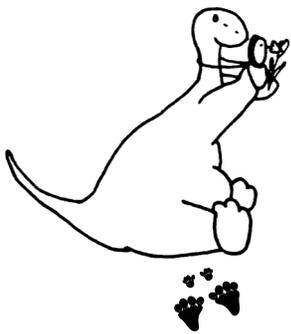


Dinosaur Hill Nature Preserve
333 North Hill Circle, Rochester MI 48307

Field Trip and Outreach School Year



Educational programs that bring the
natural world to life
for your students.

Register early so you don't miss out!

Your guide to adventure and discovery...

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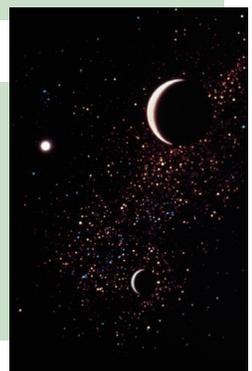
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Note on Outreach Programs

Many programs can also be offered at your school site. Look for this symbol (○) next to programs that can “travel” to you. This is a great way to experience a Dinosaur Hill program without the hassle of busses and parent drivers. An additional mileage charge may be applicable for non-RCS schools. We can adjust the length of the program to fit your needs and some program content may change depending on your specific site and needs.

Check Insert:

for programs in our new
classroom-sized portable
planetarium!





About Dinosaur Hill and Our Educational Approach



Dinosaur Hill Nature Preserve is a nonprofit, environmental education organization located in the City of Rochester. We have been providing area schools with quality programs for over forty years. Our experience, combined with dedicated, skilled naturalists, allow us to offer a wide selection of high-quality programs. Most importantly, our naturalists want you and your students to learn, enjoy and become inspired.

Should you choose to bring your students to the preserve you will experience our award winning nature center - a small treasure of unique displays, artifacts and observation bee hive. Your students will spend time on our trails exploring our 16 acre preserve with a variety of wildlife and plant habitats...take a walk over the bridge to view the beautiful Paint Creek and enjoy the serenity of nature. Each time you visit the preserve you will discover something new.

If you choose to have Dinosaur Hill visit your classroom you will find our highly trained naturalists and wide variety of hands-on programs will engage your students and make the most of the experience...it certainly won't be "just another day at school"!

Our programs are pedagogically designed to meet the educational needs of your students, as well as to meet several state and local educational benchmarks and standards (a great way to prepare for the MEAP test. Benchmark programs are identified in this brochure and at our website: www.dinosaurhill.org.



Program Information

- ⇒ Programs are offered by grade level (we can adapt a program if you have a "split" grade level).
- ⇒ Some programs can only take place during certain months. Any restrictions on timing are noted in the individual program descriptions.
- ⇒ Program descriptions are general and meant to give you an idea of the activities and topics you can expect. Occasionally, some minor modification may be made in case of foul or severe weather and late arrival.
- ⇒ The length of the program follows the description. The majority of our programs last one and a half hours.

A Dinosaur Hill experience Includes:

- Enthusiasm about science, nature and social studies
- Concepts covered in classroom discussions
- Access to materials your school may not have
- Real life examples of classroom ideas
- Hands-on exploration and experiments
- Techniques to reach students with varying learning styles



Want a topic or activity you don't see listed? Have a question or concern?
Contact us today! 248-656-0999 or info@dinosaurhill.org

Reserve Your Program Today!

Dinosaur Hill programs run rain or shine, please dress for the weather. If severe weather threatens, we will stay inside. If Rochester Community Schools close due to weather, Dinosaur Hill will also close.



Preschool

Maple Sugaring (1 hr.) (mid-Feb. to mid-March) Tap a tree, challenge your taste buds with a taste test, visit our log cabin, discuss the history of maple sugaring, learn how a tree makes sap and take sap back to the classroom to boil. ○

Dinosaurs (1.5 hrs.) (Sept.-Oct and April-June.) Look at and touch fossils. Can you guess what each one was? Outside we dig for dinosaur bones, role-play dinosaur behavior, measure dinosaurs and find ancient plants.

Signs of the Season (1 hr.) (All Year) Children use their senses to observe seasonal changes. They discover animal tracks, listen for bird calls, feel bark, search for leaves or tiny insects in the snow depending on the time of year.

Go Nuts! (1 hr.) (All Year) Find out what it's like to be a squirrel during this sometimes silly, always fun program about our favorite backyard friend. We'll make a treat to offer the squirrels in your yard! ○

Furry, Hairy, Fuzzy (1 hr.) (All Year) Feel furs of many different animals, look at their teeth and learn about the different critters that share our world. We'll make a very special "touch book" to take home. ○

Eggs & Nests (1 hr.) (March to April) Find out about animals that lay eggs including birds, reptiles, and insects. Observe differences between eggs. Look at bird nests and make a bird nest building material bag. ○

Crickets (1 hr.) (All Year) Search for crickets, practice cricket calls, meet real crickets and look at them up close and see if you can jump as high as a cricket. Make and take home a lucky cricket cage. ○

Go Buggy (1 hr.) (All Year) Students learn what makes an insect an insect. Do all insects have wings? What do they eat? Get a close up look at mounted and live insects then we'll transform a student into an insect in our 'Build-a-Bug activity. ○

Owls are a Hoot (1 hr.) (All Year) Students learn to talk like an owl, see owl mounts up close, make an owl mask and take a walk to look for owl habitat. ○

You can register by e-mailing us at:
info@dinosaurhill.org

You may also reach us by telephone at
(248) 656-0999.

Our hours during the school year are Tuesday through Friday 9-4. During the summer, we are open Monday -Friday 9-3.

Fees are \$5.00 per person (including adults), there is no charge for the teacher. For all non-RCS schools we require a deposit of \$25.00 with the balance due the day of the program. Payment is by cash or check only. RCS schools do not require a deposit and the total fee is billed directly to the District.

If you cancel less than 1 month in advance of your reservation, a \$25.00 cancellation fee will be applied. This is necessary because we reserve space for your class and will often have to turn away other potential visiting groups.

○ This symbol at the end of a program description denotes programs that we can take to your individual school site. Contact us for details

Kindergarten

Trees (1 hr.) *Sept-Nov and Apr-June.*) Learn the ins and outs of trees. What hangs on them and around them? What do they need to survive, and what becomes of them when they die. Match shapes and colors with real and fun faux leaves. ○

Meets: (L.OL.00.11); (L.OL.00.12); (E.SE.00.11)

Maple Sugaring (1.5 hrs.) *(mid-Feb. to mid-March)* Follow a season by changing the leaves on our traveling tree then learn the basics of tapping. Challenge your taste buds to a taste test. What does sap taste like and how does a tree make it? Visit us and you can tour our log cabin to learn the history of maple sugaring and take sap back to the classroom to boil (if available) ○

Meets: (L.OL.00.11); (L.OL.00.12); (E.SE.00.11)

Wild, Woolly, Wet & Wiggly (1.5 hrs.)*(All year)* How is a worm like a millipede? Is a turtle shell minus the turtle a living thing? Students meet Dinosaur Hill animals two by two, discover similarities and differences, and play an animal guessing game. Outside we'll find more animals, with an emphasis on animals that depend on trees for food or shelter. ○

Meets: (L.OL.00.11); (L.OL.00.12); (E.SE.00.11)

Rock Hounds (1.5 hrs.) *(All year)* What components make up our planet Earth? While inside we'll investigate rocks, sand, and soil. Which parts were once living? Non-Living? What happens when we use a sieve or add water? Check out Dinosaur Hill's extensive rock collection and have fun at our hands-on centers. Outside we'll see glacial boulders, the creek, and we'll take soil samples to compare different areas. Meets: (L.OL.00.11); (L.OL.00.12); (E.SE.00.11) ○

Dinosaurs (1.5 hrs.) *(Sept.-Nov. and April-June)* Take a dino quiz, use a timeline, then see and touch some actual fossils. Outside we dig for dinosaur bones and figure out how they go together. We demonstrate dinosaur behavior, measure the longest dinosaur and search for ancient plants.

Who Lives There? (1.5 hrs.) *(All year)* What are the basic needs of living things? How can you tell living from non-living? Learn all this from the animals and plants inside the nature center using plants and animals you might have at your own home... then we'll hit the trail and learn about the plants and animals that live in each habitat of Dinosaur Hill. See which animal homes we can spot. Meets: (L.OL.00.11); (L.OL.00.12); (E.SE.00.11)



The vast majority of teachers say they'd recommend Dinosaur Hill programs to their colleagues...here's why:

"I was impressed at how knowledgeable each one of the (naturalists) were and also how well all of the (naturalists) related to the students' age level. Excellent!"

"What a wonderful curriculum link! Great pacing, visuals, good questioning. Thank you!"

"This was a fabulous program. The instructors were well-prepared and highly knowledgeable about the material covered. The program goes hand-in-hand with our curriculum."

"This was very beneficial to our curriculum and followed everything the students had learned. The students really enjoyed the presentation."

"This is an outstanding program! Keep up the great work! Thanks."

First grade

Adaptable Animals (1.5 hrs.) (All Year) At indoor “Adaptation Stations” students touch and compare furs, scales, and shells of various animals, play a matching game with animal babies and adults, “make” and compare animal tracks, experiment to see how different bird beaks work. Are all life cycles alike? Let’s compare. Outside we’ll look for animal homes as small as a midge’s and as large as a hawk’s and discuss the characteristics of each animal. (We can focus on life cycles if preferred-just let us know.)

Meets: (L.OL.01.13); (L.LO.01.21); (L.HE.01.11)

Wonderful Weather (1.5 hrs.) (All year) Be a part of our mock weather show. Practice dressing for the weather, observe the sky, make a cloud chart and wind wheel. Learn how to prepare for severe weather. We will also look at tools used to measure temperature, rain, wind, and cloud cover and talk about how the weather and the seasons impact our daily lives. ○

Meets: (E.ES.01.21); (E.ES.01.22); (E.ES.01.23); (E.ES.01.24); (E.ES.01.31)

Maple Sugaring (1.5 hrs.) (mid-Feb. to mid-March)

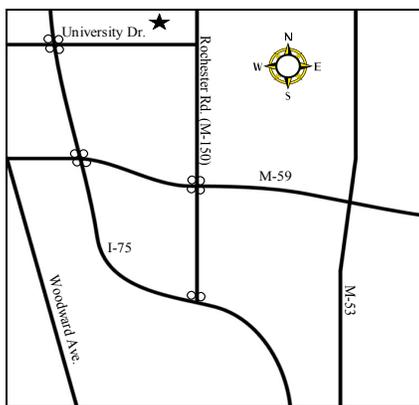
Tap a tree, challenge your taste buds with a taste test, visit our log cabin, discuss the history of maple sugaring, learn how a tree makes sap and take sap back to the classroom to boil (if available). ○

Matter of Fact-(1.5 hrs. (All year) States of matter, magnets and fun with water! Will it float or sink? Will the magnet push or pull? Make your guess and try it out!

Meets: (P.PM.E.1) (P.PM.01.11) (P.PM.E.2) (P.PM.01.21) (P.PM.01.22) (P.PM.E.3) (P.PM.01.31) (P.PM.01.32)

Dinosaurs (1.5 hrs.) (Sept.-Nov. and April-June) Take a dino quiz, use a timeline, then see and touch some actual fossils. Outside we dig for dinosaur bones and figure out how they go together. We demonstrate dinosaur behavior, measure the longest dinosaur and search for ancient plants.

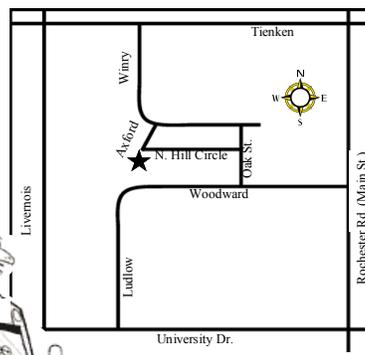
From Out-of-town



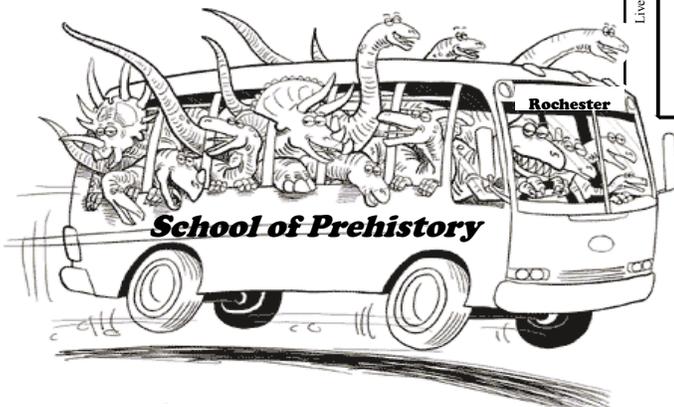
Rochester Road (M-150) is a convenient exit off both I-75 and M-59. Once you’ve exited, follow Rochester Rd. North through the City of Rochester. Reference the “in-town” map below for directions from there.

How to Find Us

From In-town



Just North of downtown Rochester turn left on Tienken Rd (West at the light). Going West on Tienken, look for a side street on the South side called Winry. Follow Winry to Axford Place. Turn Right on Axford Place. Axford Place will dead-end in front of Dinosaur Hill. You can park along the street or in the parking lot to your right.



Second grade

Plant Life Cycles (1.5 hrs.) (All year) We'll plant a seed for the class to take back to school while we learn almost everything there is to know about how a plant goes from seed to plant to compost. What does it need to grow? What are the functions of its parts? How is it a part of the food chain? We will meet Ms. Flower, dissect flowers or fruit and take a close look at the plants on the trail. Meets: (L.OL.02.14); (L.OL.02.22); (L.HE.02.13) ○

Over the Meadow & Through the Woods (Sept. to Oct. & Apr to May) (1.5 hrs.) Outside we follow a map through the woods and meadow and find out which animals and plants live there. We'll see erosion in action, look for signs of the old village dump and discover ways plants disperse their seeds. Students complete a list, which we then use in a Venn diagram activity.

Where in the World (1.5 hrs.) (All Year) From a world globe down to a map of the Dinosaur Hill trail and everything in between, we will discover the wonder of maps. Check out an old map of the city of Rochester from the 1800's. Take a walk on our trails and see if you can map it! Where is the old city dump? Does it have an effect on the nature preserve? How has the preserve changed over the years? Should we protect the preserve or let people build homes and businesses on it?

Meets: Geography

Fantastic Fossils (1.5 hrs.) (All year but outdoor dig portion not available Dec.-Feb.) How and when were fossils formed? Check out Dinosaur Hill's extensive fossil collection. Make your own fossil to take home. Then we'll head out to our ever popular dinosaur dig to discover how scientists use tools and unearth bones to uncover the secrets of the past. We'll even look for 'Michigan' fossils on our limestone trail. ○

Meets: Earth Through Time

Maple Sugaring (1.5 hrs.) (mid-Feb. to mid-March) Tap a tree, challenge your taste buds with a taste test, visit our log cabin, discuss the history of maple sugaring, learn how a tree makes sap and take sap back to the classroom to boil (if available). ○

Dinosaurs (1.5 hrs.) (Sept.-Nov. and April-June) Take a dino quiz, use a timeline, then see and touch some actual fossils. Outside we dig for dinosaur bones and figure out how they go together. We demonstrate dinosaur behavior, measure the longest dinosaur and search for ancient plants.

Fabulous Fluid Earth (1.5 hrs.) (All year) Students will observe an indoor water cycle, a demonstration of how water is distributed on Earth and in what state: solid, liquid or gas. We model a watershed, then become a raindrop flowing through our preserve while discussing animals that live in the vernal pond and creek, viewing the storm drain system in action and observing the "water treatment system" of our wetland. Meets: (E.FE.E.1); (E.FE.02.11); (E.FE.02.12); (E.FE.02.14); (E.FE.E.2)



Elementary School Assembly Programs

Circle of Nature 1 hr. (All Year) Assembly. This entertaining, interactive "game-show" style program is both educational and a lot of fun! Participants will answer questions in six areas of natural history: mammals, birds, reptiles, amphibians, insects and plants. Teams of children spin the wheel and answer the questions.

Fee: \$250

Grades 2-5

This is a great "end of the year" review!

Squares of Life 1.5 hrs. (Sept-Oct & April-June) This is an adaptation of an international program. Students mark off squares outdoors then observe and note everything they can find in their square. After the program, students can log on to the internet to report their findings and compare them with what other children around the world found at their schools!

Fee: call for details

Grades 2-5



Third Grade

Environmental Science (1.5 hrs.) (All Year) Students will gain an understanding that humans are a part of the natural world and their actions influence their environment. They will discover the effects of water pollution, experience food webs hands-on, learn what natural resources are ingredients in common household materials, and discuss how to be stewards to the environment.

Meets (E.SE.03.41); (E.SE.03.42); (E.SE.03.43); (E.SE.03.44); (E.SE.03.51); (E.SE.03.52) ○

Earth Science Explorer (1.5 hrs.) (All year) Using indoor centers discover the earth's make-up. Learn about the forces that tear the earth apart and then rebuild it all over again. Play 'name that earth material'. Then guess what it's used for. What do you mean there's rocks in toothpaste?!? Outdoors we'll discuss the terrain (natural or man-made), look for erosion, and take core samples.

Meets: (E.SE.03.13); (E.SE.03.32); (E.SE.03.14); (E.SE.03.22); (E.SE.03.31) ○

What's for Lunch? (1.5 hrs.) (Sept. to Nov. & April to June) How high up the food chain was your breakfast? Can we really trace all our food energy back to the sun? Should Dinosaur Hill clear out all its dead trees? Students investigate these and other food chain questions by first creating a sample food web. Outside exploration includes turning over logs and leaves to observe plants, animals and fungus to see how they work together to complete the nutrient cycle.

Pioneer Survival (1.5 hrs.) (All Year) Could your students survive the Michigan winter of 1817, the year Rochester was founded? Students role play pioneers, searching for resources in our log cabin museum and in the preserve that will help them "survive" until spring. An excellent complement to the Stoney Creek experience. Meets H3 History of Michigan (H3.0.1, H3.0.3, H3.0.5, H3.0.6, H3.0.7)

People of the Three Fires...the Ottawa, Potawatomi & Ojibwa of the Great Lakes (1.5 hrs.) (All Year) This hands on program is designed to enhance your study of Michigan and its Native American Peoples through the interpretive use of legends, crafts, displays, and food tasting. Meets: SS History of Michigan ○



Fourth Grade

Let's Get Physical (1 hr.) (All year) Students expand their understanding of energy as heat and electricity. Find out how electricity is generated and makes its way to your home and school. The students will play a game with a simple circuit that they make and learn how to make an electromagnet. ○

Meets: (P.EN.04.12); (P.EN.04.41); (P.EN.04.42); (P.EN.04.43); (P.EN.04.51); (P.EN.04.52)

Earth's Water (1.5 hrs.) (Sept. to Oct. & Apr. to June) Students will observe an indoor water cycle, a demonstration of how water is distributed on Earth and a model of water in action. Outside we model a watershed, discuss animals that live in vernal ponds and creek, view the storm drain system in action and observe the "water treatment system" of our wetland.

People of the Three Fires...the Ottawa, Potawatomi & Ojibwe of the Great Lakes (1.5 hrs) (All Year) This hands on program is designed to enhance your study of Michigan and its Native American Peoples through the interpretive use of legends, crafts, displays, and food tasting. ○

Life Cycle Case Studies (2 hrs) (All year) We turn student volunteers into honeybees, and follow them from egg to adult, using props to illustrate changes in their bodies and their roles in the hive. Students take an in depth look at a working honeybee hive and Dinosaur Hill's insect collection. Outside we dissect flowers and investigate plant life cycles, from seed to compost.

Wild World of Weather (1.5 hrs) (All Year) Study the effects of weather, how it influences our lives and how to be prepared for severe weather. Students will learn how different instruments are used to predict weather. ○

Astronomy– Star Sailors Part 1 (1.5 hrs) (All Year) The adventure begins! Learn how the moon rotates and spins around the earth and how the earth rotates and revolves around the sun and how all that movement affects us. We will use our portable classroom sized planetarium with cutting edge *Stellarium* software to enhance your curriculum. Meets: (E.ST.04.11); (E.ST.04.12); (E.ST.04.21); (E.ST.04.22); (E.ST.04.23); (E.ST.04.24); (E.ST.04.25) ○

Fifth Grade

Astronomy- Star Sailors Part 2 (1.5 hrs.) (All Year) Continue the adventure! From the earth's four seasons to the sun and beyond! Learn about the moon's phases, eclipses and its effects on the ocean. Learn about axes, orbits, and gravity. We will use our portable planetarium with cutting edge Stellarium software to go beyond the earth, explore the rest of the solar system and on into the milky way. Meets: (E.ES.05.61); (E.ES.05.62); (E.ST.05.11); (E.ST.05.21); (E.ST.05.22); (E.ST.05.23); (E.ST.05.24); (E.ST.05.25) ○

Wetland Ecosystems (2 hrs.) (Sept. to Oct. & April to June) What is a wetland? Students use wetland metaphors to learn how wetlands act as filters, flood controls, animal/plant nurseries and more. Students survey plant species, test the soil, and observe the terrain. In addition, students will conduct water quality tests on pond and stream water samples and observe aquatic invertebrates. We'll wrap it all up with a short "Not-so-Trivial" quiz.

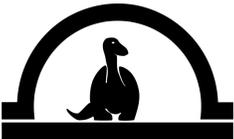
Hydropower (2 hrs.) (Sept. to Oct. & April to June) Students expand their understanding of energy, work and simple machines by assessing the costs and benefits of building a dam to generate electricity. We'll show how the energy of running water can generate electricity and measure stream flow to calculate potential electricity production. Students also measure trees and estimate biomass to complete a fuel wood assessment. Conclusions based on costs and environmental impacts of both technologies are made and students will assess uncertainties in their calculations. Ideal as a wrap-up for physical science curriculum.

Day Camp (all day) (all year) Choose from a one day or two day experience. Depending on your arrival and departure schedule you can choose up to 4 activities per day including Team Building, Hiking, Orienteering, Crafts, Astronomy, Stream Dipping, Native American Studies, Pioneer Studies, Energy, Life Cycles, Dinosaurs, Ecology, Water Ecology, Weather, Scavenger Hunts, Preserve Exploration, Bee Studies, Insects, and Lifecycles. Contact us for fees and details.

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