



Field Trip Activities matched with Iowa Core Curriculum Kindergarten – 2nd Grade

Field Trip Activities with Iowa Core Kind. - 2nd Grade	Location	Science As Inquiry	Life Science	Earth & Space Science	Physical Science	Math	Behavioral Sciences	Geography	History	Language Arts	21 st Century Skills
Bat Program	Maquoketa Caves	X	X								
Bees/Flowers/Pollinators	Any location	X	X								
Bee Program	Hurstville Center	X	X								
Birding	Any location		X								
Birds & Worms	Any location	X	X			X					
Cave Tour, Dancehall	Maquoketa Caves		X	X	X				X		X
Exhibit Scavenger Hunt	Hurstville Center	X	X							X	
Exhibit Tour	Hurstville Center	X	X	X			X		X		
Marsh Study	Area with water	X	X								X
Migration Headache	Any location	X	X	X							
Monarch Tagging	Any location	X	X					X			X
Nature Sounds	Any location	X	X		X						X
Prairie Hike	Area with prairie	X	X	X	X				X		X
Recycling Relay	Any, indoors	X	X	X							X
Shapes & Colors Hike	Any location	X	X		X	X					X
Smart Lunch	Any location	X					X				X
Trumpeter Swan Viewing	Hurstville Center	X	X								
Wetland Hike	Area with wetlands	X	X	X	X						X
Woodland Hike	Area with woods	X	X	X	X						X

Bat Program **At Maquoketa Caves State Park, or any other location**

Method: We will discuss myths of bats with students and explain the difference between myths and facts. A real bat, bat effects, and a game help bring about a change in attitude and illustrate how these amazing animals are truly important to our ecosystem.

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

1. Explain what bats eat in different parts of the world
2. Describe why bats are an important part of our ecosystem
3. List at least 5 traits of bats

Iowa CORE:

- Science
 - Science As Inquiry
 - Ask questions about objects, organisms, and events in the environment
 - Life Science
 - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment

Bees/Flowers/Pollinators At any location

Method: Students will explore to find examples of different flowers and pollen in the surrounding area. They will identify animals that are found pollinating flowers. 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. After practicing two “bee dances” they will work as teams to find the pollen their “forager bee” directs them to.

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

1. Name the three types of honey bees found in a hive
2. Name at least 3 (kindergarten), 4 (1st) or 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
5. Collect pollen (poms) from correct location given by dance performed by team leader

Iowa CORE:

- Science
 - Science As Inquiry
 - Ask questions about objects, organisms, and events in the environment
 - Life Science
 - Understand and apply knowledge of the characteristics of honey bees how they are similar to and different from each other and other living things
 - 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

Bee Program, inside using Bee Hive At the 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 characteristics of honey bees how they are similar to and different from each other and other living things
 - 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 any location (that has birds of course! I.e. Hurstville Center, Green Island, State Parks)**

Method: Using a pheasant or other bird showing a variety of colors and field marks students will learn field mark terminology for birds. Then, they will 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
 - 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 non-living things
 - 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 ways to help take care of the environment

Birds & Worms **At any Location**

Method: In this activity, students learn about animal camouflage as they pretend to be birds in search of colored worms (yarn). Students will predict what colors will be hard and easy to find. Students will help chart the colors found.

Objectives: Students will be able to

1. Define the term camouflage
2. Identify animals that use camouflage
3. Predict what colors will be easier to find and which colors will be harder to find
4. Make a chart or graph of their findings

Iowa CORE:

- Science
 - Science As Inquiry
 - Ask questions about objects, organisms, and events in the environment
 - Life Science
 - Understand and apply knowledge of the basic needs of plants and animals and how they interact with each other and their physical environment.
- Mathematics
 - Measurement and Data
 - Describe and compare measurable attributes.
 - Classify objects and count the number of objects in categories.
 - Counting and Cardinality
 - Know number names and the count sequence.
 - Count to tell the number of objects
 - Compare numbers.
 - Operations and Algebraic Thinking
 - Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

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

- 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
 - Recognizes different roles and responsibilities and is open to change
 - Learn leadership skills and demonstrate integrity, ethical behavior, and social responsibility
- 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 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.

Objectives: Following the tour, students will be able to:

1. Identify at least 3 items 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
 - Ask questions about objects, organisms, and events in the environment
 - 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
- Language Arts
 - Reading
 - Use the illustrations and details in a text to describe its key ideas. (RI.1.7) (RI.K.1) (RI.K.2)
 - Speaking & Listening
 - Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood. (SL.1.3.)

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.*

Method: Take a guided tour of the exhibits at the Hurstville Center. The tour can include learning about 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 some native prairie plants
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
 - Behavioral Sciences
 - Understand the changing nature of society.
 - History
 - Understand people construct knowledge of the past from multiple and various types of sources.
 - Understand economic needs and wants affect individual and group decisions.
 - Understand relationship between geography and historical events.
- Science
 - Science As Inquiry

- Ask questions about objects, organisms, and events in the environment
- Earth & Space
 - 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 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

Marsh Study – Macro Invertebrates

Any location with water source (river, stream, wetland, marsh, lake)

Method: Students will be shown proper methods to collect aquatic 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 macro invertebrates observed or collected from the local body of water
2. Describe at least 1 adaptations exhibited by the macro invertebrates they observed
3. 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
 - Ask questions about objects, organisms, and events in the environment
 - Use tools to gather data and extend the senses
 - Use data to construct reasonable explanations
 - Communicate explanations and investigations
 - Follow appropriate safety procedures when conducting investigations
 - Life Science
 - Understand and apply knowledge of the characteristics of macro invertebrates how they are similar to and different from each other and other living things
 - 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
- 21st Century Skills
 - Employability
 - Communicate and work productively with others to complete tasks

- Recognize different roles and responsibilities and be open to change
- Work productively and are accountable for their actions

Migration Headache 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
 - Ask questions about objects, organisms, and events in the environment
 - Earth & Space
 - Understand and apply knowledge of observable information about daily and seasonal weather conditions.
 - Understand and apply knowledge of events that have repeating patterns.
 - Life Science
 - 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.

Monarch Tagging At any location for tagging & release; prairie (flowers, clover areas, etc...) site needed for catching

Method: Students will learn about the monarch butterfly’s life cycle and their unique migration patterns. Following the presentation, students will observe pre-caught butterflies being tagged as part of a citizen science project and aid in the data collection. If time allows, or are at an appropriate site, students will use nets to collect monarch butterflies.

Objective: At the end of this activity the 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
 - Ask questions about objects, organisms, and events in the environment
 - Communicate investigations and explanations
 - Follow appropriate procedures
- Life Science
 - Understand and apply the knowledge of the characteristics of 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
- 21st Century Skills
 - 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
- Geography
 - Understand the use of geographic tools to locate and analyze information about people, places, and environments

Nature Sounds At any location

Method: Students will learn about sounds in nature (insects, frogs, etc...) and use household items to recreate various sounds

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

1. Identify animals that make sounds
2. Explain why animals communicate
3. Describe how certain insects make sounds

Iowa Core

- 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
- Science
 - Science as Inquiry
 - Use tools to gather data and extend the senses.
 - Ask questions about objects, organisms, and events in the environment
 - 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 the basic needs of plants and animals and how they interact with each other and their physical environment.
- Physical Science
 - Understand and apply knowledge of observable and measurable properties of objects

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 one prairie plant adaptation
2. Identify one prairie animal adaptation
3. Identify at least 3 prairie animals species seen
4. Identify at least 3 prairie plant species seen
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
 - Use tools to gather data and extend the senses (Students use tools such as rulers, thermometers, watches, balances, spring scales, magnifiers and microscopes to extend their senses and their abilities to gather data)
 - Ask questions about objects, organisms, and events in the environment (Students should answer their questions by seeking information from their own observations, investigations and from reliable sources of scientific information)
 - 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
- 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.
 - Understand relationship between geography and historical events
 - Understand why people developed a region.
 - Understand that the earth's physical features have changed over time.
- 21st Century Skills
 - Health Literacy
 - Understand and use basic health concepts to enhance personal, family, and community health
 - Know and use concepts related to health promotion and disease prevention
 - Tech Literacy
 - Understand basic technology hardware and software and their application
 - Choose the most appropriate technology tool for a given task.
 - Employability
 - Communicate and work appropriately with others to complete tasks
 - Work appropriately and productively with others.
 - Use all the appropriate principles of communication effectively.
 - Recognizes different roles and responsibilities and is open to change
 - Adapt to varied roles, responsibilities, and expectations.
 - Learn leadership skills and demonstrate integrity, ethical behavior, and social responsibility
 - Use interpersonal skills to influence and guide others toward a goal.
 - Demonstrate integrity and ethical behavior
 - Demonstrate mental, physical, and emotional preparedness to accomplish the task

Recycling Relay Any location (inside is preferred)

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
 - Earth & Space
 - Understand and apply knowledge of properties of earth materials.
 - Life Science
 - Understand and apply knowledge of ways to help take care of the environment

- 21st Century Skills
 - Employability
 - Communicate and work appropriately with others to complete tasks.
 - Health Literacy
 - Recognize critical literacy/thinking skills related to personal, family and community wellness.

Shapes & Colors Hike Any location

Method: Students will randomly pick an item out of a bag and will use their observation skills to find that color or shape of the object in nature or along the trail that is being walked.

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

1. Better identify shapes in nature
2. Better identify colors in nature

Iowa Core

- 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
- Science
 - Science as Inquiry
 - Use tools to gather data and extend the senses.
 - Ask questions about objects, organisms, and events in the environment
 - 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 the basic needs of plants and animals and how they interact with each other and their physical environment.
 - Physical Science
 - Understand and apply knowledge of observable and measurable properties of objects
- Math
 - Measurement and Data
 - Describe and compare measurable attributes.
 - Classify objects and count the number of objects in each category

Smart Lunch At any location

Method: Using the remains of various types of lunches we'll discuss how they differ in terms of cost, amount of waste generated and techniques for packing a 'smarter waste-free lunch'.

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

1. Explain the difference between individual and bulk packaging
2. Describe the cost difference between individual and bulk packaged items
3. List 4 ways they can reduce their garbage when packing a lunch

Iowa CORE:

- Science
 - Science as Inquiry
 - Use mathematics in scientific inquiry
- Mathematics
 - Operations and Algebraic Thinking
 - Represent and solve problems involving addition and subtraction
- 21st Century Skills
 - Financial Liability
 - Recognize various ways to save and the reasons individuals decide to save
 - Distinguish between appropriate spending choices
 - Identify monetary resources and distribution options for those resources

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. List two physical features of a trumpeter swan
2. Describe the habitat needs of trumpeter swans
3. Discuss the history of swan populations in Iowa from settlement by Europeans to the re-introduction of swans during recent decades
4. 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 characteristics of macro invertebrates how they are similar to and different from each other and other living things

- 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

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
 - Use tools to gather data and extend the senses (Students use tools such as rulers, thermometers, watches, balances, spring scales, magnifiers and microscopes to extend their senses and their abilities to gather data)
 - Ask questions about objects, organisms, and events in the environment (Students should answer their questions by seeking information from their own observations, investigations and from reliable sources of scientific information)
 - 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
- 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.
- Understand relationship between geography and historical events
- Understand why people developed a region.
- Understand that the earth's physical features have changed over time.
- 21st Century Skills
 - Health Literacy
 - Understand and use basic health concepts to enhance personal, family, and community health
 - Know and use concepts related to health promotion and disease prevention
 - Tech Literacy
 - Understand basic technology hardware and software and their application
 - Choose the most appropriate technology tool for a given task.
 - Employability
 - Communicate and work appropriately with others to complete tasks
 - Work appropriately and productively with others.
 - Use all the appropriate principles of communication effectively.
 - Recognizes different roles and responsibilities and is open to change
 - Adapt to varied roles, responsibilities, and expectations.
 - Learn leadership skills and demonstrate integrity, ethical behavior, and social responsibility
 - Use interpersonal skills to influence and guide others toward a goal.
 - Demonstrate integrity and ethical behavior
 - Demonstrate mental, physical, and emotional preparedness to accomplish the task

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 2 adaptations of woodland species
4. Describe one 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

- 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
- 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