Branch of the Clinton River to observe how plants and animals (including humans) have modified the river to suit their need. Students will get to witness the concrete and steel dam that the Wolcott's built to harness energy from the river to power the Grist Mill and discuss the dam's impact on the river. Students will explore how pollution and overuse can threaten the river ecosystem and learn how we can reduce our negative impact on the river. Finally, students will observe waterwheels and turbines and construct a homemade waterwheel to demonstrate how water can be harnessed for power.

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#### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** K-ESS2-2, K-ESS3-3, K-2-ETS1-1

Earth's Systems | Earth and Human Activity





## MAPLE SUGARING

FEBRUARY - MARCH • INDOOR & OUTDOOR • KINDERGARTEN -FOURTH GRADE • 1 HOUR

Ever wondered who discovered maple syrup, or how maple syrup is made? Students will learn the changes in maple sugaring through time from the native tribes to modern day. Students will also go for a hike to learn about the parts of a tree and their function, correctly identify a Sugar Maple using various markers, and determine why Sugar Maples are the best source for syrup. Students will learn the proper tapping technique to preserve the health of the tree. Students will also visit the sugar shack to see how a wood-fired evaporator turns maple sap into delicious maple syrup. The program concludes with a sweet taste test to compare the taste of maple syrup to common store brand syrups.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-2-ETS1-1**

Independent Relationships in Ecosystems: Animals, Plants, and Their Environment | Engineering Design

**MICHIGAN K-12 SOCIAL STUDIES STANDARDS: K-G5.0.1, 2-G 5.0.1**

Environment and Society | History of Michigan (Through Statehood)

## PROGRAM ADD-ONS

Optional program enhancements may be added to any of the school tours (Except Maple Sugaring) for an additional cost.

### CANDLE DIPPING:

Students will get to dip their own wax candle to take home while exploring why candles were an important resource before modern electricity. Please note: Candle Dipping takes an additional 30 minutes per group.

### LOG CABIN BUILDING:

Students will get to construct their own model log cabin to take home. Please note: Log Cabin making takes an additional 60 minutes depending on class size.





# EDUCATIONAL OUTREACH PROGRAMS

The Community Outreach program is a vital part of the Metroparks' Interpretive Department.

Serving Wayne, Oakland, Macomb, Washtenaw and Livingston Counties, the Outreach program are comprised of 3 Educational Outreach Vehicles. Programming is offered to communities, schools, senior centers, and other related groups that may not have the opportunity or means to visit the Metroparks.

Available throughout the year, all programs are based upon an interactive theme with activities to do and items to see and touch. All programs are provided either inside the organization's facility\* or in an adjacent outdoor space. Activities may vary for each program dependent upon class interest and times. Most programs can be modified for all age groups (unless otherwise noted).

\*Subject to certain room requirements.

To schedule a program, please contact us by phone or email:

LIVINGSTON, WASHTENAW, & WEST OAKLAND COUNTIES: [lisa.parsons@metroparks.com](mailto:lisa.parsons@metroparks.com)

810-227-2757 X6422

EAST OAKLAND & MACOMB COUNTIES: [charlie.shelton@metroparks.com](mailto:charlie.shelton@metroparks.com) 810-227-2757 X6247

WAYNE COUNTY: [justin.smith@metroparks.com](mailto:justin.smith@metroparks.com) 810-227-2757 X6639

If you don't see a program you are looking for, we are happy to customize a program to meet your group's needs.



## PRESCHOOL - FIRST GRADE

(AVAILABLE TO ALL FIVE COUNTIES) 810-227-2757 X6422

Age-appropriate and geared toward the developmental level of early learners, these programs include stories, puppet shows, songs and unique activities. Children are encouraged to use their senses during the up-close investigation of furs, feathers, skulls and other animal artifacts. Our preschool programs are adaptable for children ages two through first grade.

### MAMMALS ARE MARVELOUS

YEAR-ROUND • INDOOR • PRESCHOOL - FIRST GRADE • 45 MINUTES

Children will delight in learning what features make mammals unique by comparing themselves to other animals “born alive and well.” They’ll discover different Michigan mammals that are carnivores, herbivores and omnivores.

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Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

### OUTSTANDING OWLS

YEAR-ROUND • INDOOR • PRESCHOOL - FIRST GRADE • 45 MINUTES

We’ll explore “wide-eyed owls” with all their neat features, from hooked beaks to silent wings to oh-so-sharp talons, through movement, artifacts and taxidermy. We’ll also listen to the sounds of Michigan owls and try to mimic them! To enhance your experience, consider BUILD A BIRD FOR YOUNGER GRADES at Kensington Nature Center and meet Ranger, the Red-tailed Hawk.

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Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

### SHELLS, SCALES & POLLYWOG TAILS

YEAR-ROUND • INDOOR • PRESCHOOL - FIRST GRADE • 45 MINUTES

Children will discover frogs, toads, and salamanders through games and artifacts that illustrate their life cycles and special features. Then turtles and snakes will make their debut with further games and activities. To wrap it all up, children will meet the live animals they’ve just learned about. To enhance your experience, consider POND STUDY or PRESCHOOL POND STUDY at Hudson Mills Activity Center or the Indian Springs Environmental Discovery Center, POND-ECOSYSTEMS & LIFE CYCLES at Kensington Nature Center, FROG FUN at Lake Erie Marshlands Museum, or TURTLES & SNAKES: SCALY ENCOUNTERS at Lake Erie Marshlands Museum or Oakwoods Nature Center

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Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

### LIFE CYCLES - WHEN I WAS A BABY

YEAR-ROUND • INDOOR • PRESCHOOL - FIRST GRADE • 45 MINUTES

Kids will have fun relating to how different animals grow up. Whether it’s hatching from an egg, going through a total metamorphosis, or receiving a mother’s care, children will participate in several life cycle activities. We’ll focus on the strategies of familiar animals such as birds, butterflies and opossums through counting, movement, guessing games and dress-up. To enhance your experience, consider POND STUDY at many Metroparks nature centers.

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Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing



## LIFE WHEN IT'S SNOWY

FALL & WINTER • INDOOR • PRESCHOOL– FIRST GRADE • 45 MINUTES

Michigan winters may be cold and snowy, but these animals have special ways to survive! Children will investigate the different methods animals use to survive the cold while they compare and contrast using hands-on animal artifacts. To enhance your experience, consider ANIMALS IN WINTER at many Metroparks nature centers.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

## WE'RE FOND OF PONDS

SPRING & SUMMER • INDOOR • PRESCHOOL– FIRST GRADE • 45 MINUTES

Check out what's going on down at the pond! From food webs and frog calls to amphibian and insect metamorphosis, children will get a taste of all kinds of pond life as they view and touch artifacts, participate in pond-themed activities, and interact with live animals. To enhance your experience, consider POND STUDY at many Metroparks nature centers.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

## CRAWLING CUTIES: BUGS, INSECTS, SPIDERS AND MORE!

YEAR-ROUND • INDOOR • PRESCHOOL– FIRST GRADE • 45 MINUTES

Bugs are our friends! Children will get up close and personal with insects, spiders and more as they observe the many important jobs that these clever, captivating, crawling creatures perform. We will read a buggy story and through singing and dramatic play activities, students will discover what physical features all insects have. To enhance your experience, consider the INSECT INVESTIGATIONS program at Hudson Mills Activity Center, or POND STUDY at many Metroparks nature centers.

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### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS3-1

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment | Structure, Function, and Information Processing

## SECOND - TWELFTH GRADE

### CULTURAL HISTORY PROGRAMS

LIVINGSTON, WASHTENAW, & WEST OAKLAND COUNTIES: 810-227-2757 X6422

EAST OAKLAND & MACOMB COUNTIES: 810-227-2757 X6248

WAYNE COUNTY: 810-227-2757 X6639

## THE FRENCH & THE FUR TRADE

YEAR-ROUND • INDOOR • THIRD - SIXTH GRADE • 1 HOUR

Through role play, activities and even songs students will discover Michigan's place in the fur trade during the French period of Great Lakes History. Characters portraying family members of actual Frenchmen in Michigan's history share life as it was during this dynamic time period. Students will experience the people, the furs, the culture and the challenges of life as a voyageur as they participate in the commerce of 1750's Fort Michilimackinac. To enhance your experience, consider the PEOPLE OF THE THREE FIRES or MICHIGAN MAMMALS: WETLAND MAMMALS at your school from the Educational Outreach Programs, or the VOYAGEUR CANOE EXPERIENCE at Lake St. Clair Metropark Nature Center, Oakwoods Metropark Nature Center, or Stony Creek Metropark Nature Center.

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### Connections to MDE Academic Standards

MICHIGAN K-12 SOCIAL STUDIES STANDARDS: 3-H3.0.4, 3-H3.0.5, 3 - H3.0.6, 3 - H3.0.7, 3 - E1.0.3, 3-G1.0.1, 3-G4.0.3, 3 - G5.0.1

History of Michigan (Through Statehood) | Market Economy | Geography - World in Spatial Terms | Geography- Human Systems | Environment and Society

## PEOPLE OF THE THREE FIRES

YEAR-ROUND • INDOOR • THIRD - SIXTH GRADE • 1 HOUR

Students will explore the lives of pre-statehood Ojibwa, Odawa and Potawatomi peoples during this hands-on program. Our presenter uses artifacts, replicas, graphics and interactive activities to help students discover American Indian lifeways, tools, technologies, and modern language contributions. Students will then try their hands at fire making with hand drills and at drilling with replicas of pre-contact pump drills. To enhance your experience, consider WINTER ADVENTURE: FIRST PEOPLES OF THE GREAT LAKES at Stony Creek Metropark Nature Center, WOODLAND INDIAN WAYS at Lake Erie Marshlands Museum or Oakwoods Nature Center, and MAPLE SUGARING programs at many Metroparks nature centers.

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### Connections to MDE Academic Standards

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MICHIGAN K-12 SOCIAL STUDIES STANDARDS: MHS: 3 - H3.0.4, 3 - H3.0.5, 3-H3.0.6, 3-G1.0.1, 3-G1.0.2, 3-G2.0.1, 3-G2.0.2, 3-G4.0.4, 3-G5.0.2

Michigan History Standards | History of Michigan (Through Statehood) | The World in Spatial Terms | Places and Regions | Human Systems  
Environment and Society

## TIMBER!

YEAR-ROUND • INDOOR • THIRD - SIXTH GRADE • 1 HOUR

Michigan's logging industry, of the mid to late 1800's, brought both jobs and people to our state. In this program, the daily life of the lumberjack comes alive as our costumed Interpreters introduce students to the tools and the logging methods used by these hardy individuals of the "Green Gold" era. Students will experience the foods, languages, and pastimes of the logging camps, as well as the stories that grew up around them. To enhance your experience, consider AUTUMN ADVENTURE at Stony Creek Metropark Nature Center, or MICHIGAN LUMBER STORY, GRIST MILLING, or SETTLING IN MICHIGAN at Wolcott Mill Metropark Historic Center.

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### Connections to MDE Academic Standards

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MICHIGAN K-12 SOCIAL STUDIES STANDARDS: MHS: 4-H3.0.1, 4-H3.0.4, 4-H3.0.5, 3-G2.0.1, 3-G4.0.1, 3-G5.0.1, 3-G5.0.2, 3 - E1.0.3

History of Michigan (Beyond Statehood) | Places and Regions | Human Systems | Environment and Society | Market Economy

## SCIENCE & NATURAL HISTORY PROGRAMS

LIVINGSTON, WASHTENAW, & WEST OAKLAND COUNTIES: 810-227-2757 X6422

EAST OAKLAND & MACOMB COUNTIES: 810-227-2757 X6248

WAYNE COUNTY: 810-227-2757 X6639

## BIRDS OF PREY

YEAR-ROUND • INDOOR • SECOND - TWELFTH GRADE • 1 HOUR

Explore the adaptations that make hawks, eagles, falcon and owls some of the most effective predators in the Great Lakes region! Students will use photos, video, sound recordings and taxidermy mounts to identify these birds and learn about their hunting and feeding behaviors in different habitats. Our presenter will lead your class through several hands-on demonstrations illustrating the effectiveness of raptor biology as your students learn about predator/prey relationships and bird of prey lifeways. To enhance your experience, consider MIGRATORY BIRDS at Lake St. Clair Metropark Nature Center, FEATHERED FRIENDS at Lake Erie Marshlands Museum, or BUILD A BIRD FOR OLDER GRADES at Kensington Nature Center.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-2, 3-LS4-3, 4-LS1-1, 4-LS1-2

Inheritance and Variation of Traits: Life Cycles and Traits | Interdependent Relationships in Ecosystems | Structure, Function and Information Processing

## MICHIGAN MAMMALS

YEAR-ROUND • INDOOR • SECOND - TWELFTH GRADE • 1 HOUR

A great many mammals call Michigan home. Using skins, skulls, mounted animals and a variety of hands-on activities, students will learn how to identify Michigan's mammals. Students will also explore mammal diversity and adaptations, especially as they relate to diet and survival. Optional: Explore mammals through a featured animal program! Students will explore how the featured animal or animal group fits into the mammal family, how its unique adaptations affect anatomy and behavior, and the diversity of the species or group in our state. Choices: all mammals, wetland mammals, carnivores, deer, bats. To enhance your experience, consider ANIMAL FORENSICS at Lake Erie Marshlands Museum.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 3-LS4-2, 3-LS4-3, 4-LS1-1, 4-LS1-2

Inheritance and Variation of Traits: Life Cycles and Traits | Interdependent Relationships in Ecosystems | Structure, Function and Information Processing

## PLANT PARTS AND SEED DISPERSAL

YEAR-ROUND • INDOOR • SECOND - TWELFTH GRADE • 1 HOUR

From our food to our homes to the air we breathe, where would we be without plants? Students will discover the role each part of a plant plays as we transform a student volunteer into a beautiful flower. Then students will find out how plants overcome the challenge of being stuck in one place through different techniques to cast their seeds across the world during this lively, interactive presentation. Learn about plant structure, diversity and importance all while having fun! Optional: Venture out into the schoolyard on a plant hike and scavenger hunt. (Additional 30 minutes) To enhance your experience, consider GREEN SCENE at Lake Erie Marshlands Museum, PLANTS and PLANT AND ANIMAL DEFENSES at Lake St. Clair Metropark Nature Center, GREENHOUSE AND GARDENS TOUR, FOOD AND FIELDS TOUR at Wolcott Mill Metropark Farm Learning Center or PLANT PARTS AND THEIR CYCLES at Hudson Mills Activity Center, Kensington Nature Center or Indian Springs Environmental Discovery Center.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 2-LS2-1, 2-LS2-2, 4-LS1-1, 5-PS3-1, 5-LS1-1

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing | Matter and Energy in Organisms and Ecosystems

## COLD-BLOODED CREATURES

YEAR-ROUND • INDOOR • SECOND - TWELFTH GRADE • 1 HOUR

This up-close look at Michigan's reptiles and amphibians is sure to satisfy the most curious budding herpetologist (one who studies reptiles and amphibians). Students will learn to categorize herps as reptiles or amphibians by observing physical features and life cycles. Students will also learn about reptile and amphibian habitats, populations, diets and adaptations for survival in this hands-on program. Optional: Select a focus on just reptiles or amphibians. Students will enjoy an entire session devoted to that animal family, including meeting some of its members. Optional: choose just reptiles or just amphibians. To enhance your experience, consider VERNAL PONDS at the Hudson Mills Activity Center, or POND ECOSYSTEMS & LIFE CYCLES FOR OLDER GRADES at Kensington Nature Center.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, 3-LS4-3, 3-LS1-1, 4-LS1-1

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function and Information Processing





## INSECTS ARE EVERYWHERE!

SPRING, SUMMER, & FALL • INDOOR • SECOND - TWELFTH GRADE • 1 HOUR

Once you discover how fascinating insects are, you'll never let 'em bug you again! We'll transform a student volunteer into a six-legged arthropod as your class learns what makes an insect an insect. Then we'll explore insect life cycles, learn about the major groups of insects, and finally head outside (when seasonally appropriate) to capture and observe some of these sometimes bizarre, but always cool, invertebrates. To enhance your experience, consider POLLINATORS at Lake St. Clair Metropark Nature Center.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 2-LS4-1, 3-LS4-3, 3-LS1-1, 4-LS1-1

Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits | Structure, Function and Information Processing

## SPECIALTY PROGRAMS

810-227-2757 X6248

Along with the core natural and cultural history programs for elementary school students, the S.T.E.A.M. experience offers programming designed for both students and adults. Developed by staff with degrees in history and graphic arts, these programs are presented to a wide spectrum of audiences—whether the participants are 7 or 107 years old they will be engaged in meaningful activities. Offerings include local history, art in nature, and farm life.

### MOBILE INCUBATOR PROGRAM (TWO PARTS)

#### "EGGSPLORATION" EGG INCUBATION PART I

SPRING • INDOOR • ALL GRADES • 1 HOUR

Let's "Eggsploration" the mysteries of the egg: Why does an egg have a hard shell? What happens inside the egg before the chick hatches? Will my grocery store eggs hatch? Over the course of 21 days, participants will witness the transformation of fertilized eggs into fully-formed chicks. Our interpreters will provide everything needed for a successful hatch, so participants can experience the wonder of life on display at your facility. Fertile eggs and an incubator will be brought to your location with simple-to-follow instructions.

#### "EGGSPLORATION" EGG INCUBATION PART II

1 HOUR • ALL GRADES • SPRING

The chicks have hatched! Are they male or female? Do they have teeth? How will they survive? Find out what's next in the life a chick during the essential 'Part II' follow-up visit. Staff will collect the incubator and all the materials from "Eggsploration" Part I while guiding participants through an exploration of life after the egg! To enhance your experience, consider the FARM TOUR program at Wolcott Mill Metropark Farm Learning Center or at Kensington Farm Center.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS3-1, 1-LS1-1, 1-LS3-1, K-2-ETS1-2, 3-LS4-3, 3-LS1-1

Interdependent Relationships in Ecosystems: Animals, Plants and their Environment | Structure, Function and Information Processing  
Engineering Design K-2 | Interdependent Relationships in Ecosystems | Inheritance and Variation of Traits: Life Cycles and Traits



## ECOSYSTEMS

810-227-2757 X6639

Use science and the tools of a scientist to explore your schoolyard with help from the Outdoor Exploration Vehicle. Through games and activities, your class will discover what an ecosystem is. Then, with handheld data loggers, probes, sensors, field microscopes, portable weather stations and a host of other observation and data collection equipment, students will measure the ecological parameters of your schoolyard, then use this information to form hypotheses and answer questions about the environment around them.

We offer the Ecosystem Exploration program with different focuses, depending on your interests and the time available. Ecosystem Exploration programs typically require 120 minutes.

### ECOSYSTEM EXPLORATION - FOCUS: ECOSYSTEM COMPARISON

YEAR-ROUND • INDOOR & OUTDOOR • FOURTH - TWELFTH GRADE + COLLEGE • 2 HOURS

How is your grassy lawn different from a native plant garden? Or from a stand of oak trees? Or even from a row of hedges by the side of the building? Using the tools of the Outdoor Exploration Vehicle, have your class observe and measure the differences between the varied habitats around your school, no matter how large or how small the differences. Then have your students figure out what this means for the animals and plants that call your schoolyard home. To enhance your experience, consider any of the ECOSYSTEM PROGRAMS at Indian Springs Metropark.

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#### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 4-LS1-1, 5-PS3-1, 5-LS1-1, 5-LS2-1, 5-ESS2-1, MS-LS1-6, MS-LS2-1, MS-LS2-3, MS-LS2-4, MS-LS2-2, MS-LS2-5

Structure, Function and Information Processing | Matter and Energy in Organisms and Ecosystems | Earth's Systems  
Interdependent Relationships in Ecosystems

### ECOSYSTEM EXPLORATION - FOCUS: SOIL & THE FOREST FLOOR

YEAR-ROUND • INDOOR & OUTDOOR • FOURTH - TWELFTH GRADE + COLLEGE • 2 HOURS

Do you dig dirt? Check out what's going on beneath the grass as we take soil core samples to examine the soil horizons. Students will check for soil color, soil moisture, and the amount of organic matter present. They'll also use the rest of the Ecosystem Exploration tools and focus their measurements on the "lower" levels of the ecosystem. To enhance your experience, consider any of the ECOSYSTEM PROGRAMS at Indian Springs Metropark.

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#### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 4-LS1-1, 5-PS3-1, 5-LS1-1, 5-LS2-1, 5-ESS2-1, MS-LS1-6, MS-LS2-1, MS-LS2-3, MS-LS2-4, MS-LS2-2, MS-LS2-5

Structure, Function and Information Processing | Matter and Energy in Organisms and Ecosystems | Earth's Systems  
Interdependent Relationships in Ecosystems





## ECOSYSTEM EXPLORATION - FOCUS: WATER QUALITY AND ENVIRONMENTAL CHEMISTRY

YEAR-ROUND • INDOOR & OUTDOOR • SIXTH - TWELFTH GRADE + COLLEGE • 2 HOURS

If you have a pond, ditch or stream nearby, have your students discover whether or not different aquatic life could survive based on the chemistry and hydrology of the water. They'll test for dissolved oxygen, pH, phosphates, nitrates and a host of other parameters before figuring out what ranges are required for local aquatic invertebrates and common fishes. What could survive in your water? To enhance your experience, consider any of the ECOSYSTEM PROGRAMS at Indian Springs Metropark.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 4-LS1-1, 5-PS3-1, 5-LS1-1, 5-LS2-1, 5-ESS2-1, MS-LS1-6, MS-LS2-1, MS-LS2-3, MS-LS2-4, MS-LS2-2, MS-LS2-5

Structure, Function and Information Processing | Matter and Energy in Organisms and Ecosystems | Earth's Systems  
Interdependent Relationships in Ecosystems

## ECOSYSTEM EXPLORATION - FOCUS: TEST A HYPOTHESIS

YEAR-ROUND • INDOOR & OUTDOOR • SIXTH - TWELFTH GRADE + COLLEGE • 2 HOURS

Does your class have a particular question or hypothesis they'd like to explore about their schoolyard? Then why not build your own program? Use the tools of the Outdoor Exploration Vehicle and the expertise of our staff to assist your classroom full of scientists as they run their own Ecosystem Exploration experiment! To enhance your experience, consider any of the ECOSYSTEM PROGRAMS at Indian Springs Metropark.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 4-LS1-1, 5-PS3-1, 5-LS1-1, 5-LS2-1, 5-ESS2-1, MS-LS1-6, MS-LS2-1, MS-LS2-3, MS-LS2-4, MS-LS2-2, MS-LS2-5

Structure, Function and Information Processing | Matter and Energy in Organisms and Ecosystems | Earth's Systems  
Interdependent Relationships in Ecosystems

