

# 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 8 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 Centers
- 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 Centers

## WHY SCHEDULE AN EDUCATIONAL PROGRAM

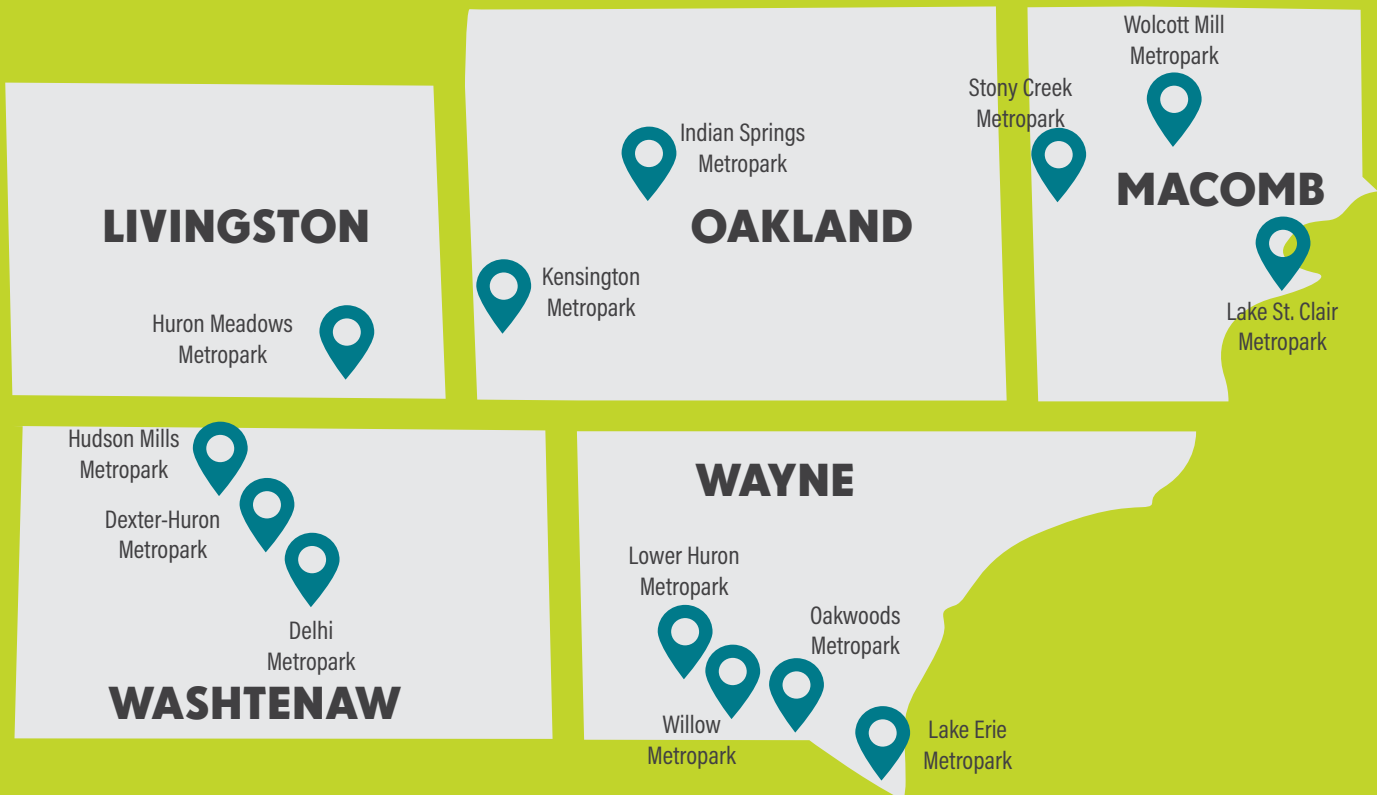
Research shows that children's social, psychological, academic, and physical health is positively impacted when they have daily contact with nature. Environmental education has been proven to engage students in learning and to raise test scores. Additionally, MDE states that students need to be prepared 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 & GRANT 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/education/#educationalgrants](http://metroparks.com/education/#educationalgrants)





# HUDSON MILLS METROPARK

**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 of the area.

The Interpretive program is conducted in a variety of access points to the park's assorted habitats. Possibilities include the two-mile nature trail, the hike/bike trail, picnic shelters and the Activity Center. School programs are meant to be entirely spent in outdoor exploration, but may include an indoor component, or a combination of both depending on the topic, weather or other factors. Popular topics include maple sugaring, river ecology and seasonal hikes. 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 virtual nature discovery and scavenger hunts. Enquire during registration for more details. Playfields and playgrounds are also available from the Activity Center.

Outdoor hike routes may traverse hilly dirt and gravel trails, grass pathways or uneven, wet ground. The distance of the hike will be adjusted to the age and abilities of your group.

To schedule a program, please contact us by phone 810-227-2757 x6531 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

LATE FEBRUARY/EARLY MARCH • OUTDOOR • ALL GRADES • 1 HOUR

Your class will discover why Michigan is the perfect spot for making maple sugars and syrups and learn about how the maple tree is used for one of our favorite sweet treats. As students discover the process of making maple syrup they'll discover the parts of a tree and how it uses the process of photosynthesis to survive. This unique program includes tree identification, tapping a maple tree, visiting an evaporator to watch the process of turning sap into syrup and getting a sweet taste at the end. Students will also be introduced to the concept of human impacts and how maple sugaring is changing in a warming climate. This program can be adapted for all abilities.

#### Connections to MDE Academic Standards

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

### SEASONAL HIKE

YEAR-ROUND • OUTDOOR • ALL GRADES • 1 HOUR

An Interpreter will lead the class on a ½ mile hike along uneven mixed gravel trails, distance of the hike can be adjusted to the age and abilities of the group. On this hike students will observe and discover the patterns of the season. As a class we will discuss the basic needs of the plants and animals during the season and compare different habitats to analyze the unique ways that animals are adapted to meet their needs. Students will note changes in each habitat by observing foliage, plant growth, and animal diversity. Bring your students back each season so they can make predictions and observations about the patterns of the seasons.

#### Connections to MDE Academic Standards

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

### INSECT DISCOVERY

SPRING, SUMMER & FALL • OUTDOOR • ALL GRADES • 1 HOUR

During this program, students will learn more about the animals everyone has easy access to: Insects and their relatives. Through grade appropriate hands-on activities, investigative tools and techniques, and outdoor exploration, your class will develop an understanding of our area arthropods. Truly a discovery-based experience, the live animals your class will encounter depends on the time of year and their own field work.

To enhance your experience, consider CRAWLING CUTIES or INSECTS EVERYWHERE 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, 3-LS1-1, 4-LS1-1

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





## HURON RIVER WATERSHED

SPRING, SUMMER & FALL • OUTDOOR • ALL GRADES • 1 HOUR

During this Interpreter-led hike we will traverse along an unpaved trail to discover the Huron River Watershed. Along the way students will visit a river, marsh, and vernal pool to look at the different habitats supported by our watershed and the animals adapted to survive in these unique areas. Students will learn what makes up a healthy watershed, and how water health and biodiversity are related. An Interpreter will help the class discover our local watersheds as well as what local communities are doing to protect them.

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### Connections to MDE Academic Standards

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

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

## PRESCHOOL – KINDERGARTEN

### Exploring Nature with Your Senses

YEAR-ROUND • OUTDOOR • PRESCHOOL & KINDERGARTEN • 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. An Interpreter will facilitate discovery using the senses as they lead your students on a ¼ mile hike along an unpaved trail to observe and characterize the wildlife. Students will discover the different behaviors of animals and plants that help them to survive in their environment.

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### Connections to MDE Academic Standards

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Focus for Early Learners: Observation and Inquiry, Living and Non-Living Things, Knowledge about the Earth

Michigan Science Standards: K-LS1-1

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

## FRESHWATER FUN

SPRING, SUMMER & FALL • OUTDOOR • PRESCHOOL & KINDERGARTEN • 1 HOUR

Students will engage in Interpreter-led activities to find water in the wild. Discover the answers to such questions as What forms of water can we see? What lives in it? Does fresh water mean clean water, and how can we tell by looking? Your class will explore the importance of fresh water in our everyday world and will build their knowledge of life requirements and ecosystems.

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### Connections to MDE Academic Standards

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

Focus for Early Learners: Observation and Inquiry, Living and Non-Living Things, Knowledge about the Earth

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



## FIRST - SECOND GRADE

### HURON RIVER DISCOVERIES FOR YOUNGER GRADES

SPRING, SUMMER & FALL • OUTDOOR • FIRST & SECOND GRADE • 1 HOUR

On the banks of the Huron River students will learn about the watershed and how the water is connected to them. Students will use tools to search a tributary of the Huron River to collect macroinvertebrates. With the help of a key and magnifiers, we will look at the adaptations of these animals to help identify them. Using data sheets students will be able to determine how healthy the river water is based on the organisms they find, and the impact humans have on the health of the river. During collection, students will be wading in a shallow slow-moving river tributary.

#### Connections to MDE Academic Standards

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

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

## SECOND - FIFTH GRADE

### VERNAL WETLAND INVESTIGATION

SPRING • OUTDOOR • SECOND - FIFTH GRADE • 2 HOURS

Students will understand the importance of 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. We will be traveling roughly ½ mile along a hilly dirt trail to the wetland where we will traverse through uneven, wet ground to observe and collect.

#### 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: Environmental Impacts on Organisms | Structure Function and Information Processing Matter and Energy in Organisms and Ecosystems | Earth's Systems

### HURON RIVER INVESTIGATION FOR OLDER GRADES

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

Students will learn about the Huron River Watershed and how water moves through the land. Students will use various sampling methods and identification aids to learn more about macroinvertebrates in the Huron River. They will learn what makes up a healthy watershed, and how water health and biodiversity are related. An Interpreter will help the class discover our local watersheds, as well as what local communities are doing to protect them. During collection, students will be wading in a shallow slow-moving river tributary.

#### 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

### HURON RIVER WATER QUALITY EXPLORATION

SPRING, SUMMER & FALL • OUTDOOR • FOURTH - FIFTH GRADE • 1 - 1 ½ HOURS

Students will be visiting the Huron River to gather water quality parameters as well as ambient air and water temperatures, water depth, current speed, and water turbidity. Students will learn what a watershed is, how water moves through an ecosystem and how people influence the quality of water. As a class we will discover food chains and energy flow found throughout a riverine ecosystem. During collection, students will be wading in a shallow slow-moving river tributary.

#### 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: DISCOVER THE HURON RIVER

SPRING, SUMMER, & FALL • OUTDOOR • THIRD GRADE – FIFTH 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 river is important to wildlife and plant life cycles. Students will be adding to this data each time 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. During observation, students will be wading in a shallow slow-moving river tributary.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS4-3, 4-LS1-1, 4-ESS2-1, 5-PS2-1, 5-PS3-1, 5-LS2-1, 5-ESS3-1

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

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

### SPRINGBOARD SERIES: MACROINVERTEBRATE RIVER EXPLORATION\*

SPRING, SUMMER AND FALL • OUTDOOR • THIRD - FIFTH GRADE • 1 ½ HOURS

Students will continue their exploration of the Huron River tributary. Through this hands-on program, they will learn about water quality and water movement through this watershed. They will complete a macroinvertebrate study by entering the water and using dip nets, a kick net, magnifiers, and ID charts. Using the data collected they will be able to complete a water quality assessment for this tributary. Prior to the program, teachers will be sent a literacy packet to prepare the students for new vocabulary during the program. During collection, students will be wading in a shallow slow-moving river tributary.

\*Prerequisite: Previous participation in SPRINGBOARD SERIES: DISCOVER THE HURON RIVER is highly recommended

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS4-3, 4-LS1-1, 4-ESS2-1, 5-PS2-1, 5-PS3-1, 5-LS2-1, 5-ESS3-1

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

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

### SPRINGBOARD SERIES: RIVER WATER QUALITY\*

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

Students will be visiting the Huron River tributary to gather water quality parameters as well as ambient air and water temperatures, water depth, and water turbidity. They will be following food chains and energy flow 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. During collection, students will be wading in a shallow slow-moving river tributary.

\*Prerequisite: Previous participation in SPRINGBOARD SERIES: DISCOVER THE HURON RIVER and SPRINGBOARD SERIES: MACROINVERTEBRATES RIVER EXPLORATION is highly recommended

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 3-LS1-1, 3-LS4-3, 4-LS1-1, 4-ESS2-1, 5-PS2-1, 5-PS3-1, 5-LS2-1, 5-ESS3-1

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

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



# 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, sand play area, sand volleyball court, and baseball diamond.

Outdoor hike routes may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways. The distance of the hike will be adjusted to the age and abilities of your group.

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

### INSECT ADVENTURE

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

Let's learn about the incredible world of insects! Students will go on an Interpreter-led hike to observe different insect habitats along the Indian Springs Metropark nature trails. Our guided activities teach students to identify the parts of an insect and to understand how those parts help an insect survive. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

To enhance your experience, consider LIFE CYCLES – WHEN I WAS A BABY or CRAWLING CUTIES: BUGS, INSECTS, SPIDERS, & MORE 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

From Molecules to Organisms: Structures & Processes

### SEASONAL EXPLORATIONS

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

Explore the unique animals that live in Michigan, the habitats they live in, and why their behaviors change throughout the year. Our Interpreter will lead your class on a hike to explore a variety of habitats and observe special features of animals that live in those areas. Students will identify essential components of ecosystems needed for plants and animals to survive. Topics will correspond with the current season. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

To enhance your experience, consider these programs: WE'RE FOND OF PONDS, LIFE CYCLES – WHEN I WAS A BABY, or 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, K-ESS3-3

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

### LIFE IN A POND

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

Discover the fascinating array of wildlife inhabiting the ponds at Indian Springs Metropark. Our Interpreters will lead students on a hike through diverse habitats where they will encounter an assortment of creatures. From macroinvertebrates to small vertebrates, students will have a hands-on opportunity to observe these pond dwellers up close in specially prepared pond tubs. Our guided activities highlight these organisms' unique adaptations and life cycles, while we explore the intricate web of life within these watery ecosystems. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

To enhance your experience, consider SHELLS, SCALES & POLLYWOG TAILS, LIFE CYCLES – WHEN I WAS A BABY, or 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, K-ESS2-2

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



## FIRST - FOURTH GRADE

### INSECT ECOLOGY

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

Discover the world of terrestrial and aquatic insects with this engaging exploration of their life cycles. Students will embark on a guided hike along the nature trails of Indian Springs Metropark to explore various insect habitats. Students will collect, examine, and identify invertebrates found in the park's diverse landscape using scientific tools. This interactive program covers both complete and incomplete life cycles, highlighting how these adaptations aid insects throughout their metamorphic stages, ensuring their survival in diverse environments. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

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): 2-LS4-1, 3-LS1-1, 3-LS4-3, 4-LS1-1

Biological Evolution: Unity & Diversity | From Molecules to Organisms: Structures & Processes

### ANIMAL ADAPTATIONS

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

Students will explore the adaptations of various animals and hypothesize how and where these traits help them survive in Michigan. By examining and comparing animal skulls, mounts and furs, we will uncover the unique physiological and behavioral adaptations of native Michigan species. In addition, we will hike along the Indian Springs nature trails to observe how those adaptations help animals survive in our terrestrial and aquatic habitats. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

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

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 1-LS1-1, 2-LS4-1, 2-ESS2-2, 3-LS2-1, 3-LS4-3, 3-LS3-2, 3-LS4-2, 4-LS1-1

From Molecules to Organisms: Structures & Processes | Biological Evolution: Unity and Diversity



## PLANT ECOLOGY

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

Explore the life cycle of a plant, learn about their structure and how they are adapted to survive in environments such as a prairie or marsh. Students will learn about pollination, seed dispersal and photosynthesis through hands-on activities. Your students will develop hypotheses about the plants that live in a specific ecosystem and what characteristics they would need to survive and reproduce. An Interpreter will lead your class on a hike to explore a variety of habitats and discover the unique adaptations of plants that live in those areas. Students will explore and observe plants living in different ecosystems and will discuss with the class whether their hypotheses were correct. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

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): 1-LS1-1, 1-LS3-1, 2-LS4-1, 2-LS2-2, 3-LS1-1, 3-LS4-3 3-LS3-2, 4-LS1-1

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

## WETLAND HABITATS

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

Students will work as ecologists to discover and investigate life in a pond through hands-on learning experiences. They will use scientific tools to identify some of the smallest aquatic organism that live in the ponds of Indian Springs Metropark. We will use models to learn about amphibian life cycles and discover the unique calls of these animals. An Interpreter will lead students on a trail hike to explore a variety of wetland habitats as students observe and learn about the plants and animals that live in those ecosystems. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

-Grades 1st and 2nd: Students will sort and identify creatures in pre-collected tubs.

-Grades 3rd and 4th: Students will use pond dip nets to collect pond water samples.

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### Connections to MDE Academic Standards

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

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

## FIFTH - SEVENTH GRADE

### ECOSYSTEM INVESTIGATION

SPRING & FALL • OUTDOOR • FIFTH - SEVENTH GRADE • 2 HOURS

Indian Springs Metropark has a variety of ecosystems that support Michigan flora and fauna populations. During this in-depth program, students will explore several habitats to learn how living and non-living components interact with each other to keep ecosystems functioning. Students will use scientific tools to collect samples from each habitat and analyze the data to compare and contrast the different environments. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

To enhance your experience, consider ECOSYSTEM EXPLORATION – FOCUS: ECOSYSTEM COMPARISON, ECOSYSTEM EXPLORATION – FOCUS: SOIL & 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

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

From Molecules to Organisms: Structures & Processes | Ecosystems: Interactions, Energy, & Dynamics

## WETLANDS & WATER QUALITY

SPRING & FALL • INDOOR & OUTDOOR • FIFTH - SEVENTH GRADE • 1 ½ HOURS

Students will learn about the numerous functions and benefits of wetlands through close observations and hands-on experiences. Our Interpreters will lead students on a hike to explore the different types of wetlands in the park, observing the dynamics of each. By studying various wetland plants and animals, we will learn about their adaptations and how they are perfectly suited for living in a wetland habitat. Students will use scientific tools to investigate and identify aquatic macroinvertebrates in the microscope lab to learn about biodiversity and how that relates to water quality. We will discuss the environmental significance of human impact and the effects of climate change on water quality. The program route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

\*If your group is larger than 50 students, the microscope lab will not be available for this program unless your group participates in the program at staggered times (i.e. 50 students participate in the program from 10am-11:30am and 50 students participate in the program from 11:30am-1pm)

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): 5-LS2-1, 5-ESS3-1, MS-LS2-1, MS-LS2-4, MS-LS2-2, MS-LS2-5, MS-ESS3-3, MS-ESS3-4

## ANIMAL ADAPTATIONS

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

Students will explore the adaptations of various animals and how these traits help them survive in Michigan. By examining and comparing animal skulls, mounts and furs, we will uncover the unique physiological and behavioral adaptations of native Michigan species. In addition, we will hike along the Indian Springs nature trails to observe how those adaptations help animals survive in our terrestrial and aquatic habitats. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): MS-LS2-2, MS-LS2-4, MS-LS1-5,

From Molecules to Organisms: Structures & Processes | Ecosystems: Interactions, Energy, and Dynamics





## EIGHTH - TWELFTH GRADE

### ECOSYSTEM INVESTIGATION

SPRING & FALL • OUTDOOR • EIGHTH - TWELFTH GRADE • 2 HOURS

Indian Springs Metropark has a variety of ecosystems that support Michigan flora and fauna populations. During this in-depth program, students will explore several habitats to learn how living and non-living components interact with each other to keep ecosystems functioning. Students will use scientific tools to collect samples from each habitat and analyze the data to compare and contrast the different environments. The hike route may traverse level, composite wood boardwalks and hilly mixed gravel and grass pathways.

To enhance your experience, consider ECOSYSTEM EXPLORATION – FOCUS: ECOSYSTEM COMPARISON, ECOSYSTEM EXPLORATION – FOCUS: SOIL & 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): HS-LS2-6

Ecosystems: Interactions, Energy, & Dynamics

### FORESTS & FIRES IN MICHIGAN'S HISTORY

SPRING & FALL • OUTDOOR • EIGHTH - TWELFTH GRADE • 2 - 2 ½ HOURS

Learn how the historical use of Michigan's lumber resources has affected the state's relationship with fire. Enjoy an interpretive hike to learn about Michigan's historic lumber resources and "new forests." Discover how fire affects different ecosystems in the state and investigate how prescribed burns can be used to address the human-caused fire deficit.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): HS-LS2-6, HS-ESS3-1, HS-ESS3-4

Earth & Human Activity | Ecosystems: Interactions, Energy, & Dynamics

### WETLANDS & WATER QUALITY

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

While hiking the Indian Springs Metropark trails, students will explore and observe various wetlands, including the marsh, swamp, and vernal pond. We will discuss the important roles wetlands play for animals, humans, and the environment. Students will investigate aquatic macro-invertebrates up-close in the microscope lab to complete a biological water quality assessment of the pond. Finally, we will perform tests on water samples to assess the suitability and carrying capacity for different organisms. If your group is larger than 50 students, the microscope lab will not be available for this program.

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): MS-LS2-1, MS-LS2-4, MS-LS2-5, MS-ESS3-3, MS-ESS3-4, HS-LS2-2, HS-LS2-6, HS-LS2-7, HS-LS4-5, HS-ESS2-2





# 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.

Outdoor hike routes may traverse flat dirt and gravel trails, boardwalks, or muddy, wet ground. The distance of the hike will be adjusted to the age and abilities of your group.

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

### PRESCHOOL NATURE HOUR

YEAR-ROUND · INDOOR · PRESCHOOL · 1 HOUR

Students will discover what animals need to survive and what survival strategies animals use as they prepare for the changing of the seasons. Working together, the class will create a map of where different species can be found during the current season. Students will have a chance to interact with live animals, hear animal calls, and touch animal pelts and artifacts. Topics will correspond with the current season. If you'd like an indoor/outdoor experience but only have an hour, we'd be happy to offer the second half of the program as a nature walk.

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

### PRESCHOOL NATURE WALK

YEAR-ROUND · OUTDOOR · PRESCHOOL · 1 HOUR

Discover the sights, sounds, and smells of nature during this outdoor nature walk. Students will get up-close with animals and experience how plants change through the seasons while hiking through several different habitats around the Kensington Nature Center. Topics will correspond with the current season.

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

## KINDERGARTEN – SECOND GRADE

### ANIMAL ADAPTATIONS & HABITATS 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. We'll also learn about the basic needs of animals and the characteristics and behaviors that help them to survive. Working together, the class will create a map of where different species can be found during the current season. Students will have a chance to interact with live reptiles and amphibians, hear animal calls, and touch animal pelts and artifacts. 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





## HABITAT HIKE FOR YOUNGER GRADES

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

Explore the many diverse habitats inside Kensington Metropark. Students will use their observational skills to discover the plants and animals that call these habitats their home and how certain plants can be used as indicator species for specific habitats. With this knowledge, students will be able to use evidence to determine which habitats surround the Nature Center while experiencing the abundant wildlife of Kensington Metropark. 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, 2-LS4-1, 2-LS4.D

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

Interdependent Relationships in Ecosystems

## 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 unique and unusual adaptations that birds rely on to survive in their different habitats. Based on their observations, students will work together in small groups to design a bird for a specific habitat. During the presentation, a visit with Ranger, our live red-tailed hawk, will 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

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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.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

## PLANT PARTS & LIFE CYCLES FOR YOUNGER GRADES

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

We will explore the life cycle of a plant through immersive visualization and by modeling a plant's structures and functions. The group will dramatize a pollinator's role in how flowers turn into seeds and explore the unique ways that plant seeds are dispersed. As a class, the students will also create a model to explore the parts of a tree and the role each part plays in the tree's survival, all while discovering the services plants provide, both to their ecosystems and to people.

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### Connections to MDE Academic Standards

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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 AND WEBS 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 plants and animals need to live and grow. Participants will observe live animal interactions to gain an understanding of the connections between parts of a food chain. Students will also 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. This program features a visit with Ranger, a live red-tailed hawk.

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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

## POND ECOSYSTEMS & LIFE CYCLES FOR YOUNGER GRADES

MAY – OCTOBER • 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

## THIRD - FIFTH GRADE

### ANIMAL ADAPTATIONS & HABITATS 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. We'll also learn about the basic needs of animals and the characteristics and behaviors that help them survive. The 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, hear animal calls, and touch animal pelts and artifacts. Topics will correspond with the current season.

### Connections to MDE Academic Standards

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

### HABITAT HIKE FOR OLDER GRADES

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

Explore the many diverse habitats inside Kensington Metropark. Students will use their observational skills to discover the plants and animals that call these habitats their home and how certain plants can be used as indicator species for specific habitats. With this knowledge, students will be able to use evidence to determine which habitats surround the Nature Center while experiencing the abundant wildlife of Kensington Metropark. During the walk students will also investigate how certain plants reproduce and how animals use different survival strategies through the changing seasons. 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-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

## 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 unique and unusual adaptations that birds rely on to survive in their different habitats. Based on their observations, students will work together in small groups to design a bird for a specific habitat. Each group will then present the evidence for why their bird is best adapted to thrive in its home. During the presentation, a visit with Ranger, our live red-tailed hawk, will 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.

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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

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 through immersive visualization and by modeling a plant's structures and functions. The group will dramatize a pollinator's role in how flowers turn into seeds and explore the unique ways that plant seeds are dispersed. As a class the students will also create a model to explore the parts of a tree and the role each part plays in the tree's survival, all while discovering the services plants provide both to their ecosystems and to people. 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 AND WEBS 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. Observe live animal interactions to gain an understanding of the connections between 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. This program features a visit with Ranger, a live red-tailed hawk.

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### Connections to MDE Academic Standards

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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)

## POND ECOSYSTEMS & LIFE CYCLES FOR OLDER GRADES

MAY - OCTOBER • 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.

### Connections to MDE Academic Standards

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

## 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 ½ HOURS

Inside, students will discover the different species of birds that live around the 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 these study sites to observe, investigate, and record the bird species in each area. Back in the nature center classroom the group will tabulate species found and create graphs to compare and 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.

### 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 ½ HOURS

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.

### 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

### 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 ½ HOURS

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. They will also 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](mailto:KENSINGTON.FARM@METROPARKS.COM)**

Located within Kensington Metropark, the Farm Center is a 100-acre educational farm focused on helping youth gain an appreciation, awareness, and understanding of agricultural methods of the past, present, and future. The majority of 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.



## PRESCHOOL - FIFTH GRADE

### FUN ON THE FARM

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

The Fun on the Farm program is a popular series of programs designed especially for the little ones. We will have story time and an activity all focused around a farm theme of your choice. Possible themes include horses, cows, chickens, sheep, goats, pigs, and tractors. Seasonal themes such as maple sugaring, spring babies, honey bees, 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

### BEES! AGRICULTURE'S HARDEST WORKERS

MAY - OCTOBER • OUTDOOR • SECOND GRADE - FIFTH GRADE • 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

## SECOND - EIGHTH GRADE

### 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.

#### Connections to MDE Academic Standards

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

### 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

### FARM INVADERS

YEAR-ROUND • OUTDOOR • THIRD - 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 • THIRD - 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.

### 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-LS-2, 5-PS3-1, 5-LS1-1, 5-LS2-1, MS-LS1-6, MSLS2-3, 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

## SUMMER ADVENTURE

JUNE - SEPTEMBER • OUTDOOR • THIRD - 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.

### 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, MSLS2-3, 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.

### 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, MSLS2-3, 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



## FUTURE OF FARMING PROGRAM SERIES

Programs in this series examine the future of agriculture in our region and the challenges it faces as well as the efforts being made to mitigate and adapt to those issues. Each program involve active exploration and hands-on learning. The Future of Farming series can be standalone experiences but are designed to be complimentary programs for year-to-year learning within these grade levels.

### AGRICULTURE IN A CHANGING CLIMATE

YEAR-ROUND • OUTDOOR • FOURTH - EIGHTH GRADE • 90 MINUTES

As farms and cities spread in Michigan, our region's ecosystems and climate changed and still are today. Using a stream table your students will explore the history behind our region's patchwork landscape and hypothesize about what that has meant for the flora and fauna of Michigan. Once the students' landscape of urban, rural, and natural areas is set, they will observe the effects of future weather patterns based on climate modeling. Then students explore the farm and will learn what farmers in Michigan are doing to mitigate and adapt to our changing climate and come up with their own ideas to increase sustainability in our food supply. Through active exploration and hands-on learning, our curriculum offers students greater awareness of our region's land and the impacts climate plays in their lives.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 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, MSL1-7, 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

### AGRICULTURE IN A CHANGING WATERSHED

APRIL - SEPTEMBER • OUTDOOR • FOURTH - EIGHTH GRADE • 90 MINUTES

Explore the deep connection between our area's agriculture and the Huron River watershed. Using a stream table your students will explore how watersheds function and then make hypotheses and observations about point source and non-point source pollution. Then students will go to the banks of Kent Lake, a part of the Huron River, for a hands-on exploration of water quality. Through active exploration and hands-on learning, our curriculum offers students greater awareness of our region's water resources and issues facing it now and in the future.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): 4-ESS2-1, 4-ESS3-2, 3-5-ETS1-2, 5-LS2-1, 5-ESS3-1, 5-ESS2-1, MS-LS2-3, MS-LS2-5, MS-ESS3-3,

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

### AGRICULTURE INDOORS!

APRIL - NOVEMBER • INDOOR & OUTDOOR • FOURTH - EIGHTH GRADE • 90 MINUTES

Agricultural production in our urban and suburban region is increasing thanks to greenhouses and technologies like hydroponics and LED lighting. Your students will explore the physical and chemical requirements for growing plants indoors and learn the basics of several different hydroponic systems. They will explore how indoor agriculture is increasing sustainability in our region and discuss how locally grown produce reaches nearby stores, markets, and restaurants. Through active exploration and hands-on learning, our curriculum offers students greater awareness of rapidly developing technologies and careers in sustainable agriculture.

#### Connections to MDE Academic Standards

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

Energy | Engineering Design | Structure, Function, and Information Processing | Earth Systems | Matter and Energy in Organisms and Ecosystems | Growth, Development, and Reproduction of Organisms



## AGRICULTURE AND OUR CHANGING SOILS

APRIL – NOVEMBER • INDOOR & OUTDOOR • FOURTH – EIGHTH GRADE • 90 MINUTES

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. Through active exploration and hands-on learning, our curriculum offers students greater awareness the effects of human usage on soil and the agricultural practices being used to restore and protect our soils.

### Connections to MDE Academic Standards

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

## AGRICULTURE AND OUR CHANGING WOODLANDS

MARCH – NOVEMBER • INDOOR & OUTDOOR • FOURTH – EIGHTH GRADE • 90 MINUTES

As farms and cities spread in Michigan, our region's ecosystems were altered from forests, prairies, and swamps to our patchwork of largely suburban and urban areas today. In addition to direct human impacts, our changing climate and invasive species are playing key roles in the function and composition of our woodlands. Your students will explore the farm's Sugar Bush and use physical and digital tools to measure the forest's biodiversity, productivity, and ecosystem services using the iTree suite of digital tools developed by the U.S. Forest Service. Through active exploration and hands-on learning, our curriculum offers students greater awareness of the benefits of our local woodlands and the importance of sustainable forestry in facing the many current and future threats to our forests.

### Connections to MDE Academic Standards

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

Structure, Function, and Information Processing | Earth's Systems: Processes that Shape the Earth | Matter and Energy in Organisms and Ecosystems | Earth Systems | Growth, Development, and Reproduction | Human Impacts

## 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 • 90 MINUTES

Inside, students will discover the different species of birds that live around the 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 these study sites to observe, investigate, and record the bird species in each area. Back in the nature center classroom the group will tabulate species found and create graphs to compare and 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.

### 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 • 90 MINUTES

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.

### **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 • 90 MINUTES

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 • 90 MINUTES

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. They will also 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



## 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.

### CHARTER HAYRIDE or SLEIGH RIDE

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 a classroom 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.





# 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.



## 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.

#### Connections to MDE Academic Standards

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.

#### Connections to MDE Academic Standards

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.

#### Connections to MDE Academic Standards

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.

#### Connections to MDE Academic Standards

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



## 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.

### Connections to MDE Academic Standards

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

### 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.

### Connections to MDE Academic Standards

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 LEVEL

### 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

## PRESCHOOL

### EXPLORING NATURE: WINTER WILDLIFE

WINTER • INDOOR & OUTDOOR • PRESCHOOL • 1 HOUR

Young learners will get a chance to explore the trails searching for tracks and other signs of winter wildlife. Students will be introduced to some animals that stay active during the winter, those who migrate and those who hibernate.

Focus for Early Learners: observation and inquiry, basic needs of living things, seasonal characteristics, adaptations

### EXPLORING NATURE: SPRING HAS SPRUNG

SPRING • INDOOR & OUTDOOR • PRESCHOOL • 1 HOUR

Spring brings new life, colors, smells, and sounds! Our younger learners will experience our trails while being introduced to the wildlife and plants growing up during this time. In the Nature Center we'll look at differences between bird eggs and dive into the frog life cycle.

Focus for Early Learners: observation and inquiry, life cycles, seasonal characteristics, habitats

### EXPLORING NATURE: FALL INTO NATURE

FALL • INDOOR & OUTDOOR • PRESCHOOL • 1 HOUR

Young learners will explore the changing colors and weather of the trail. We will discuss what is happening to the plants and how animals prepare for the cold winter season coming up next.

Focus for Early Learners: observation and inquiry, adaptations, basic needs of living things, seasonal characteristics, habitats

## KINDERGARTEN - FOURTH GRADE

### ANIMAL LIFE CYCLES

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

### INCREDIBLE INSECTS

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 discuss 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.

#### Connections to MDE Academic Standards

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





## WILD WINTER

NOVEMBER - FEBRUARY • INDOOR & OUTDOOR • FIRST - FOURTH GRADE • 1 ½ HOURS

Michigan's animals have unique features 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 adapt and survive. Find out just how our animals survive the cold months and what outdoor clues they leave for us to find. On the nature trails, an interpreter will lead students on a search for animal tracks and signs. Participants of this program will create and add to their track ID guide and booklet.

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

### Connections to MDE Academic Standards

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.

### Connections to MDE Academic Standards

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 GROUPS

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.

### Connections to MDE Academic Standards

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 in the Nature Center classroom. Afterwards we'll take a short hike to examine local flora, their habitats and the role they play for wildlife.

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



## FALL INTO NATURE

SEPTEMBER - NOVEMBER • INDOOR & OUTDOOR • FIRST - FOURTH GRADE • 1 ½ HOURS

Fall is a wonderful time of the year, full of changing colors and cooler weather. Join our interpreters while we discuss the many changes that are happening outside. Students will get time to investigate common trees and animals in Michigan and discuss what they do to prepare for the upcoming winter season. Participants of this program will collect leaves to add to their own leaf booklet and ID guide.

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### Connections to MDE Academic Standards

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

Interdependent Relationships in Ecosystems | Structure, Function and Information Processing From Molecules to Organisms: Structures and Processes: Structure & Processes

## 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.

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

### INSECT INVESTIGATIONS

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.

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### Connections to MDE Academic Standards

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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

## NATURE DETECTIVES

FALL & WINTER • INDOOR & OUTDOOR • THIRD - FIFTH GRADE • 2 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. During the 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).

### Connections to MDE Academic Standards

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

## 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 a nature center program for an additional fee; please add a minimum 45 minutes to your program if scheduling additional activities.

### 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

To enhance your experience, consider ULTIMATE VOYAGEUR EXPERIENCE at your school from the Educational Outreach Programs.

## 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.

### 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





## ECOSYSTEMS: WETLANDS AND THEIR ROLES

SPRING - FALL - INDOOR & OUTDOOR - SEVENTH - TWELFTH GRADE + COLLEGE - 2 HOURS

Wetlands play an important role in an ecosystem, Lake St. Clair and its surrounding wetlands are no different. During this 2-hour program we will discuss the important functions of wetlands, explore swamps, cattail, and coastal marsh habitats. Students will hear about conservation and mitigation efforts made in the park and how that has impacted the people and the wildlife in the area. We will also introduce a threatened Michigan species inside the Nature Center before the guided nature walk.

### 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, 5-LS2.A, 5-LS2.B, MS LS2 1, MS LS2 3, MS LS 2 4, HS LS2 6, HS LS2 7

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

## SALMON\* IN THE CLASSROOM: SALMON RELEASE AND WETLAND EXPLORATION

APRIL 15 - MAY 15 - INDOOR & OUTDOOR - THIRD - TWELFTH GRADE - 1 ½ HOURS

After successfully raising your salmon\* for release, join Nature Center staff to explore the shores of Lake St. Clair and its coastal wetland habitat. We will discuss the importance of wetland habitats to salmon as well as many other species found in the park and lake. Students will have an opportunity to walk along the Point Rosa Marsh Boardwalk and nature trails to see the wildlife that calls our park home.

\*Sturgeon in the Classroom participants, please call the nature center to schedule and coordinate a sturgeon release date and program!

### 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, 5-LS2.A, 5-LS2.B, MS LS2 1, MS LS2 3, MS LS 2 4, HS LS2 6, HS LS2 7 |

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





A photograph of the Oakwoods Metropark Nature Center building, a modern structure with large glass windows and a dark roof, surrounded by trees with autumn foliage. The building is partially obscured by a white diagonal line that separates the image from the green background below.

# 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.

#### Connections to MDE Academic Standards

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.

#### Connections to MDE Academic Standards

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.

#### Connections to MDE Academic Standards

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.

#### 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

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.

### Connections to MDE Academic Standards

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

## 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.

### Connections to MDE Academic Standards

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, MESS3-1, 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**

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 - 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

### SEASONAL NATURE DISCOVERY

YEAR ROUND • INDOOR & OUTDOOR • PRESCHOOL- THIRD GRADE • 1 - 1 ½ Hours

Our most-requested program! Students will learn about some of the nature center's animals and their adaptations to surviving Michigan's changing seasons. Then, we'll head outside to explore the sights, sounds, and signs of the seasons; using our senses to observe the clues that animals leave behind, the ways that plants change throughout the year, and to enjoy being in a true four-season climate.

#### 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

### SPRING TO LIFE

SPRING • INDOOR & OUTDOOR • PRESCHOOL – THIRD GRADE • 1 - 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 • 3-3 ½ 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

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.

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

### 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

## Spring Adventure

SPRING • INDOOR & OUTDOOR • KINDERGARTEN – FIFTH GRADE • 3 – 3 ½ HOURS

Bring your students to experience the sounds and smells of spring. Students will take a short hike to observe the life cycles of birds and amphibians. Along the way, they'll get a chance to see, feel and smell different plants as they learn about their life cycles and role in food chains. Then students will dip a net into the pond to catch and identify macroinvertebrates and examine insect life cycles. Students will create a frog life cycle with paint stamps on a t-shirt to take home. One or two classes (maximum of 50 students) may be scheduled for this program.

### Connections to MDE Academic Standards

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

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





## TALES AND TAILS

MARCH • INDOOR & OUTDOOR • KINDERGARTEN - THIRD GRADE • 1 1/2 HOURS

March is Reading Month! Celebrate literacy on the move with a seasonal story, hike, and take-home craft. We'll take our book with us as the pages come to life on the trails and habitats of Stony Creek. Students will make observations, search for signs of wildlife, and connect their reading to real life.

### Connections to MDE Academic Standards

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

## AN INSECT'S LIFE

SPRING, SUMMER, FALL • INDOOR & OUTDOOR • KINDERGARTEN - FOURTH GRADE • 1 1/2 HOURS

Students will discover this branch of the Arthropods through grade-level appropriate exploration. Insect life cycles, adaptations, and habitats 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.

### Connections to MDE Academic Standards

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 • 1 1/2 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.

### Connections to MDE Academic Standards

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 – TWELFTH GRADE • 2 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. Older students will key out various aquatic macroinvertebrate species and use microscope to make further observations of their adaptations and characteristics. The vernal pools are most active in early spring, later pond programs will focus on the permanent pond

### Connections to MDE Academic Standards

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.

### Connections to MDE Academic Standards

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

## PREDATOR PREY DISCOVERY

YEAR ROUND • INDOOR & OUTDOOR • THIRD – EIGHTH GRADE • 1.5

Explore the adaptations of Michigan's predator and prey species, how they co-exist in the park, and how to recognize their unique features. 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. Outdoors, students will look for sign of mammals in the park and the clues that they leave behind.

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



## VOYAGEUR CANOE EXPERIENCE

MAY - SEPTEMBER • 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. Onshore discovery activities can be added to extend student learning for an additional fee

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### Connections to MDE Academic Standards

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**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

To enhance your experience, consider ULTIMATE VOYAGEUR EXPERIENCE at your school from the Educational Outreach Programs.

## WINTER ADVENTURE: SURVIVAL

WINTER • INDOOR & OUTDOOR • FOURTH – TWELFTH 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.

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### Connections to MDE Academic Standards

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

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

## WATER ALL AROUND US

FALL AND SPRING • INDOOR AND OUTDOOR • FOURTH - TWELFTH GRADE • 1 ½ - 2 HOURS

Where does the water go when it rains and why does it matter? Students will explore the journey of a water droplet and where all the water in the world can be found. A hike along Stony Creek showcases our local watershed and how water, landscapes, and humans all interact to impact our watersheds. Optional Extensions: Landscapes and Landforms focuses on the glaciers and geological processes that shaped our landscapes.

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### Connections to MDE Academic Standards

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**MICHIGAN SCIENCE STANDARDS (MSS):** 2-ESS2-3 \*MI, 2-ESS2.A, 2-ESS2.B, 2-ESS2.C, HS ESS2, HS ESS3 4, HS ETS1 1

Earth's Systems: Processes that Shape the Earth | Human Sustainability | Engineering Design

## LANDFORMS AND LANDSCAPES

YEAR ROUND • INDOOR AND OUTDOOR • FOURTH - TWELFTH GRADE • 1 ½ - 2 HOURS

How and why does Michigan look the way it does? Let's explore the way that glaciers move, how they shaped the landforms we see today, and the geological processes that are still at work all around us. Indoors, students will learn about how, when, and where the glaciers shaped the landscape around them. Outdoors, we'll discover a variety of present-day glacial landforms including kames, kettles, and moraines along our Landscape Trail.

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### Connections to MDE Academic Standards

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**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





# WOLCOTT MILL METROPARK FARM CENTER & HISTORIC CENTER

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

The Wolcott 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 experience 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.

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.

## PRESCHOOL

### STORYTIME ON THE FARM

APRIL - OCTOBER • OUTDOOR • PRESCHOOL • 1 HOUR

The Storytime on the Farm 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. Consider an optional add-on to enhance your visit. See program add-ons below.

## PRESCHOOL - SECOND GRADE

### 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. Consider an optional add-on to enhance your visit. See program add-ons below.

#### 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

## PRESCHOOL - TWELFTH GRADE

### FREE-RANGE FARM TOUR

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

This experience is for groups of 100 students or more. Students will explore the Farm Center and visit the different animal barns at their own pace. Farm Center staff will be on hand in each barn to provide information about what the students are experiencing, answer student's questions, and allow students the opportunity to interact with some of the farm's animals. Consider an optional add-on to enhance your visit. See program add-ons below.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, 1-LS3-1, K-2-ETS1-1, 3-5-ETS1-1

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





## FARM EXPLORATION

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

Students will have the opportunity to explore the farm at their own pace. Visit the different animal barns, watch the cows being milked (morning session only), and spend time at the playground and picnic area in this non-structured farm experience. Consider an optional add-on to enhance your visit. See program add-ons below.

## A BUNNY OF A DIFFERENT COLOR: RABBIT GENETICS EXPLORATION

YEAR-ROUND • INDOOR & OUTDOOR • KINDERGARTEN – TWELFTH GRADE • 1 HOUR

Mathematics and chance come together as we roll the dice on bunny genetics! What color is our rabbit? What alleles lined up to make it look like that? Come explore the basics of 5 different genetic loci and see what sort of phenotype they produce! Meet our resident rabbits and decipher what their genetic code might look like.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 1-LS3-1, 3-LS3-1, HS-LS3-1

Plant and Animal Structures – Parents and Offspring | Inheritance and Variation of Traits | Chromosomal Inheritance

## SCIENCE ON THE FARM - POO DONE IT?

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

Everybody poops. And we have an abundance of poop on the farm. Why do different animals poop the way they do? What can we learn from their poop? What do we do with the poop and what impact does poop have on the environment? It's a dirty job...but somebody has to do it! Get ready to learn more than you ever wanted to know about poop.

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### Connections to MDE Academic Standards

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

Internal and External Structures | Environmental Matter Cycling | Interacting Body Systems | Interacting Body Systems | Feedback Mechanisms and Homeostasis

## SCIENCE ON THE FARM - FORAGE DIVERSITY EXPLORATION

MAY - OCTOBER • INDOOR & OUTDOOR • SIXTH – TWELFTH GRADE • 1 - 1 ½ HOURS

Take a walk out into our hay field with your tools and discover the diverse plants that grow there. What did we plant there? What is a weed? Which plants provide our farm animals with the nutrients they need and what invaders have taken over space? How does diversity play a role in the health of the entire farm? Take home your own "planting" and see what grows in our natural seedbank under the field.

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### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): MS-LS2-5, MS-LS2-2, MS-LS4-4, HS-LS2-2, HS-LS4-5

Biodiversity and Ecosystem Services Solutions | Interdependent Relationships in Ecosystems | Natural Selection | Biodiversity and Populations in Ecosystems | Environmental Change – Speciation and Extinction





## SCIENCE ON THE FARM - COW GENETICS

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

Students will learn all about choosing genetics to improve our dairy herd. What are genotypes and phenotypes? How do we select create the best cow and why does it matter? Get a supplemental science lesson with a hands-on experience partially indoor classroom style, and partially outdoor observing cows. Learn about the impact genetic selection has on animals, production, and the environment.

### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): MS-LS4-5, MS-ESS3-5, MS-LS1-5, HS-LS3-1, HS-ESS3-5

Artificial Selection | Causes of Global Warming | Environmental and Genetic Growth Factors | Chromosomal Inheritance | Climate Change and Future

## KINDERGARTEN - THIRD GRADE

### MICHIGAN SETTLERS

APRIL - JULY • OUTDOOR • KINDERGARTEN – THIRD GRADE • 1 ½ HOURS

Students will discover what early settlers to Ray Township would have encountered as they worked to turn rustic wilderness into valuable farmland. Learn about the history of the Grist Mill, while engaging in a variety of hands-on activities early settlers would have experienced. From candle dipping to butter making, grain milling and more, students will learn how all these skills were critical to the survival of the local community.

### Connections to MDE Academic Standards

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)

## THIRD - FIFTH GRADE

### FOOD AND FIELDS

AUGUST - 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



## THIRD - TWELFTH GRADE

### 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. Consider an optional add-on to enhance your visit. See program add-ons below.

#### 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.

#### TRACTOR-DRAWN WAGON RIDES (YEAR-ROUND):

Students will climb aboard our tractor drawn wagon to take a ride 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. Our wagons are wheelchair accessible.

#### PUMPKIN PATCH WAGON RIDE (OCTOBER ONLY):

Students will climb aboard our tractor drawn wagon to our pumpkin patch. Students will be able to explore the pumpkin patch and pick out a small or mini pumpkin to take home. Wagon rides take an additional 30 minutes per group, maximum group size 35 people. Weather permitting. Our wagons are wheelchair accessible.

#### BUTTER MAKING (APRIL - OCTOBER):

Students will turn heavy cream into butter with this hands-on activity. Butter making takes an additional 30 minutes per group, maximum group size 35 people.

#### MAPLE SUGARING (MARCH ONLY):

*\*Only available as part of the Farm Exploration tour.*

Students will climb aboard a tractor drawn wagon ride for a visit to our Sugar Shack. Once there, students will learn the changes in maple sugaring through time from the native tribes to modern day. Students will also learn about the parts of a tree and their function, how to correctly identify a Sugar Maple using various markers, discover why Sugar Maples are the best source for syrup, observe the proper tapping technique to preserve the health of the tree, and see how a wood-fired evaporator turns maple sap into delicious maple syrup. Large groups may require extra time. Weather permitting. Our wagons are wheelchair accessible.

#### GREENHOUSE EXPLORATION (APRIL - JUNE):

*\*Only available as part of the Farm Exploration tour.*

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. 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.

#### PUMPKIN PATCH AND CORN MAZE WAGON RIDE (OCTOBER ONLY):

*\*Only available as part of the Farm Exploration tour.*

Students will climb aboard our tractor drawn wagon to our pumpkin patch. Students will be able to explore the pumpkin patch and pick out a small or mini pumpkin to take home. In addition, students will have access to explore our 5 acre corn maze. Large groups may require extra time. Weather permitting. Our wagons are wheelchair accessible.



# 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 is 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: [mike.broughton@metroparks.com](mailto:mike.broughton@metroparks.com) 810-227-2757 X6639

DETROIT PUBLIC SCHOOLS COMMUNITY DISTRICT: [sabrina.deschamps@metroparks.com](mailto:sabrina.deschamps@metroparks.com) 810-227-2757 X6660

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.

### THE PLANTS WE EAT

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

Preschool through first grade students will have fun learning about the plants we eat and how they travel from place to place. We will act out ways that seeds are dispersed, we will discover which parts of the various plants we eat, and we will learn about the different animals and their jobs that make it all possible. Through songs, a puppet show, and other engaging activities, students will be left with a greater understanding of the food chain, as well as how our food makes it to us from the farm to the table.

#### Connections to MDE Academic Standards

MICHIGAN SCIENCE STANDARDS (MSS): K-LS1-1, K-ESS2-2, K-ESS3-1, 1-LS3-1

### 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.

#### 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.

#### 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

#### 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.

### 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.

### 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.

### 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.

### 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.

#### 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 precontact pump drills. To enhance your experience, consider WOODLAND INDIAN WAYS at Lake Erie Marshlands Museum or Oakwoods Nature Center, and MAPLE SUGARING programs at many Metroparks nature centers.

#### Connections to MDE Academic Standards

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 1800s, 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.

#### Connections to MDE Academic Standards

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

### STARS AND STORIES

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

When we look up at the night sky, the stars look like bright dots. If you connect the dots, you will see shapes, animals and even people. Young astronomers will learn about the stories behind the constellations by acting out the rescue of the Princess Andromeda. Then we will check out seasonal constellations and see what's up tonight by visiting the Metropark's inflatable CUBEX planetarium.

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#### Connections to MDE Academic Standards

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MICHIGAN SCIENCE STANDARDS (MSS): 1-ESS1-1, 5-ESS1-2 Space Systems

Patterns and Cycles | Space Systems: Stars and the Solar System

MICHIGAN MERIT CURRICULUM: ARTS (ART): T.I.1.1, T.I.1.2, T.I.2.1, T.I.2.2, T.I.3.1, T.I.3.2, T.I.4.1, T.I.4.2, T.I.5.1, T.I.5.2

Apply Skills and Knowledge to Perform in the Arts

### 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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## 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.

### Connections to MDE Academic Standards

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.

### Connections to MDE Academic Standards

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

## WEATHER SCIENCE

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

Students will learn the difference between weather and climate and explore weather phenomena through photos and demonstrations. Using data loggers and other tools, students will measure weather conditions, including temperature, wind speed, humidity, light levels, and more. They will then use a weather map to present data.

### Connections to MDE Academic Standards

Michigan Science Standards (MSS): 3-ESS2-1, 3ESS2-2, 3ESS3-1, 5-ESS2-1, MS-ESS2-5, MS-ESS3-5, MS-ESS2-4, MS-ESS3-2, MS-ESS3-3

Weather & Climate | Earth's Systems | Human Impacts

## 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.

### Connections to MDE Academic Standards

## 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 “Eggsplore” 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.

#### **Connections to MDE Academic Standards**

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.

#### **Connections to MDE Academic Standards**

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! This is a great follow-up to any of the other Ecosystem Exploration programs. To enhance your experience, consider any of the ECOSYSTEM PROGRAMS at Indian Springs Metropark.

#### **Connections to MDE Academic Standards**

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





# VIRTUAL PROGRAMS AND ONLINE RESOURCES

## Virtual Programs

Add an interactive presentation to your students' day with a virtual "visit" from the Metroparks. Our virtual presentations are meant to be just as valuable as in-person experiences but may be a better option if you are short on time or travel funds. Options include live presentations from Metroparks Interpreters as well as pre-recorded programming. Some programs also offer additional hands-on traveling trunk materials or video content to enhance and extend the curriculum.

See all the details in the Synchronous Program Guide at <https://www.metroparks.com/education/#SCHOOLPROGRAMSANDFIELDTRIPS>.

## Online Resources

We also have companion material and loads of additional education content in our Virtual Resources library! From our educational programming video series to apps and scavenger hunt ideas for your park field trips, you'll find plenty of resources to incorporate standards-aligned, hands-on learning activities into your classroom.

<https://www.metroparks.com/education/#VIRTUALRESOURCES>