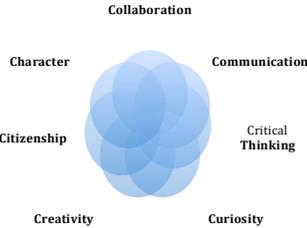


Content Area: Science	Course: Kindergarten Science	Grade Level: Kindergarten
	R14 The Seven Cs of Learning 	
Unit Titles	Length of Unit	
<ul style="list-style-type: none"> • Weather and Climate 	<ul style="list-style-type: none"> • 8-10 weeks 	
<ul style="list-style-type: none"> • Forces and Interactions: Pushes and Pulls 	<ul style="list-style-type: none"> • 8-10 weeks 	
<ul style="list-style-type: none"> • Animals, Plants, and their Environment 	<ul style="list-style-type: none"> • 8-10 weeks 	



Strands	Course Level Expectations
Physical Sciences	<ul style="list-style-type: none"> • 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. • 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 • Make observations to determine the effect of sunlight on Earth’s surface • Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.
Life Sciences	<ul style="list-style-type: none"> • Use observations to describe patterns of what plants and animals (including humans) need to survive
Earth and Space Sciences	<ul style="list-style-type: none"> • Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs • Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live • Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment • Use and share observations of local weather conditions to describe patterns over time • Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

Unit Title	Weather and Climate	Length of Unit	8-10 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What patterns do you notice in the weather and how do those patterns help us know what the weather will be? • How does the sun affect different parts of the Earth? 		
Standards*	K-PS3-1, K-PS3-2, K-ESS2-1, K-ESS3-2, ETS1-1, ETS1-2		
Unit Strands & Concepts	<p>DISCIPLINARY CORE IDEAS (DCI):</p> <ul style="list-style-type: none"> • Conservation of Energy and Energy Transfer • Weather and Climate • Natural Hazards • Defining and Delimiting an Engineering Problem <p>Cross Cutting Concepts (CCC)</p> <ul style="list-style-type: none"> • Patterns • Cause and Effect 		
Key Vocabulary	Weather, Warmer, Colder, Structure, Temperature, Region, Forecast, Data, Observations		

*Standards based on the Next Generation Science Standards (NGSS) and the National Research Council (NRC)

For more information visit: <http://portal.ct.gov/SDE/Science/Science-Standards-and-Resources>

Unit Title	Weather and Climate	Length of Unit	-10 Weeks
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Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • Local forms of severe weather • Sunlight warms earth's surface • Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. • People measure weather and record the weather to notice patterns over time. • Some kinds of severe weather are more likely than others in a given region 	<ul style="list-style-type: none"> • Articulate the purpose of weather forecasting • Identify and describe patterns and variations in local weather • Determine the effect of sunlight on earth's surface • Design a structure that will reduce the warming effect of sunlight on a given area

Assessments:	Performance Task(s) focused on demonstrating an understanding of weather patterns
Teacher Resources:	NGSS Frameworks, Region 14 Science Implementation Guide, Model Based Inquiry Investigations, Foss Kits, NGSS Phenomenon Resources, Stem Teaching Tools

Unit Title	Forces and Interactions: Pushes and Pulls	Length of Unit	8-10 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • What happens if you push or pull an object? • What is the relationship between speed and the amount of force used to push or pull an object? • What happens if an object hits another object? 		
Standards	K-PS2-1, K-PS2-2, K-2-ETS1-1, ETS1-3		
Unit Strands & Concepts	<p>DISCIPLINARY CORE IDEAS (DCI):</p> <ul style="list-style-type: none"> • Forces and Motion • Types of Interactions • Relationship Between Energy and Forces • Defining and Delimiting an Engineering Problem <p>Cross Cutting Concepts (CCC)</p> <ul style="list-style-type: none"> • Cause and Effect 		
Key Vocabulary	Push, Pull, Force, Motion, Collide, Speed, Data, Observations		

Unit Title	Forces and Interactions: Pushes and Pulls	Length of Unit	8-10 weeks
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Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • Pushes and pulls can have different strengths and directions • Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it • When objects touch or collide, they push on one another and can change motion. • bigger push or pull makes things speed up or slow down more quickly. 	<ul style="list-style-type: none"> • Compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. • 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 and adjust the design accordingly.

Assessments:	Performance Task(s) focused on demonstrating an understanding of the effects of various types of force on the speed and direction of a given object
Teacher Resources:	NGSS Frameworks, Region 14 Science Implementation Guide, Model Based Inquiry Investigations, Foss Kits, NGSS Phenomenon Resources, Stem Teaching Tools

Unit Title	Animals, Plants, and their Environment	Length of Unit	8-10 weeks
Inquiry Questions (Engaging & Debatable)	<ul style="list-style-type: none"> • How are things influenced by where they live? • Why do plants and animals live where they do? • What kind of impact can living things have on their environment? 		
Standards*	K-LS1-1, K-ESS2-2, K-ESS3-1 K-ESS3-3, ETS1-1		
Unit Strands & Concepts	<p>DISCIPLINARY CORE IDEAS (DCI):</p> <ul style="list-style-type: none"> • Organization for Matter and Energy Flow in Organisms • Biogeology • Natural Resources • Human Impacts on Earth Systems • Developing Possible Solutions Through Modeling <p>Cross Cutting Concepts (CCC)</p> <ul style="list-style-type: none"> • Cause and Effect • Patterns • Systems and System Models 		
Key Vocabulary	Environment, Needs, Impact, Pollution, Resources, Natural Resources, Data, Observations		

Unit Title	Animals, Plants, and their Environment	Length of Unit	8-10 weeks
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Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • All animals need food in order to live and grow. • Plants need water and light to live and grow • Plants and animals can change their environment • Living things need water, air, and resources from the land • Humans use natural resources for everything they do • Representations (ex. Drawings, sketches, & models) are useful in communicating ideas for a problem's solutions to other people 	<ul style="list-style-type: none"> • Compare and contrast different ways in which different types of animals and plants obtain food • Analyze and articulate the factors that can lead to animals and plants to influence their environment • Justify why certain plants and animals live in a specific environment • Explain how the choices humans make can reduce their impacts on the land, water, air, and other living things. • Model the relationship between the needs of different plants or animals (including humans) and the places they live.

Assessments:	Performance Task(s) focused on demonstrating an understanding of how plants and animals interact with their environment
Teacher Resources:	NGSS Frameworks, Region 14 Science Implementation Guide, Model Based Inquiry Investigations, Fos Kits, NGSS Phenomenon Resources, Stem Teaching Tools