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Field Trip Activities matched with Iowa Core Curriculum 3rd – 5th Grades

Field Trip Activities with Iowa Core 3rd-5th Grades	<i>Location</i>	Science As Inquiry	Life Science	Earth & Space Science	Physical Science	Math	Social Studies	Language Arts	21st Century Skills
Bee Program with Hive	<i>Hurstville Center</i>	X	X						
Birding	<i>Any location</i>	X	X						
Cave Tour	<i>Maquoketa Caves</i>	X	X	X	X		X		X
Exhibit Tour	<i>Hurstville Center</i>	X	X	X			X		
Exhibit Scavenger Hunt	<i>Hurstville Center</i>	X	X					X	
Fallen Log	<i>Any woodland</i>	X	X						
Fishing	<i>Any pond, lake or river</i>		X						X
Hooks & Ladders	<i>Any location</i>	X	X						X
Hurstville Lime Kiln Tour	<i>Hurstville Lime Kilns</i>			X	X		X		
It Takes A Lot of Resources	<i>Hurstville Center, Kilns</i>		X	X			X		
Marsh Study	<i>Any marsh, pond, stream</i>	X	X						X
Migration Headache	<i>Any location</i>	X	X	X					
Monarchs	<i>Any location</i>	X	X				X		X
Oh, Deer	<i>Any location</i>	X	X			X			
Orienteering compass	<i>Any location</i>					X			X
Orienteering GPS	<i>Any location</i>					X			X
Prairie Hike	<i>Any location</i>	X	X	X			X		X
Recycling Relay	<i>Any indoor location</i>	X	X	X					X
Sandbox Dig	<i>Hurstville Center</i>	X					X	X	
Snowshoeing	<i>Any location</i>		X	X	X		X		X
Team Building	<i>Any location</i>								X
Trumpeter Swan & viewing	<i>Hurstville Center</i>	X	X						
Wetland Hike	<i>Any wetland</i>	X	X	X	X		X		X
Woodland Hike	<i>Any woodland</i>	X	X	X	X				X

Bee Program (inside using live bee hive) At Hurstville Interpretive Center

Method: Students will observe the working hive at the Hurstville Center and have the opportunity to ask questions about the hive and the bees inside the hive. Students will actively participate in a demonstration of the jobs performed by bees in a hive. Students will compare a list of foods from pollinator sources to foods they enjoy eating, and discuss what pollinators need in their environment.

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

1. Name the three kinds of honey bees found in a hive
2. Name at least 3 (kindergarten), 4 (1st) 5 (2nd) jobs performed by honey bees
3. Describe how honey bees communicate the location of flowers
4. Describe why humans need pollinators and how we can provide their habitat needs

Iowa Core

- Science
 - Science As Inquiry
 - Ask questions about objects, organisms, and events in the environment
 - Life Science
 - Understand and apply knowledge of the structures, characteristics and adaptations of honey bees that allow them to function and survive within their habitats
 - Understand and apply knowledge of the basic needs of plants and animals and how they interact with each other and their physical environment
 - Understand and apply knowledge of ways to help take care of the environment

Birding At the Hurstville Center, Green Island Wildlife Area, and other locations

Method: Using a pheasant or other bird showing a variety of colors and field marks students will learn field mark terminology for birds. Students will then participate in a birding hike using provided binoculars and field guides.

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

1. locate and name at least 2 field marks on 4 common local birds
2. demonstrate the correct use of a pair of binoculars and a basic field guide to birds of North America
3. demonstrate appropriate bird watching techniques such as moving slowly, quiet voices, patience, and sharing of equipment

Iowa Core

- Science
 - Science As Inquiry
 - Ask questions about objects, organisms, and events in the environment
 - Life Science
 - Understand and apply knowledge of organisms and their environments, including:
 - Structures, characteristics and adaptations of organisms that allow them to function and survive within their habitats
 - How individual organisms are influenced by internal and external factors

- The relationships among living and non-living factors in terrestrial and aquatic ecosystems
- Understand and apply knowledge of environmental stewardship
- Humans change environments in ways that can be either beneficial or detrimental to themselves or other organisms

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 2 examples of how caves provide habitat

Iowa Core

- Science
 - Science As Inquiry
 - Ask questions about objects, organisms, and events in the environment
 - Physical Science
 - Understand and apply knowledge of observable and measurable properties of objects
 - Understand and apply knowledge of characteristics of liquids and solids
 - Understand and apply knowledge of the positions and motions of objects.
 - Earth Science
 - Understand and apply knowledge of properties of earth materials
 - Life Science
 - Understand and apply knowledge of the characteristics of living things and how living things are both similar to and different from each other and from non-living things
 - Understand and apply knowledge of ways to help take care of the environment
- 21st Century
 - Employability
 - Communicate and work appropriately with others to complete tasks
- Social Studies
 - History
 - Understand people construct knowledge of the past from multiple and various types of sources
 - Understand past, present, and future time in relation to historical events.
 - Understand that primary sources such as artifacts, photographs, and documents are used to learn about the past.

Exhibit Tour At 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.

Method: Students will be led on a guided tour of the exhibits at the Hurstville Center. The tour may include Iowa's wetlands, prairies, the Hurstville Lime Kilns, endangered species, birds of prey, bees & pollinators, extirpated animals, waste reduction, geology, mussels and other Iowa 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:

- Science
 - Science as Inquiry
 - Use evidence to develop reasonable explanations
 - Earth & Space
 - Understand and apply knowledge of properties and uses of earth materials
 - Understand and apply knowledge of processes and changes on or in the earth's land, oceans, and atmosphere.
 - Understand and apply knowledge of fossils and the evidence they provide of past life on earth.
 - Life Science
 - Understand and apply knowledge of organisms and their environments
 - Understand and apply knowledge of environmental stewardship
- Social Studies
 - History
 - Understand historical patterns, periods of time and the relationships among these elements.
 - Understand the effect of economic needs and wants on individual and group decisions.
 - Understand the effects of geographic factors on historical events.
 - Understand the role of innovation on the development and interaction of societies.

Exhibit Scavenger Hunt At 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.

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
 - Use evidence to develop reasonable explanations
 - Life Science
 - Understand and apply knowledge of organisms and their environments, including:
 - Structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats.
 - How individual organisms are influenced by internal and external factors.
 - The relationships among living and non-living factors in terrestrial and aquatic ecosystems.
 - Understand and apply knowledge of environmental stewardship
- Language Arts
 - Reading
 - Key Ideas & Detail
 - Integration of Knowledge & Ideas RI.3.7 RI.4.7 RI.5.7

Fallen Log

At any woodland, i.e. Maquoketa Caves State Park, Bellevue State Park

Method: Students will learn about life under a fallen log by examining their log, disturbing it, identifying what is found there. Students will make notes about any plants and animals they find.

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

1. Identify at least 5 species that live under a log
2. Explain what a microhabitat is
3. Describe the purpose of decomposition in nature

Iowa CORE:

- Science
 - Science as Inquiry
 - Use evidence to develop reasonable explanations
 - Life Science
 - Understand and apply knowledge of organisms and their environments, including:
 - Structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats.
 - How individual organisms are influenced by internal and external factors.
 - The relationships among living and non-living factors in terrestrial and aquatic ecosystems.
- 21st Century Skills
 - Employability

- Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work

Fishing **At any lake, pond or river (i.e Hurstville Fishing Pond, Horseshoe Pond, Maquoketa River)**

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

Objectives: At the end of this activity the students should 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

Iowa CORE:

- Science
 - Life Science
 - Understand and apply knowledge of organisms and their environments, including:
 - Structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats.
 - How individual organisms are influenced by internal and external factors.
 - The relationships among living and non-living factors in terrestrial and aquatic ecosystems.
- 21st Century Skills
 - Health Literacy
 - Obtain, interpret, understand and use basic health concepts to enhance personal, family, and community health
 - Utilize interactive literacy and social skills to establish personal family, and community health goals
 - Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society
- Physical Education
 - Fitness, activity skill, leisure & lifetime activities

Hooks & Ladders **At any location**

Method: Students simulate salmon and the hazards faced by salmon in a physical activity (obstacle course) portraying their life cycle and migration.

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

1. Recognize that some fish migrate as part of their life cycle.
2. Describe limiting factors affecting Pacific salmon as they complete their life cycle.
3. List, describe, and illustrate the major stages in a Pacific salmon's life cycle.

Iowa CORE:

- Science
 - Science as Inquiry
 - Use evidence to develop reasonable explanations
 - Life Science
 - Understand and apply knowledge of organisms and their environments, including:
 - Structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats.

- How individual organisms are influenced by internal and external factors.
 - The relationships among living and non-living factors in terrestrial and aquatic ecosystems.
- Understand and apply knowledge of environmental stewardship
- 21st Century Skills
 - Employability
 - Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work
- Physical Education
 - Fitness

Hurstville Lime Kiln Tour At the Hurstville Lime Kilns (can be in conjunction with a visit to the Hurstville Interpretive Center)

Method: Students will tour the historical lime kilns and learn about the history of the town.

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

1. Describe two natural resources needed for the kiln operation
2. Explain how the kilns were used and what product they made
3. Recall at least 3 facts about the town of Hurstville

Iowa Core

- Science
 - Earth & Space
 - Understand and apply knowledge of properties and uses of earth materials
 - Physical Science
 - Understand and apply knowledge of how to describe and identify substances based on characteristic properties
- Social Studies
 - History
 - Understand historical patterns, periods of time, and the relationships among these elements
 - Understand the effect of economic needs and wants on individual and group decisions
 - Understand the effects of geographic factors on historical events
 - Understand the role of innovation on the development and interaction of societies
 - Geography
 - Understand how geographic and human characteristics create culture and define regions

It Takes a Lot of Resources At the Hurstville Interpretive Center (ideally followed by a visit to the Lime Kilns)

Method: Students will use maps of Midwestern states to locate the natural resources that were needed to produce lime and determine which needed resources are found in close proximity to Hurstville. Students will understand that materials (rocks) react in different ways when subjected to heat. Students will use charts to compare the characteristics of different woods and relate how that determines the value of each wood as a fuel source

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

1. Discuss how the availability of natural resources determines where industries develop/locate their operations

2. Describe the four conditions required for industrial development – raw materials, energy source, labor force, and transportation
3. Describe how limestone (dolomite) was processed into a building material and what the materials was used for
4. Describe at least three different uses for different species of local wood

Iowa Core:

- Science
 - Earth & Space
 - Understand and apply knowledge of properties and uses of earth materials
 - Understand that the different physical and chemical properties of earth materials make them useful in different ways, for example, as building materials, as sources of fuel, or for growing the plants we use as foods.
 - Life Science
 - Understand and apply knowledge of environmental stewardship
 - Understand that humans change environments in ways that can be either beneficial or detrimental to themselves or other organisms
- Social Studies
 - History
 - Understand historical patterns, periods of time and the relationships among these elements
 - Understand differences in life today compared to life in the past
 - Understand the effect of economic needs and wants on individual and group decisions
 - Understand the economic activities in the community have changed over time
 - Understand that the types of work local community members do have changed over time
 - Understand the effects of geographic factors on historical events
 - Understand varying a landforms and geographic features and their importance in the development of communities
 - Understand seasons, climate, weather and environmental change and crisis affect social and economic development
 - Understand the role of innovation on the development and interaction of societies
 - Understand ways science and technology have changed the way people think about the natural world
 - Understands that the use of technology in the local community has changed over time
 - Understand cause and effect relationships and other historical thinking skills in order to interpret events and issues
 - Understand the historical perspective including cause and effect
 - Understand how to view the past in terms of the norms and values of the time
 - Geography
 - Understand the use of geographic tools to locate and analyze information about people, places and environments
 - Understand political, topographical and historical maps, aerial photos and maps
 - Understand the concepts of title, legend, cardinal directions, distance, grids
 - Understand the representations of major physical and human features on maps and globes
 - Understand how human factors and the distribution of resources affect the development of society and the movement of populations
 - Understand reasons for the growth and decline of settlements
 - Understand the relationship between population growth and resource use
 - Understand the concepts of renewable and non-renewable resources
 - Understand the relation between economic activities and natural resources in areas
 - Understand how physical processes and human actions modify the environment and how the environment affects humans

- Understand the characteristics of places are shaped by physical and human processes
- Understand humans interact and adapt to the physical environment

Marsh or Stream Study – Macro Invertebrates **At any area with water (ideally a stream but a river, wetland or pond will work)**

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
 - Identify and generate questions that can be answered through scientific investigations
 - Recognize that scientists perform different types of investigations
 - Use appropriate tools and techniques to gather, analyze and interpret data
 - Use evidence to develop reasonable explanations
 - Follow appropriate safety procedures when conducting investigations
 - Life Science
 - Understand and apply knowledge of the structures, characteristics and adaptations of organisms that allow them to function and survive within their habitats
 - Understand and apply knowledge of how individual organisms are influenced by external factors
 - Understand the relationships among living and non-living factors in aquatic ecosystems
 - Understand and apply knowledge of environmental stewardship
- 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

Migration Headache

At any location

Method: In this active game, students become “migrating water birds,” traveling between nesting and wintering habitats. Along their journeys they experience some of the threats that affect the survival of migratory water bird populations.

Objectives: After this activity, students will be able to:

1. Define the term migration
2. List three limiting factors that can affect the populations of migrating water birds
3. Classify these limiting factors as natural or human-caused.

Iowa CORE:

- Science
 - Science as Inquiry
 - Use evidence to develop reasonable explanations
 - Earth & Space
 - Understand and apply knowledge of weather and weather patterns
 - Life Science
 - Understand and apply knowledge of organisms and their environments, including:
 - Understand and apply knowledge of environmental stewardship
- Physical Education
 - Fitness

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
 - Recognize that scientists perform different types of investigations
 - Use evidence to develop reasonable explanations
 - Follow appropriate procedures
 - Life Science
 - Understand and apply knowledge of organisms and their environments

- Structures, characteristics, and adaptations of organisms
 - How individual organisms are influenced by internal and external factors
 - Relationships among living and non-living factors in ecosystems
 - Understand and apply knowledge of environmental stewardship
- Social Studies
 - Economics
 - Understand the role of scarcity and economic trade-offs and how economic conditions impact people's lives
 - Geography
 - Understand how physical processes and human actions modify the environment
- 21st Century Skills
 - Communicate and work productively with others

Environmental Education Skills

- Humans and their societies
 - Understand how people are connected at many levels – including the global level – by actions and common responsibilities that concern the environment
- Environment and Society
 - Identify ways people depend on, change, and are affected by the environment
 - Demonstrate an understanding of resources
- Skills for analyzing and investigating environmental issues
 - Speculate about and explore the social, economic, and environmental consequences of issues and proposed solutions to them
- Decision making and citizenship skills
 - Consider whether they believe action is needed in particular situations and whether they think they should be involved

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
 - Use evidence to develop reasonable explanations
 - Life Science
 - Understand and demonstrate knowledge of structures, characteristics, and adaptations of organisms that allow them to function and survive

within their habitats.

- Understand and demonstrate knowledge of how individual organisms are influenced by internal and external factors
 - Understand and demonstrate knowledge of environmental stewardship
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Math
 - Students can interpret data presented in a variety of ways
 - Students can use tables and graphs to locate and read information.

Orienteering with compass At any location (we already have courses set at Hurstville Center & Eden Valley)

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: At the end of this activity the students should 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:

- Math
 - Geometry
 - Graph points on the coordinate plane to solve real-world and mathematical problems
- 21st Century Skills
 - Health Literacy
 - Obtain, interpret, understand and use basic health concepts to enhance personal, family, and community health
 - Utilize interactive literacy and social skills to establish personal family, and community health goals
 - Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society
- 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: At the end of this activity the students should 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:

- Math
 - Geometry

- Graph points on the coordinate plane to solve real-world and mathematical problems
- 21st Century Skills
 - Technology Literacy
 - Understand and practice appropriate, legal, and safe uses of technology for lifelong learning
 - Health Literacy
 - Obtain, interpret, understand and use basic health concepts to enhance personal, family, and community health
 - Utilize interactive literacy and social skills to establish personal family, and community health goals
 - Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society
- 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 properties and uses of earth materials
 - Life Science
 - Understand and apply knowledge of organisms and their environments
 - Understand and apply knowledge of environmental stewardship
- Social Studies
 - Behavioral Sciences
 - Understand the changing nature of society
 - 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
- 21st Century Skills
 - Employability
 - Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work

Recycling Relay **At any location**

Method: Students sort 'trash' by placing it in the appropriate recycling bins relay style.

Objectives: Following the activity, students will be able to

1. Define the terms reduce, reuse, recycle
2. Identify what is plastic, paper, cardboard, aluminum, glass
3. Identify items that can and cannot be recycled
4. Understand why the 3 Rs can reduce pressure on landfills

Iowa CORE:

- Science
 - Science as Inquiry
 - Use evidence to develop reasonable explanations
 - Earth & Space
 - Understand and apply knowledge of properties and uses of earth materials
 - Life Science
 - Understand and apply knowledge of environmental stewardship
- 21st Century Skills
 - Employability
 - Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work
- Physical Education
 - Fitness

Sandbox Dig **At the Hurstville Interpretive Center; 3rd week of September only**

Method: Students will use several learning skills while digging in prepared sandboxes to find "artifacts" from one of three different time periods. Students will become more aware of early cultures and the benefits of preserving material remains of these cultures.

Objectives: At the end of this activity the students should be able to work as part of a team to:

1. Correctly map objects found within a physical site onto a paper grid
2. Classify 5 or more objects based on their physical characteristics and/or known or presumed uses
3. Organize their observations into a theory about the meaning of these objects
4. Report their theory to other groups participating in the activity

Iowa CORE:

- Science
 - Science as inquiry
 - Recognize that scientists perform different types of investigations
 - Use appropriate tools to gather, process and analyze data
 - Use evidence to develop reasonable explanations
- Social Studies
 - History
 - Understand the cause and effect relationships and other historical thinking skills in order to interpret events and issues
Understand processes important to reconstructing and interpreting the past
 - Geography
 - Understand how geographic and human characteristics create culture and define regions
 - Understand the characteristics of regions--physical and cultural.
 - Understand regions change over time and the causes and consequences of these changes
 - Understand the use of geographic tools to locate and analyze information about people, places and environments
 - Understand the concepts of title, legend, cardinal directions, distance, grids
 - Understand the use of data sources, atlases, data bases, grid systems, charts, graphs and maps to generate, manipulate and interpret information
- Language Arts
 - Comprehension and Collaboration
 - Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.
 - Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
 - Identify the reasons and evidence a speaker provides to support particular points.
 - Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Snowshoeing At any location: with adequate space, 4" or more of snow, and not on pavement

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

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

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
 - Life Science
 - Understand and apply knowledge of personal health and wellness issues.
 - Understand and apply knowledge of environmental stewardship

- Physical Science
 - Understand and apply knowledge of states of matter and changes in states of matter.
 - Understand and apply knowledge of how forces are related to an object's motion
- Earth Science
 - Understand and apply knowledge of weather and weather patterns.
- Social Studies
 - Behavioral Sciences
 - Understand the process of how humans develop, learn, adapt to their environment, and internalize their culture
- 21st Century Skills
 - Health Literacy
 - Obtain, interpret, understand and use basic health concepts to enhance personal, family, and community health
 - Utilize interactive literacy and social skills to establish personal family, and community health goals
 - 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: There are a variety of different team building activities that can be done. Students will work together in different size groups to finish a task.

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

1. Work together as a team more efficiently
2. Be more comfortable with each other
3. Have improved their communication skills

Iowa CORE:

- 21st Century Skills
 - Employability
 - Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work
 - Adjust to various roles and responsibilities and understand the need to be flexible to change
 - Practice leadership skills, and demonstrate integrity, ethical behavior, and social responsibility in all activities
 - Demonstrate initiative, creativity, self-direction, and entrepreneurial thinking to produce successful outcomes
 - Demonstrate productivity and accountability by producing quality work

Trumpeter Swan Program and Viewing At the Hurstville Interpretive Center

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
 - Science As Inquiry
 - Ask questions about objects, organisms, and events in the environment
 - Life Science
 - Understand and apply knowledge of the structures, characteristics and adaptations of organisms that allow them to function and survive within their habitats
 - Understand and apply knowledge of how individual organisms are influenced by external factors
 - Understand the relationships among living and non-living factors in aquatic ecosystems
 - Understand and apply knowledge of environmental stewardship

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 properties and uses of earth materials
 - Life Science
 - Understand and apply knowledge of organisms and their environments
 - Understand and apply knowledge of environmental stewardship
- Social Studies
 - Behavioral Sciences
 - Understand the changing nature of society
 - 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
- 21st Century Skills
 - Employability
 - Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work

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
 - Use tools to gather data and extend the senses.
 - Ask questions about objects, organisms, and events in the environment
 - Earth & Science
 - Understand and apply knowledge of events that have repeating patterns.
 - Understand and apply knowledge of properties of earth materials
 - Understand and apply knowledge of observable information about daily and seasonal weather conditions
 - Life Science
 - Understand and apply knowledge of the characteristics of living things and how living things are both similar to and different from each other and from non-living things.
 - Understand and apply knowledge of life cycles of plants and animals.
 - Understand and apply knowledge of the basic needs of plants and animals and how they interact with each other and their physical environment.
 - Understand and apply knowledge of ways to help take care of the environment.
 - Physical Science
 - Understand and apply knowledge of observable and measurable properties of objects
- 21st Century
 - Employability

- Communicate and work appropriately with others to complete tasks
- Recognizes different roles and responsibilities and is open to change
- Learn leadership skills and demonstrate integrity, ethical behavior, and social responsibility