

CURRICULUM MAP
SUBJECT: Science
GRADE LEVEL: Fourth Grade

Unit Time Frame	Essential Questions	Content	Skills	Assessment	Standards
Ecosystems One Trimester (8-12 weeks)	<ul style="list-style-type: none"> -How is an organism in the rainforest similar to a person? -What do living things need in order to survive? -How do living things interact with their environments in order to survive? -How is the life cycle or an animal similar to your life cycle? -How does the way a human lives influence and affect an ecosystem? -What makes something a living thing? 	<p>Students will understand that...</p> <ul style="list-style-type: none"> -Living organisms interact with and cause changes in their environment. -Living organisms exchange materials (such as gases, nutrients, water, and waste) with the environment. -Essential functions required for the well-being of an organism are carried out by specialized structures in plants and animals. -Organisms can only survive in environments in which their needs are met. -Some changes in ecosystems occur 	<p>Students will be able to....</p> <ul style="list-style-type: none"> -Develop and use evidence to determine if an unfamiliar object is living or nonliving. -Compare and contrast structures that have similar functions in different organisms. -Identify sources of energy in a variety of settings. -Predict the biotic and abiotic characteristics of an unfamiliar organism's habitat. -Explain the consequences of rapid ecosystem changes and compare them to the 	<p>Performance Task</p> <p>The students will be scientists that will use all information that they have learned throughout this unit to create a species of their own and demonstrate how/why it would be able to survive in the Rainforest. They should draw an illustration of the animal, label the characteristics of the animal that help it to thrive in this environment, as well as write a paragraph explaining their animal and its capabilities.</p> <p>Other Evidence</p> <p>-Teacher made vocabulary quizzes/tests</p>	<ul style="list-style-type: none"> 3-4.5.3.4.A 3-4.5.3.4.B 3-4.5.3.4.C 3-4.5.3.4.D 3-4.5.3.4.E

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		<p>slowly, while others occur rapidly.</p> <p>Students will know...</p> <p>-Characteristics of each stage of a life cycle vary according to the species.</p> <p>-Almost all energy and matter can be traced to the sun.</p> <p>-Organisms interact with and are dependent on their physical and living environment.</p> <p>-Interdependence of species within an ecosystem makes it possible for survival.</p> <p>-Characteristics of an ecosystem include climate, natural resources, and species of life.</p>	<p>consequences of gradual ecosystem changes.</p> <p>-Identify and explain the stages of a life cycle of a specific organism.</p> <p>-Compare the characteristics of life stages among species.</p> <p>-Model an adaptation to a species that would increase its chances of survival, should the ecosystem drastically change over time.</p> <p>-Evaluate and explain the ability of similar populations to thrive and grow in an ecosystem.</p> <p>-Create a species that will be able to adapt and survive in two different ecosystems.</p>	<p>-Chapter/Unit Test</p> <p>-Science Journals/Projects</p> <p>-Activities and investigations (partner work)</p> <p>-Article Comprehension Questions</p>	
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Energy One Trimester (8-12 weeks)	<p>-What objects do you use on a daily basis that have matter?</p> <p>-What objects in the classroom have energy? Which do not?</p> <p>-What items in your life produce a chemical change? Which produce a physical change?</p> <p>-How do we use the different forms of energy in our classroom?</p> <p>-When is it best to conserve energy?</p> <p>-When and how can energy be transferred?</p> <p>-Why do you need a complete circuit to</p>	<p>Students will understand that...</p> <p>-All objects are composed of matter.</p> <p>-Matter takes up space.</p> <p>-Energy is the ability to cause a change in matter and all moving things have energy.</p> <p>-Energy undergoes physical and chemical changes.</p> <p>-The forms of energy are electricity, light, heat, sound, and motion/force.</p> <p>-Each form of energy has properties.</p> <p>-A complete circuit is required in order for</p>	<p>Students will be able to...</p> <p>-Identify situations in which energy is being used.</p> <p>-Categorize objects based on their form of energy.</p> <p>-Predict and explain what happens when energy undergoes a physical or chemical change, is transferred, and conserved.</p> <p>-Demonstrate examples of kinetic and potential energy.</p> <p>-Compare and contrast the forms of energy seen in everyday life, and describe their applications.</p>	<p>Performance Task</p> <p>-All students will complete a Unit Test on Energy, in addition to lab experiments and investigations on electricity.</p> <p>Other Evidence</p> <p>-Teacher made vocabulary quizzes/tests</p> <p>-Chapter/Unit Test</p> <p>-Science Journals/Projects</p> <p>-Activities and investigations (partner work/response sheets)</p> <p>-Article Comprehension Questions</p>	<p>3-4.5.2.4 3-4.5.2.4.A 3-4.5.2.4.B 3-4.5.2.4.C 3-4.5.2.4.D 3-4.5.2.4.E</p>

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	<p>produce electricity?</p> <p>-What are some objects in your home that require energy?</p> <p>-How is energy related to the motion of objects?</p>	<p>electricity to flow.</p> <p>-Motion is a change in position over time.</p> <p>Students will know...</p> <p>-Matter can be measured through properties of a substance using appropriate tools.</p> <p>-Many substances can be changed from one state to another.</p> <p>-Energy is used in everyday life and where/when it occurs.</p> <p>-Energy can be conserved or transferred from one place to another.</p> <p>-Differences between heat and temperature.</p> <p>-Differences between conductors and</p>	<p>-Draw and label diagrams showing several ways that energy can be transferred.</p> <p>-Repair an electrical circuit by producing an observable change.</p> <p>-Demonstrate that motion is a change in position over time.</p> <p>-Identify the force that starts something moving or change its speed or direction of motion.</p>		
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		<p>insulators, and that metals are good conductors of electricity.</p> <p>-Force impacts the motion and speed of an object.</p>			
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<p>Weather</p> <p>One Trimester (8-12 weeks)</p>	<ul style="list-style-type: none"> - How does the absorption of Sun’s energy affect temperature? - How is the documentation of weather useful in your everyday life? - How does the formation of clouds and fog affect your life? - What is the relationship between clouds and precipitation? - How is water circulated throughout 	<p>Students will understand that...</p> <ul style="list-style-type: none"> - Land, air, and water absorb the Sun’s energy at different rates. - Weather changes that occur from day to day and across the seasons can be measured and documented using basic instruments such as a thermometer, wind vane, anemometer, and rain gauge. - Clouds and fog are made of tiny droplets 	<p>Students will be able to...</p> <ul style="list-style-type: none"> - Develop a general set of rules to predict temperature changes of Earth materials such as water, soil, and sand, when placed in the Sun and in the shade. - Identify patterns in data collected from basic weather instruments. - Observe daily cloud patterns, types of precipitation, and temperature, and categorize the clouds 	<p>Performance Task</p> <ul style="list-style-type: none"> - Weather Unit Test upon completion of Unit <p>Other Evidence</p> <ul style="list-style-type: none"> - Focus on Science Level E: Chapter 6: Hands On! Make a Wind Speed Indicator (pg. 102) - Chapter 6 Test (pg. 103) <i>NOTE: omit questions 1, 2, and 8.</i> - Buckle Down: Science 4: Practice Test (pgs. 165 – 166) 	<ul style="list-style-type: none"> 3-4.5.4.4 3-4.5.4.4.E 3-4.5.4.4.F 3-4.5.4.4.G

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	<p>different parts of our earth?</p> <p>- How is water the same in different areas such as oceans, lakes, underground sources, and glaciers? How is it different?</p>	<p>of water and, at times, tiny particles of ice.</p> <p>- Rain, snow, and other forms, of precipitation come from clouds; not all clouds produce precipitation.</p> <p>- Most of Earth's surface is covered by water. Water circulates through the crust, oceans, and atmosphere in what is known as the Water Cycle.</p> <p>- Properties of water depend on where the water is located (oceans, rivers, lakes, underground sources, and glaciers).</p> <p>Students will know...</p> <p>- How clouds form.</p> <p>- How to trace a path</p>	<p>by the conditions that form precipitation.</p>	<p>- Review 16: Weather (pgs 167 – 176)</p> <p>- Practice Test (pg. 177 & 178)</p> <p>- Teacher Generated Quiz: Labeling Parts of the Water Cycle</p> <p>- Rain From the Sun Worksheet</p> <p>- Implementing a Weather / Cloud Chart as a Class Job</p>	
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		<p>a drop of water might follow through the water cycle.</p> <p>- How the properties of water can change as water moves through the water cycle.</p>			
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