



## Every fourth grader to a state park



# Pre-field-trip activities

### Learning outcomes

Following your Nature Awaits field trip, students should:

- Understand that Michigan state parks are for everyone and that they belong to the people who live here.
- Recognize negative and positive human impacts on Michigan's natural resources and the difference between them.
- Give an example of a Michigan animal impacted by climate change.
- Describe how invasive species can outcompete native species for resources.

### Background information

There are currently 104 state parks in Michigan, and they belong to the people of our state. Everyone is welcome to use our state parks and there are so many ways to enjoy them. Recreation activities that students might be familiar with include hiking, bicycling, swimming, picnicking, camping and fishing. Maybe students don't know that you can also go sledding, skiing, horseback riding, disc golfing and boating. Students may be able to name other possible activities they have done or heard of in a state park such as snowmobiling, dune buggy driving, berry picking, bird watching, or hunting.

Another purpose for public lands and state parks is to protect the lands and waters of our state for wildlife and resource use. This means that the Department of Natural Resources manages our state parks for recreation, natural resource protection and wildlife. A state park might include forests, lakes, wetlands, rivers, or other landforms like hills. They provide homes for wildlife and plant communities as well as fresh water and clean air. One way that the DNR protects these areas for all visitors is by setting rules that will keep the land, water, wildlife and people safe.

Learn all about our [state parks](#).

### Classroom activities before your trip

#### Science = Adventure

Help your students get ready for an adventure! In the classroom write the word "adventure" on the board, leaving some blank space around the word. Brainstorm and record other words that connect with "adventure," excitement, exploration, discovery, etc. As students offer suggestions, write them around the word "adventure." Tell your students your claim is that these words also describe something else. Erase the word "adventure" and replace it with the word "science." Tell them you'd like to hear whether or not they agree with this claim at the end of their field experience.

#### US Dept. of Agriculture hardiness zone maps

Compare three consecutive maps, view how cooler zones moved north, and discuss the implications

- [1976-2005 map](#)
- [2012 map](#)
- [2023 map](#)

#### Sit spot

Observe the school yard, and record changes over time/seasons/weather to build field investigation skills while getting to know their surroundings.

- [Looking at leaves data sheet](#)
- [Sit spot directions](#) (page 4)

#### Field investigation guide

[Free lessons and units](#) for teachers to help share scientific process activities in their classroom and schoolyard.



## Before your visit to a state park

The day before your field trip, check the weather with your students. Dressing for the weather is important for outdoor learning. Students who are cold, wet or unprepared have a difficult time learning their best. Students should dress for the weather with extra layers, rain gear and good sturdy shoes. It is also important to consider that there may be insects or sun exposure to be prepared for. Check your emailed receipt attachment for parking, pavilion, drinking water and other important details. The receipt also has contact information for your Nature Awaits educator.

## What students should expect during this field trip

We will make sure the whole group is together and safe. We will make observations, ask scientific questions, figure out how to investigate our questions gather and analyze data. We will observe different parts of this ecosystem and try to learn about and figure out how different parts of this ecosystem work.

# Correlations

### Science and Engineering Practices

#### Developing and Using Models

Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.

#### Engaging in Argument from Evidence

Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). Construct an argument with evidence, data, and/or a model. (4-LS1-1)

### Disciplinary Core Ideas

#### LS1.A: Structure and Function

Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)

#### LS1.D: Information Processing

Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)

### Crosscutting Concepts

#### Cause and Effect

Cause and effect relationships are routinely identified. (4-PS4-2)

#### Systems and System Models

A system can be described in terms of its components and their interactions. (4-LS1-1),(4-LS1-2)

### Social Studies

#### 4-H3.0.7

Describe past and current threats to Michigan's natural resources and describe how state government, tribal and local governments, schools, organizations, and individuals worked in the past and continue to work today to protect its natural resources.

#### 4-G5.0.1

Assess the positive and negative consequences of human activities on the physical environment of the United States and identify the causes of those activities.

#### 4-P3.1.1

Identify public issues in the United States that influence the daily lives of its citizens.

### Language Arts

Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

Engage effectively in a range of collaborative discussions, following agreed-upon rules for discussions and carry out assigned roles. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

Identify the reasons and evidence a speaker provides to support particular points.

### Physical Education

#### S5.1.4

Examines the health benefits of participating in physical activity.

#### S5.3.4

Rank the enjoyment of participating in different physical activities.



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## Post-field-trip activities

### Followup activity

Adapted from BEETLES Project, Social Emotional Learning Routine

Share that students can look for opportunities to work on skills that are newer or more challenging to them in any situation. In a new situation such as our field trip today, or any experience at all, we can try to learn or develop new skills and ways of being in the world.

On the board, draw a circle and write “comfort zone” inside the circle and “growth edge” as a label that points to the perimeter of the circle. Share: One way to think about growing and developing new skills is getting to your growth edge. We often learn the most when we’re practicing skills that are just outside of what’s comfortable for us. Invite students to briefly think about one activity or skill that is in their comfort zone, and one that is on their growth edge. Let students know that they can share about any skills or activities, not just those they used on the field trip.

Draw a second circle around the first circle. Write “Yikes!” on the diagram outside the second circle. Share that this represents when things are beyond your growth edge and feel very scary and challenging. It can be harder to learn a new skill or way of being if it’s way outside our comfort zone. When we’re trying to build new skills, we try to stay at our growth edge without going into the Yikes! zone.

Ask students what skills they will need to be successful in chosen activities and how comfortable they are with those skills. Tell them that practicing and doing science can be outside your comfort zone right on your growth edge. The more practice you have at science discussions, the bigger your comfort zone grows.

### Resources for after your trip

#### Science = adventure

Revisit your adventure = science activity on the board. Start a discussion to hear whether or not they agree with this claim now that they have participated in the field trip.

#### Habitat puzzle

Reinforce learning about how and why the DNR manages your natural resources. Discuss that food, water, shelter and space are necessary in a proper arrangement for wildlife to survive

- [Habitat puzzle activity](#)

#### Indoor field investigations

Learning field investigation techniques can help students explore their surroundings and practice inquiry.

- [Beetles Project field investigations](#)

#### Teaching about climate change: water, trees and wildlife

How does climate change affect our natural resources?

- [Project WET climate change activity](#)

#### The power of the sun

Learn more about green energy.

- [MightyOwl converting energy activity](#)

