






Elementary - Kindergarten Science

North Boone CUSD 200

UNITS (5/5 SELECTED)

SUGGESTED DURATION

 Unit 1: Plants and Animals	<i>10 lessons</i>
 Unit 2: Weather	<i>18 lessons</i>
 Unit 3: Forces and Motion	<i>17 lessons</i>
 Unit 4: EOY Performance Tasks: Plants & Animals	<i>5 lessons</i>
 Unit 5: EOY Performance Tasks: Weather	<i>5 lessons</i>

Unit 1: Plants and Animals

Elementary - Kindergarten Science - Last Updated on June 4, 2019

STANDARDS

K-ESS3-1.: Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

K-LS1-1.: Use observations to describe patterns of what plants and animals (including humans) need to survive.

PRIORITY STANDARDS

K-LS1-1.	Use observations to describe patterns of what plants and animals (including humans) need to survive.
K-ESS3-1.	Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

Unit 1: Plants and Animals

Elementary - Kindergarten Science - Last Updated on June 4, 2019

DESIRED RESULTS

Enduring Understandings	Essential Question(s)
<p>All animals need food and water in order to live and grow.</p> <p>Animals obtain their food from plants or from other animals.</p> <p>Plants need water and light to live and grow.</p> <p>Living things need water, air, and resources from the land.</p> <p>Living things live in places that have the things they need.</p> <p>Humans use natural resources for everything they do.</p>	<p>What do plants and animals need to live?</p> <p>Where do different kinds of plants grow?</p> <p>Where do different kinds of animals live?</p>

Students will know (Knowledge):	Students will be able to (Skills):
<ul style="list-style-type: none"> • Key concepts and vocabulary associated with plants and animals, including: animal, desert, habitat, nonliving, Arctic, ecosystem, living, plant, climate, forest, need, survival, pond, rainforest • What needs of plants and animals are the same; what needs of plants and animals are different • Things an animal needs in its habitat • Some animals eat only meat (carnivores); some animals eat only plants (herbivores); and some animals eat both meat and plants (omnivores) • Examples of living things in each habitat • What helps plants grow in very hot, very cold, very wet, and very dry climates 	<ul style="list-style-type: none"> • Use key concepts and vocabulary associated with plants and animals in discussions, inquiry activities, and performance tasks • Formulate questions about a chipmunk, shoreline plants, and a deer • Match pictures of plants and animals with pictures of the things plants and animals need to live • Make a model of an animal and what it eats • Identify desert and rainforest plants • Match different plants to the climate where it lives • Identify desert and rainforest animals

Unit 2: Weather

Elementary - Kindergarten Science - Last Updated on June 4, 2019

STANDARDS

K-ESS2-1.: Use and share observations of local weather conditions to describe patterns over time.

K-ESS3-2.: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

K-2-ETS1-1.: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

PRIORITY STANDARDS

K-ESS2-1.	Use and share observations of local weather conditions to describe patterns over time.
K-ESS3-2.	Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

Unit 2: Weather

Elementary - Kindergarten Science - Last Updated on June 4, 2019

DESIRED RESULTS

Enduring Understandings	Essential Question(s)
<p>Weather is the combination of sunlight, wind, precipitation, and temperature in a particular region at a particular time.</p> <p>People measure weather conditions to describe and record the weather and to notice patterns over time.</p> <p>Some kinds of severe weather are more likely than others in a given region.</p> <p>Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.</p>	<p>How do we measure and describe weather?</p> <p>What weather patterns do you observe in the seasons?</p> <p>What does a weather forecast tell us about severe weather?</p>

Students will know (Knowledge):	Students will be able to (Skills):
<ul style="list-style-type: none"> • Key concepts and vocabulary associated with weather, including: blizzard, hurricane, severe weather, thunderstorm, cool, patterns, temperature, tornado, forecast, seasons, thermometer, weather, rain, warm, rainbow, clouds, fall, spring, summer, winter • What meteorologists do • The longer it rains, the higher the rainfall level in a rain gauge • The heavier it rains, the higher the rainfall level in a rain gauge • Weather can affect such things as sports and recreational activities and how we should dress • Higher temperatures feel warmer and lower temperature feel cooler • Being aware of which season it is helps in knowing how to dress and what activities are possible 	<ul style="list-style-type: none"> • Use key concepts and vocabulary associated with weather in discussions, inquiry activities, and performance tasks • Generate observations about weather patterns and forecasting • Formulate questions about rain gauges, weather patterns and the seasons, and thunderstorms • Look for patterns in weather observation data • Draw a picture of today's weather • Investigate their environment looking for clues about the current season • Describe the differences in climate in the North and South • Collect and interpret data on the numbers of students in their class who prefer each season • Predict the weather and then check their predictions

Unit 2: Weather

Elementary - Kindergarten Science - Last Updated on June 4, 2019

Students will know (Knowledge):	Students will be able to (Skills):
<ul style="list-style-type: none">• The order of the seasons and the type of weather typical for each season• Weather forecasts help people plan their activities and prepare for severe weather• Radar, maps, sirens, and media announcements are some of the tools meteorologists use to forecast and warn people about severe weather• Different kinds of severe weather, including: blizzards, floods, tornadoes, hurricanes, thunderstorms• How tornadoes and hurricanes are alike and different• Tools that help us during severe weather include: flashlights, batteries, canned food, bottled water, radios• Some of the problems caused by severe weather include: fallen trees, blocked roads, flooding, power outages, damaged or destroyed property	

Unit 3: Forces and Motion

Elementary - Kindergarten Science - Last Updated on June 4, 2019

STANDARDS

K-PS2-1.: Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.

K-PS2-2.: Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.

PRIORITY STANDARDS

K-PS2-1.	Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.
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Unit 3: Forces and Motion

Elementary - Kindergarten Science - Last Updated on June 4, 2019

DESIRED RESULTS

Enduring Understandings	Essential Question(s)
<p>Pushes and pulls can have different strengths and directions.</p> <p>Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.</p> <p>When objects touch or collide, they push on one another and can change motion.</p> <p>A bigger push or pull makes things speed up or slow down more quickly</p>	<p>How do pushes and pulls affect the way objects move?</p> <p>What happens when objects touch or collide?</p> <p>How can pushes and pulls change an object's direction?</p>

Students will know (Knowledge):	Students will be able to (Skills):
<ul style="list-style-type: none"> • Key concepts and vocabulary associated with forces and motion, including: collide, force, pull, direction, distance, motion, position, push, speed • How forces (pushes and pulls) cause motion: a push moves an object further away; a pull moves an object closer; and a stronger push or pull moves an object faster or farther • In general, when objects collide, they can change direction, can change speed, can stop moving, and/or change position • When objects of <u>similar size and weight</u> collide, both objects change direction and position • When objects of <u>different size and weight</u> collide, the smaller, lighter object changes direction and position while the larger, heavier object changes position and slows down 	<ul style="list-style-type: none"> • Use key concepts and vocabulary associated with forces and motion in discussions, inquiry activities, and performance tasks • Generate observations about the effects of collisions and how to change the direction of a moving object • Investigate how pushing or pulling a toy car will cause it to move in different ways • Investigate what happens when objects (such as marbles) of similar and different sizes and weights collide • Describe and explain why bowling pins fall over when hit by a bowling ball and/or why a baseball moves far away when hit by a bat • Observe how changing the force of a push will change the effect of a collision, noting the change in speed of the bottles and the direction they move • Investigate how balls of different sizes move after they collide

Unit 3: Forces and Motion

Elementary - Kindergarten Science - Last Updated on June 4, 2019

Students will know (Knowledge):	Students will be able to (Skills):
	<ul style="list-style-type: none">• Investigate how to change the way an object travels, noting how a ball changes direction and recording data• Design and construct a maze to investigate how a marble moves and changes direction• Construct a pulley device and investigate how a pull can be used to change the direction of a basket

Unit 4: EOY Performance Tasks: Plants & Animals

Elementary - Kindergarten Science - Last Updated on June 4, 2019

STANDARDS

K-LS1-1.: Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS3-1.: Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

PRIORITY STANDARDS

K-LS1-1.	Use observations to describe patterns of what plants and animals (including humans) need to survive.
K-ESS3-1.	Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

Unit 4: EOY Performance Tasks: Plants & Animals

Elementary - Kindergarten Science - Last Updated on June 4, 2019

DESIRED RESULTS

Enduring Understandings	Essential Question(s)
All animals need food in order to live and grow.	What do plants and animals need to live?
Animals obtain their food from plants or from other animals.	Where do different kinds of plants grow?
Plants need water and light to live and grow.	Where do different kinds of animals live?
Living things need water, air, and resources from the land.	
Living things live in places that have the things they need.	
Humans use natural resources for everything they do.	

Students will know (Knowledge):	Students will be able to (Skills):
<ul style="list-style-type: none">• Things plants and animals need to survive• Things human beings need to survive• What helps plants grow in very hot, very cold, very wet, and very dry climates• How animals are suited to and get what they need (food, water, cooling or warmth) from their environments	<ul style="list-style-type: none">• Use survival graphs to compare and contrast the needs of plants and animals to the needs of people• Create a plant that will survive in a specified climate by drawing a picture and labeling its parts• Compare and contrast the needs of plants in various climates and how the plant parts help it live and grow there• Choose a habitat, research the kinds of animals that live there, and draw a model of the habitat

Unit 5: EOY Performance Tasks: Weather

Elementary - Kindergarten Science - Last Updated on June 4, 2019

STANDARDS

K-ESS2-1.: Use and share observations of local weather conditions to describe patterns over time.

K-ESS3-2.: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

PRIORITY STANDARDS

K-ESS2-1.	Use and share observations of local weather conditions to describe patterns over time.
K-ESS3-2.	Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

Unit 5: EOY Performance Tasks: Weather

Elementary - Kindergarten Science - Last Updated on June 4, 2019

DESIRED RESULTS

Enduring Understandings	Essential Question(s)
<p>Weather is the combination of sunlight, wind, precipitation, and temperature in a particular region at a particular time.</p> <p>People measure weather conditions to describe and record the weather and to notice patterns over time.</p> <p>Some kinds of severe weather are more likely than others in a given region.</p> <p>Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.</p>	<p>How do we measure and describe weather?</p> <p>What weather patterns do you observe in the seasons?</p> <p>What does a weather forecast tell us about severe weather?</p>

Students will know (Knowledge):	Students will be able to (Skills):
<ul style="list-style-type: none">• Rain gauges are used to measure rainfall• Thermometers are used to measure temperature• Seasonal differences and patterns shown by trees in northern Illinois• Weather forecasts help people plan their activities and prepare for severe weather• Radar, maps, sirens, satellites, and media announcements are some of the tools meteorologists use to forecast and warn people about severe weather• Different kinds of severe weather, including: blizzards, floods, tornadoes, hurricanes, thunderstorms• How tornadoes and hurricanes are alike and different• Tools that help us during severe weather include: flashlights, batteries, canned food, bottled water, radios	<ul style="list-style-type: none">• Make a poster about the types of weather described by rain gauges and thermometers• Make a foldable modeling weather patterns in each season by drawing and coloring pictures of a tree in each season• Play the role of TV weather reporters and make a video forecasting the next day's weather

Unit 5: EOY Performance Tasks: Weather

Elementary - Kindergarten Science - Last Updated on June 4, 2019

Students will know (Knowledge):	Students will be able to (Skills):
<ul style="list-style-type: none">Some of the problems caused by severe weather include: fallen trees, blocked roads, flooding, power outages, damaged or destroyed property	