



Field Trip Activities matched with Iowa Core Curriculum 6th – 8th Grade

Field Trip Activities with Iowa Core 6 th - 8 th Grades	<i>Location</i>	Science As Inquiry	Life Science	Earth & Space Science	Physical Science	Math	Social Studies	Language Arts	21st Century Skills
Cave Tour	<i>Maquoketa Caves</i>		X	X			X		X
Exhibit Tour	<i>Hurstville Center</i>		X	X			X		
Exhibit Scavenger Hunt	<i>Hurstville Center</i>	X	X	X				X	
Fishing	<i>Any pond, river</i>	X							X
Marsh Study	<i>Any marsh, stream</i>	X	X						X
Monarch Tagging	<i>Any location</i>	X	X				X		X
Oh, Deer	<i>Any location</i>	X	X				X		
Orienteering with Compass	<i>Any location</i>								X
Orienteering with GPS	<i>Any location</i>								X
Prairie Hike	<i>Any prairie</i>	X	X				X		
Snowshoeing	<i>Any location</i>				X		X		X
Team Building Activities	<i>Any location</i>								X
Trumpeter Swan Program	<i>Hurstville Center</i>		X						
Wetland Hike	<i>Any marsh</i>	X	X				X		
Woodland Hike	<i>Any woodland</i>	X	X				X		

Cave Tour, Dancehall At Maquoketa Caves State Park

Method: Students will be led on a guided tour of Dancehall Cave; while learning about the geology of caves, cave formations and past cave use.

Objectives: At the end of this activity the students should be able to:

1. Describe the role of water in cave formation
2. Explain what caving etiquette is
3. Describe the history of the area

4. Identify examples of how caves are habitats

Iowa Core

- Science
 - Earth Science
 - Understand and apply knowledge of the structure and processes of the earth system and the processes that change the earth and its surface
 - Understand and apply knowledge of earth history based on physical evidence
 - Understand and apply knowledge of the water cycle, including consideration of events that impact groundwater quality
 - Life Science
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- 21st Century
 - Employability
 - Work appropriately and productively with others.
- Social Studies
 - Geography
 - Understand how physical processes and human actions modify the environment and how the environment affects humans

Exhibit Tour at the Hurstville Interpretive Center

*Note: depending on the interpreter and availability of exhibits, not all Objectives & Core standards may be met. Please confirm what standards you would like covered with the interpreter ahead of time (at the Hurstville Interpretive Center).

Method:

Take a guided tour of the exhibits at the Hurstville Center. The tour can include learning about Iowa's wetlands & prairies, the Hurstville Lime Kilns, endangered species, birds of prey, bees and pollinators, extirpated animals, waste reduction, geology, mussels and other topics related to Iowa's natural resources.

Objectives: Following the tour, students will be able to

1. Explain how wetlands are beneficial to the environment
2. Identify animals that live in prairie and wetland habitats
3. Identify at least 3 native prairie plants and animals
4. Identify the natural resources used at the lime kilns
5. Explain the benefits of insect pollinators
6. Define the term endangered, extirpated and threatened
7. Identify large game animals that live in Iowa today as well as some that use to live in Iowa
8. Define the terms reduce, reuse and recycle and give an example of each

Iowa CORE:

- Social Studies
 - Geography
 - Understand how human factors and the distribution of resources affect the development society and the movement of populations
 - History
 - Understand historical patterns, periods of time, and the relationships among these elements
 - Understand the effects of geographic factors on historical events
 - Understand the role of innovation on the development and interaction of societies
- Science
 - Earth & Space Science
 - Understand and apply knowledge of the water cycle, including consideration of events that impact groundwater quality
 - Life Science
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
 - Understand and apply knowledge of:
 - Interdependency of organisms, changes in environmental conditions, and survival of individuals and species.
 - The cycling of matter and energy in ecosystems

Exhibit Scavenger Hunt at the Hurstville Interpretive Center

**Note: depending on availability of exhibits, the scavenger hunt activity sheet changes on occasion. Please confirm with our staff when planning your visit what Objectives & Core Standards you want covered.*

Method: Students will be given a worksheet to complete on their own or with a partner while touring the exhibits at their own pace (at the Hurstville Interpretive Center).

Objectives: Following the tour, students will be able to

1. Identify at least 3 things that can be recycled
2. Identify the natural resources used at the lime kilns
3. Identify animals that live in prairie and wetland habitats
4. Identify at least 3 foods/plants that need insect pollination to grow

Iowa CORE:

- Science
 - Science as Inquiry
 - Think critically and logically to make the relationships between evidence and explanations

- Earth & Space Science
 - Understand and apply knowledge of the water cycle, including consideration of events that impact groundwater quality
- Life Science
 - Understand and apply knowledge of:
 - Interdependency of organisms, changes in environmental conditions, and survival of individuals and species.
 - The cycling of matter and energy in ecosystems.
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Literacy
 - Reading
 - Key Ideas & Detail
 - RI.7.1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
 - RI.7.2. Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.

Fishing

At a pond or river, i.e. Hurstville Fishing Pond, Horseshoe Pond, Maquoketa River

Method: Students will cast and fish at a nearby pond.

Objectives: Students will be able to:

1. Identify the rod and reel of a fishing pole
2. Explain the reasons for having length and procession limits for fish
3. Cast a closed face reel fishing pole
4. Develop a lifelong hobby

Iowa CORE:

- Science
 - Life Science
 - Understand and apply knowledge of interdependency of organisms, changes in environmental conditions, and survival of individuals and species.
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- 21st Century Skills
 - Health Literacy
 - Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society
- Physical Education
 - Fitness, activity skill, leisure & lifetime activities

Marsh Study – Macro Invertebrates

At a pond, marsh or stream, i.e. Maquoketa River, nearby stream, Hurstville Marsh

Method: Students will be shown proper methods to collect macro invertebrates and how to identify those commonly found at the field trip location. Using the equipment provided, they will collect organisms and then make a determination of the water quality at the site. If the site is a registered IOWATER site, they will assist with recording and submitting the data. Students will observe features in the site's watershed and discuss which features might contribute positively or negatively to the water quality.

Objectives: At the end of this activity the students should be able to:

1. Name 2 (K-2nd), 4 (3rd – 4th) 6 (5th – 8th) macro invertebrates observed or collected from the local body of water
2. Describe at least 1 (K-2nd), 2 (3rd – 4th), 3 (5th – 8th) adaptations exhibited by the macro invertebrates they observed
3. Relate that macro invertebrates have differing tolerances for water quality (3rd – 8th)
4. Keep a tally of the macro invertebrates found at their site and make a preliminary determination of the water quality based on the macro invertebrates found (3rd – 8th)
5. Name two features observed in the watershed and describe whether the features might have a positive or negative impact on the water quality.

Iowa Core

- Science
 - Science as Inquiry
 - Select and use appropriate tools and techniques to gather, analyze and interpret data
 - Use evidence to develop descriptions, explanations, predictions and models
 - Think critically and logically to make the relationships between evidence and explanations
 - Recognize and analyze alternative explanations and predictions
 - Use appropriate safety procedures when conducting investigations
 - Life Science
 - Understand and apply knowledge of the complementary nature of structure and function and the commonalities among organisms
 - Understand and apply knowledge of interdependency of organisms, changes in environmental conditions, and survival of individuals and species
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
 - 21st Century Skills
 - Employability
 - Communicate and work productively with others, considering different perspectives and cultural views to increase the quality of work
 - Demonstrate leadership, integrity, ethical behavior and social responsibility in all environments
 - Demonstrate productivity and accountability while aspiring to meet high expectations

Monarch Tagging

At any location, September only

Method: Students listen to a description of the monarch butterfly life history, and then assist with the capture and tagging of monarchs.

Objectives: At the end of this activity students should be able to:

1. Describe the life cycle of the monarch butterfly as it relates to their migration to Mexico
2. Identify habitat needs for monarch butterflies and their caterpillars
3. Demonstrate how to capture and handle butterflies without causing harm to the butterflies
4. Describe the process of tagging monarchs and recording information from the tagging process
5. Describe how tagging helps scientists gather information about monarch populations and seasonal movements

Iowa CORE:

- Science
 - Science as Inquiry
 - Identify and generate questions that can be answered through scientific investigations
 - Understand that different kinds of questions suggest different kinds of scientific investigations
 - Select and use appropriate tools and techniques to gather, analyze and interpret data
 - Think critically and logically to make the relationships between evidence and explanations
 - Life Science
 - Understand and apply knowledge of:
 - Interdependency of organisms, changes in environmental conditions, and survival of individuals and species.
 - The cycling of matter and energy in ecosystems.
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Social Studies
 - Geography
 - Understand how physical processes and human actions modify the environment and how the environment affects humans
- 21st Century Skills
 - Work appropriately and productively with others.

Oh Deer At any location

Method: Students portray deer and habitat components in a physically active game to illustrate how availability of food, water, shelter and space in an animal's habitat affect the species population.

Objectives: At the end of this activity, the students should be able to:

1. Identify and describe food, water, and shelter as 3 essential components to habitat
2. Describe factors that influence carrying capacity
3. Define limiting factors and give examples
4. Recognize that some fluctuations in wildlife populations are natural as ecological systems undergo constant change

Iowa Core:

- Science
 - Science as Inquiry
 - Identify and generate questions that can be answered through scientific investigations
 - Think critically and logically to make the relationships between evidence and explanations
 - Life Science
 - Understand and apply knowledge of:
 - Interdependency of organisms, changes in environmental conditions, and survival of individuals and species.
 - The cycling of matter and energy in ecosystems.
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Social Studies
 - Geography
 - Understand how physical processes and human actions modify the environment and how the environment affects humans

Orienteering with compass

At any location (course already set up at Hurstville Center & Eden Valley Refuge)

Method:

Students will learn how to use a compass and then will navigate through a predetermined orienteering course using their compass to guide them.

Objectives: Students will be able to:

1. Identify the parts of the compass
2. Understand the relationship between N, S, E, W and these directions in degrees
3. Learn a lifelong outdoor recreational hobby

Iowa CORE:

- 21st Century Skills
 - Health Literacy
 - Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society
 - Technology Literacy
 - Understand the underlying structure and application of technology systems
- Physical Education
 - Fitness, activity skill, leisure & lifetime activities

Orienteering with GPS + geocaching

at any location

Method: Students will learn how Global Positioning System works and then navigate using a GPS unit to find established points.

Objectives: Students will be able to:

1. Use a GPS unit
2. Understand how GPS works
3. Identify at least 4 instances that GPS is used in today's world

Iowa CORE:

- 21st Century Skills
 - Health Literacy
 - Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society
 - Technology Literacy
 - Demonstrate creative thinking in the design and development of innovative technology products and problem solving
 - Understand the underlying structure and application of technology systems
- Physical Education
 - Fitness, activity skill, leisure & lifetime activities

Prairie Hike

At the Hurstville Interpretive Center (can be adapted for other prairie locations)

Method: During a guided hike on the prairie trail, students will use hand lenses, binoculars, and/or nets to investigate the plants and animals of the tall-grass prairie ecosystem.

Objective: At the end of this activity the students should be able to:

1. Identify two prairie plant adaptations
2. Identify two prairie animal adaptations
3. Identify at least 3 prairie animals species seen
4. Identify at least 3 prairie plant species seen
5. Describe the difference between woodland, prairie and wetland habitats
6. If students have visited this habitat in a different season, they will be able to describe at least two seasonal differences.
7. Describe the progression of the tall grass prairie to agriculture

Iowa Core

- Science
 - Science as Inquiry
 - Identify and generate questions that can be answered through scientific investigations
 - Earth & Science
 - Understand and apply knowledge of the structure and processes of the earth system and the processes that change the earth and its surface

- Life Science
 - Understand and apply knowledge of the water cycle, including consideration of events that impact groundwater quality
 - Understand and apply knowledge of:
 - Interdependency of organisms, changes in environmental conditions, and survival of individuals and species.
 - The cycling of matter and energy in ecosystems.
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Social Studies
 - Geography
 - Understand how physical processes and human actions modify the environment and how the environment affects humans
 - History
 - Understand historical patterns, periods of time, and the relationships among these elements

Snowshoeing

At any location with a large area of snow, not on pavement or gravel

Method:

Students will be introduced to snowshoeing history and learn a lifelong outdoor winter recreational skill by using the snowshoes provided.

Objectives: Students will

1. Learn to walk with snowshoes on outside
2. Learn the benefits related to cardiovascular endurance, flexibility and muscle endurance.
3. Learn the history of snowshoes

Iowa CORE:

- Science
 - Physical Science
 - Understand and apply knowledge of forms of energy and energy transfer
 - Understand and apply knowledge of motions and forces
- History
 - Behavioral Sciences
 - Understand the process of how humans develop, learn, adapt to their environment, and internalize their culture
- 21st Century Skills
 - Health Literacy
 - Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society
- Physical Education
 - Fitness, activity skill, cardiovascular endurance, muscular strength, leisure & lifetime activities

Team building activities

At any location

Method: Students will work in small groups to solve problems using creative thinking skills with a various group initiative activities.

**Due to a variety of different team building activities available, talk with our staff about the objectives you would like covered.*

Objectives: Students will be able to:

1. Work together better as a team
2. Be more comfortable with each other
3. Improve their group communication
4. Better problem solve issues
5. Multitask
6. Have fun with their classmates

Iowa CORE:

- 21st Century Skills
 - Health Literacy
 - Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society
 - Employability
 - Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work
 - Adapt and adjust to various roles and responsibilities in an environment of change
 - Demonstrate leadership, integrity, ethical behavior, and social responsibility in all environments
 - Demonstrate initiative, self-direction, creativity, and entrepreneurial thinking while exploring individual talents and skills necessary to be successful
 - Demonstrate productivity and accountability while aspiring to meet high expectations

Trumpeter Swan Program and Viewing

At the Hurstville Center (can be adapted for other areas without the live viewing)

Method: Students will participate in a discussion of the life history of trumpeter swans and the history of their populations in North America, and Iowa in particular. (For classes that have read The Trumpet of the Swan we will also discuss which details of the story are not based on fact.)

Objectives: At the end of this activity the students should be able to:

1. Describe the habitat needs of trumpeter swans
2. Discuss the history of swan populations in Iowa from settlement by Europeans to the re-introduction of swans during recent decades
3. Relate how efforts by groups and individuals can combine to effect change

Iowa Core

- Science
 - Life Science

- Understand and apply knowledge of the interdependency of organisms, changes in environmental conditions, and survival of individuals and species
- Understand and demonstrate knowledge of the social and personal implications of environmental issues

Wetland Hike At the Hurstville Interpretive Center (can be adapted for other wetland locations)

Method: During the hike, students will learn about the plants and wildlife of the wetland ecosystem. Students will also learn about the benefits of wetlands to both wildlife and people. If time allows, students will use sampling tools to find life in the water.

Objective: At the end of this activity the students should be able to:

1. Explain at least two benefits of wetland ecosystems
2. Identify at least 3 wetland animals
3. Identify at least 3 wetland plants
4. Identify at least 2 adaptations of wetland plant or animal species
5. Describe one difference between woodland, prairie and wetland habitats
6. If students have visited this habitat in a different season, they will be able to describe at least two seasonal differences.

Iowa Core

- Science
 - Science as Inquiry
 - Identify and generate questions that can be answered through scientific investigations
 - Earth & Science
 - Understand and apply knowledge of the structure and processes of the earth system and the processes that change the earth and its surface
 - Life Science
 - Understand and apply knowledge of the water cycle, including consideration of events that impact groundwater quality
 - Understand and apply knowledge of:
 - Interdependency of organisms, changes in environmental conditions, and survival of individuals and species.
 - The cycling of matter and energy in ecosystems.
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Social Studies
 - Geography
 - Understand how physical processes and human actions modify the environment and how the environment affects humans
 - History
 - Understand historical patterns, periods of time, and the relationships among these elements

Woodland Hike

At Maquoketa Caves State Park, Bellevue State Park or other location with woods

Method: Students will take a guided hike to view woodland habitat and wildlife

Objectives: At the end of this activity the students should be able to:

1. Identify at least 3 woodland animals
2. Identify at least 3 woodland plants
3. Identify at least 3 adaptations of woodland species
4. Describe the difference between woodland, prairie and wetland habitats
5. If students have visited this habitat in a different season, they will be able to describe at least two seasonal differences.

Iowa Core

- Science
 - Science as Inquiry
 - Identify and generate questions that can be answered through scientific investigations
 - Earth & Science
 - Understand and apply knowledge of the structure and processes of the earth system and the processes that change the earth and its surface
 - Life Science
 - Understand and apply knowledge of the water cycle, including consideration of events that impact groundwater quality
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 - Understand how physical processes and human actions modify the environment and how the environment affects humans