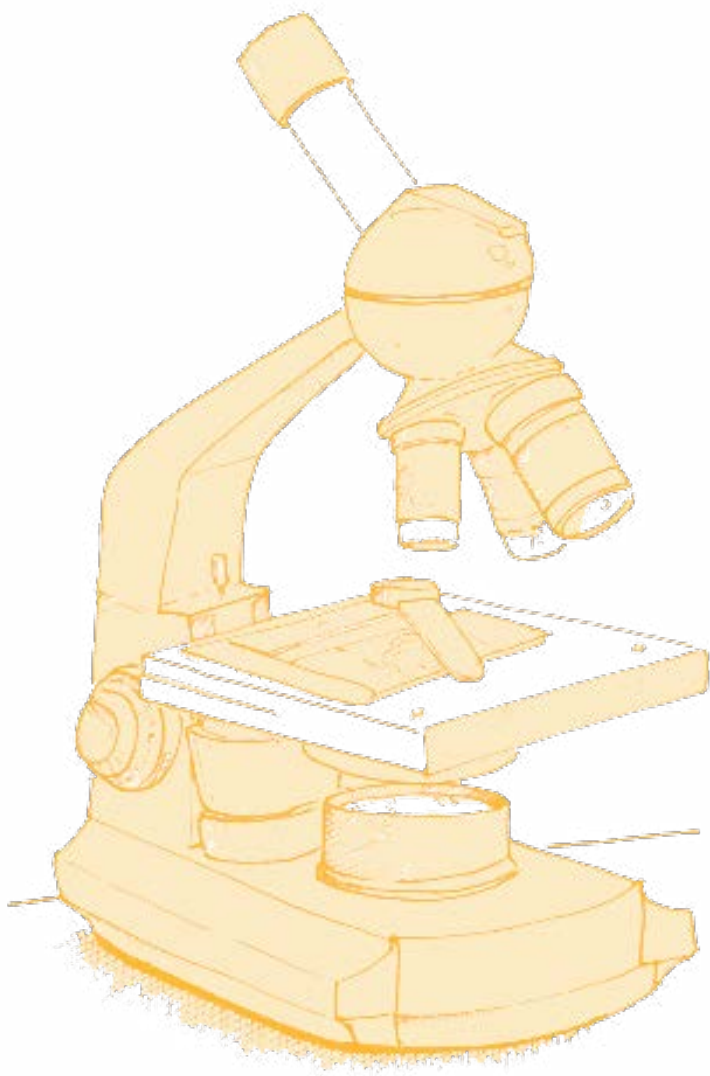


INDIAN SPRINGS METROPARK
**ENVIRONMENTAL
DISCOVERY CENTER**



SCHOOL PROGRAMS



Use science to explore nature at the Indian Springs Environmental Discovery Center! Your students will experience engaging, interactive and educational programs. Program content and activities are adjusted to meet the needs of preschool through high school. Pre- and post-visit materials are available upon request.

GETTING STARTED

Group reservations can be made by calling 248-625-7280 between 9 a.m. and 5 p.m. daily to schedule. All reservations must be made at least two weeks in advance.

To schedule a program, have the following information ready:

- Date and time you would like to visit and an alternate date
- Length of field trip (1 – 4 hours)
- Number of children and adults
- Field trip topic and activities you would like to schedule
- School address, email address and phone number
- Accommodations necessary for students with special needs

COST

IN-PARK

- Programs are \$3 per student per hour (\$6 maximum), \$45 minimum charge per hour per group
- For schools outside of Livingston, Macomb, Oakland, Washtenaw and Wayne Counties, programs are \$4 per student per hour, \$60 minimum charge per group.
- Planetarium Programs are an additional \$2 per child
- Vehicle Permit required for park entry, excluding school buses.

EDVENTURE

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).

CONFIRMATION

A confirmation email will be sent after you schedule an appointment.

CONTENT EXPECTATIONS

All programs meet the Michigan Grade Level Content Expectations (GLCE), the Next Generation Science Standards and support Common Core standards.

FACILITIES & EQUIPMENT

- 12-station computer/environmental science lab with digital microscopes (4th grade & up)
- Two additional classrooms
- Underwater pond viewing room
- 60 acres of prairie & wetland habitat restoration
- Six miles of trails through forest and swamp ecosystems
- Portable weather stations
- Dataloggers, probes and sensors (4th grade & up)
- GPS units and GIS software (4th grade & up)
- Lab glassware and other equipment
- Projection equipment

OUTREACH OPPORTUNITIES

Available at your school:

- Inflatable planetarium programs
- EDventure nature programs
- Invite an interpreter to your school fair/information night

TEACHER WORKSHOPS

- Water Quality
- Project WILD Certification
- Growing Up WILD Certification
- Project Learning Tree Certification

GREEN SCHOOL CERTIFICATION PROGRAMS

Available at the EDC or at your school:

- Be a Good Nestbox Landlord
- Endangered & Threatened Species

YOUR OUTDOOR CLASSROOM

- Service & research project location for everyone from NHS students to master gardeners
- College instructors: bring your classes for research opportunities

These programs are designed especially for children ages 3 – 5 years old. Additional environmental topics are available upon request.

FALLING FOR NATURE

1½ HOURS · FALL

- Signs of fall hike
- Leaf collection booklet
- Make leaf print T-shirts

OPTIONAL: Hayride

additional fee, extra ½ hour

PONDERING WETLANDS

1½ HOURS · SPRING

- Pond life presentation
- Make amphibian life cycle T-shirts
- Wetland hike

OPTIONAL: Meet live animals

extra ½ hour

ANIMALS IN WINTER

1½ HOURS · WINTER

- Interactive presentation
- Make animal track T-shirts
- Wetland hike

OPTIONAL: Meet live animals

extra ½ hour



Create your own field trip from 1 – 4 hours based on the following programs:

ECOLOGY OF THE FOREST FLOOR

2½ HOURS

- Interpretive hike to the Huron Swamp forest
- Forest floor search and sample
- Microscope Lab: The Hidden Life of Dirt
- Interactive games and demonstrations

FOCUS: ecosystem interactions · classification · environmental adaptation · survival · human impact

ECOSYSTEM EXPLORATION

1½ – 2 HOURS

- Ecosystem comparison hike to wetland, prairie and forest (with or without data collection)
- Ecosystem Zoology: environmental adaptations of animals
- Interactive games

Middle and high schoolers can add:

- Environmental chemistry
- Test for chemical and biological parameters including pH, dissolved oxygen and temperature

FOCUS: ecosystem interactions · classification · environmental adaptation · survival · human impact

WINTER ECO-ADVENTURE

1½ – 2 HOURS

- Animal tracking hike/scavenger hunt
- Study survival adaptations of animals and plants
- Measure and compare weather conditions in relation to snowpack

FOCUS: ecosystem interactions · classification · environmental adaptation · survival · weather measurement

WETLANDS & WATER QUALITY

2 – 3 HOURS · UPPER ELEMENTARY

- Wetland Comparison Hike/ Wetland Scavenger Hunt (with or without data collection)
- Microscope Lab
- Pond-dipping
- Visit the Underwater Pond Dome
- Interactive games and demonstrations

Middle and high schoolers can add:

- Environmental chemistry
- Test for chemical and biological parameters including pH, dissolved oxygen and temperature

FOCUS: life cycles · structures & functions · classification · environmental adaptation · water quality · ecology · human impact

ANIMAL CLASSIFICATION

1½ – 2 HOURS

- Animal Classification presentation
- Hands-on study of the five vertebrate families (live animals plus skins and skulls)
- Interactive games and demonstrations
- Make animal track stamp T-shirts (early elementary)

FOCUS: structures & functions · classification · environmental adaptation

MAPLE SUGARING

1½ HOURS · MARCH

- Learn sugaring techniques from Native American times to present day
- Hike to the sugarbush
- Tap a tree and see the boiling process
- Taste pure maple syrup

FOCUS: American Indian stories · American Indian & settler interactions & relationship to environment · plant parts & functions · states of matter · weather · seasons · movement of goods in a community

AUTUMN ADVENTURE

1 – 1½ HOURS

- Fall hike and leaf collection
- Make leaf stamp T-shirts

OPTIONAL: Hayride

additional fee, extra ½ hour

FOCUS: plant structures & functions · plant life cycles

PLANT PARTS & CYCLES

1½ HOURS

- Introduction to how plants work
- Seed dispersal activity
- Plant discovery hike
- Make plant life cycle stamp T-shirts

OPTIONAL: Plant heredity

FOCUS: plant structures & functions · plant life cycles · environmental adaptation

INCREDIBLE INSECTS

1 – 2 HOURS

- Introduction to insects and their life cycles
- Catch and release with sweep nets
- Examine aquatic insects
- Make insect life cycle stamp T-shirts (early elementary)

FOCUS: life cycles · structures & functions · classification · environmental adaptation

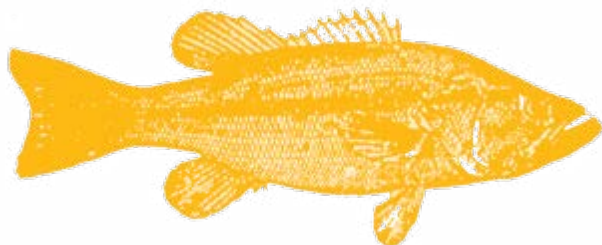
POND STUDY

1 – 2 HOURS · EARLY ELEMENTARY

Wetland hike/scavenger hunt

- Pond-dipping
- Pond critter study
- Visit the Underwater Pond Dome

FOCUS: life cycles · structures & functions · classification · environmental adaptation



MICHIGAN GEOLOGY: FOSSIL FOCUS

2 HOURS

- Fossil hike
- Interactive demonstration:
How to Become a Fossil
- Compare fossils with
organisms alive today
- Hands-on fossil ID

FOCUS: fossil evidence of the history of the earth · changes in the environment & organisms over time

MICHIGAN GEOLOGY: SOIL SCIENCE

2 HOURS

- Soil core sampling and
comparison
- Soil survey: type, moisture level,
temperature, pH
- Microscope lab:
The Hidden Life of Dirt

FOCUS: renewable natural resources · human impact

MICHIGAN GEOLOGY: IMPACT OF GLACIERS

2 HOURS

- Glacier hike: Evidence Left Behind
- Glacier lab: Glaciers in Motion
- Glacier presentation:
Michigan Landforms,
Weathering and Erosion

FOCUS: changes in the earth's surface · water movement · impact of glaciers

THE SURFACE OF THE EARTH

1½ – 2 HOURS

- Hike to different landforms
- See surface changes in action
(erosion, etc.)
 - › Stream table demonstration
- Interactive games/demonstrations

FOCUS: natural resources · types of landforms · changes of the earth's surface

MICHIGAN GEOLOGY: ROCKS!

2 – 2½ HOURS

- Rock cycle simulation
 - › Hands-on igneous, metamorphic
and sedimentary rock samples
- Mineral scavenger hunt geology
hike to look for rock types, surface
changes and landforms

FOCUS: changes in state · rock formation · plate tectonics · fossils · geologic time

WATER CYCLE

2 – 2½ HOURS

- “Liquid, Solid, Gas” interactive
demonstration
- Water movement
 - › Stream table demonstration
 - › Hike to ponds, stream
and wetlands
- Visit the Underwater Pond Dome

FOCUS: water as a natural resource · water movement · bodies of water & how water flows into them · states of matter

INFLATABLE CUBEX PLANETARIUM

2 HOURS · 2ND GRADE & UP

SUBJECT TO AVAILABILITY

- Understand patterns of objects in the sky
- Compare the sun, moon and Earth
- Explore Earth's day, night and seasonal cycles
- Make a constellation T-shirt

FOCUS: observable characteristics · predictable patterns of movement

WEATHER OF THE SEASONS

1 – 1½ HOURS · EARLY ELEMENTARY

- Make and use simple tools to measure weather
- Understand basic weather concepts
- Make a weather T-shirt

FOCUS: temperature · seasons · precipitation · clouds · wind direction & speed

ENERGY IN MOTION

1 – 1½ HOURS · 3RD GRADE+

- Learn the different types of energy through activity stations
 - › Measure and harness energy
 - › Create a battery
 - › Follow energy transformations
 - › Examine light energy
- Calculate your environmental footprint
- Learn how energy gets from coal to your light bulb
- Sustainability scavenger hunt
 - › spotlighting the “green” features of our building

FOCUS: gravity · force · speed · forms of energy & light

WEATHER & CLIMATE

1 – 2 HOURS · UPPER ELEMENTARY

- Participate in a demonstration to learn basic weather concepts
- Measure weather and investigate micro-climate with traditional and high-tech instruments
- Learn about fronts and forecasting
- Read and make weather maps
- Explore human effects on weather (acid rain, pollution, global climate change)

FOCUS: weather measurement · human impact

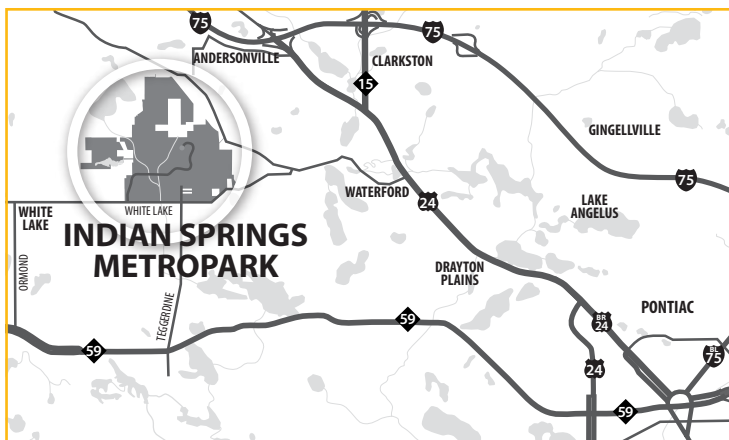
NOAA WEATHER STATION TOUR & MEET A METEOROLOGIST

1 HOUR

- Visit the nearby southeast Michigan severe weather forecasting station

May be added to “Weather & Climate” program. EDC staff will coordinate your appointment. 25 students at a time maximum.





INDIAN SPRINGS METROPARK



5175 Indian Trail, White Lake, MI 48386

FROM M-59

WESTBOUND

Travel west on M-59 to Tegardine Rd. Turn right and go 3 miles north to White Lake Rd. Turn left and go 1 mile to the park entrance, on your right.

EASTBOUND

Travel east on M-59 to Ormond Rd. (about 11 miles from US-23). Take the boulevard turn (past Ormond Rd. and around the median) to go north on Ormond Rd. Go 3 miles on Ormond Rd. to White Lake Rd. Turn right and go 2 miles to the park entrance, on your left.

FROM I-75

Take exit #93. Go south on Dixie Hwy. 1¼ miles to White Lake Rd. Turn right. Go about 2 miles to Andersonville Rd. Turn right and go ½ mile to White Lake Rd. Turn left and travel about 4 miles to the park entrance, on your right.

INSIDE THE PARK

Go about 2½ miles along the park road, past the Golf Course and the Meadowlark Picnic Area. The Environmental Discovery Center entrance will be on your left. If you continue along the park road, you will reach the Park Office.



Call
248-625-7280



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