

Priority Code
 E = Essential
 I = Important
 C = Compact

Time Code
 O = On-going
 W = Weekly
 M = Monthly

5th Grade Science Prioritized Curriculum



Goals and Objectives	Priority	Time	Essential Questions	Suggested Activities	Resources	Assessments
Goal 1: The learner will conduct investigations to build an understanding of the interdependence of plants and animals.						
1.01 Describe and compare several common ecosystems (communities of organisms and their interaction with the environment).	I	O	What do living things need to survive? How do I compare various ecosystems?	Thinking maps Wordsplashes Give one, get one 3-2-1 K-W-L chart Students create a science dictionary	Research books Internet Science textbook Videos Transparencies	Chapter test Graphic Organizers Written articles Students create Power Points
1.02 Identify and analyze the functions of organisms within the population of the ecosystem: <ul style="list-style-type: none"> • Producers • Consumers • Decomposers 	E	O	How do populations interact? What is a food chain?	Construct a model of a food chain from a particular ecosystem including vocabulary. Write a paragraph explaining the interdependence of producers, consumers, and decomposers as modeled in food chain.	Internet Science textbook "Windows on Science" Videos Transparencies	Chapter test Graphic Organizers Students create Power Points
1.03 Explain why an ecosystem can support a variety of organisms.	C	O	How can an ecosystem support a variety of organisms? How do ecosystems change?	Compare/Contrast different systems using Venn Diagram Cause/Effect analyzing changes.	Textbook Videos Dioramas of specific ecosystem Transparencies	Chapter test Graphic Organizers Students create Power Points
1.04 Discuss and determine the role of light, temperature, and soil.	E	O	How are light, temperature, and soil useful in maintaining an ecosystem?	Explore Activity from textbook Conservation Field Day Predict how changes in light, temperature, and soil composition will affect an ecosystem's capacity to support life.	Transparencies Grade level books Graphs Charts	Teacher generated test Class discussion Ticket Out the Door
1.05 Determine the interaction of organisms within an ecosystem.	I	O	Why is it important for organisms to interact together in an ecosystem?	Field trip to a zoo Create a diorama showing some interactions within an ecosystem. Discuss how organisms rely on each other.	Transparencies Grade level books Videos	Teacher generated test 3-2-1 (from Learning Focus)

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1.06 Explain and evaluate some ways that humans affect ecosystems <ul style="list-style-type: none"> Habitat reduction due to development Pollutants Increased nutrients 	E	O	How do humans interact with nature to change ecosystems?	Discuss ecological changes within our communities. Analyze the effects of development, pollutions, and increased artificial nutrients on ecosystems. Defend and support your position on the effect of those factors on the environment.	Transparencies Grade level books Internet Videos	Teacher generated test The Important Thing
1.07 Determine how materials are recycled in nature.	E		How are materials recycled in nature?	<u>Bottle Biology</u> book (variety of activities) Identify stages of decomposition List examples of recycling in nature	Textbook <u>Bottle Biology</u> book	Project Chapter test

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Goal 2: The learner will make observations and conduct investigations to build an understanding of landforms.						
2.01 Identify and analyze forces that cause change in land forms over time including <ul style="list-style-type: none"> • Water and Ice • Wind • Gravity 	E	W	How do I examine the effects of weathering and erosion? How do I compare the effect of forces that build Earth's land forms?	Power Points <ul style="list-style-type: none"> • Jefferson County Elementary Power Points Inquiry Activities Examine examples of land forms changed by water, ice, and gravity	Grade level books: <u>Our River Keeper</u> and <u>Quinto's Volcano</u> . Reading in science resources.	Summary Sentence Anticipation Guide
2.02 Investigate and discuss the role of the water cycle and how movement of water over and through the landscape helps shape land forms.	E	W	How does running water impact the changing of the Earth's surface?	Power Points Graphic organizers Draw and model the effects of run-off and glaciers on land.	Reading in science activities Internet	Learning Focus 3-2-1 Wordsplash (water cycle)
2.03 Discuss and consider the wearing away and movement of rock and soil in erosion and its importance in forming <ul style="list-style-type: none"> • Canyons • Tributaries • Valleys • Meanders 	E	W	What is the relationship between erosion and its importance in forming canyons, tributaries, valleys, and meanders?	Book <u>Explore Activity C19</u> How Does the Steepness of Slope Affect Stream Erosion? Graphic organizers Wordplashes Differentiate between canyon, valley, meander, tributaries, and sediment.	Reading in science activities Internet	Learning Focus 3-2-1 The important thing
2.04 Describe the deposition of eroded material and its importance in establishing land forms including <ul style="list-style-type: none"> • Deltas • Flood Plains 	E	O	How do beaches, dunes, deltas, and flood plains form?	Quick Lab Foldalbe Activity C23 Foldable Illustrate the differences in deltas and flood plains.	Activity Resources Book Power Points	Learning Focus 3-2-1 KWL Teacher generated test from test generated
2.05 Discuss how the flow of water and the slope of the land affect erosion.	E	O	What is the relationship between the flow of water and how it affects erosion?	Create models using different slopes Graphic organizers Compare and contrast the stages of stream erosion and use it to determine which stream is older.	Science Book Internet	Learning Focus 3-2-1 KWL Teacher generated test from test generated

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Goal 2: The learner will make observations and conduct investigations to build an understanding of landforms.						
2.06 Identify and use models, maps, and aerial photographs as ways of representing landforms.	I	O	How do I identify and use models, maps, and aerial photographs as a way of representing land forms?	Internet activities Science activities Examine and distinguish among various land forms when shown models, maps, and aerial photos. Construct and label a model to demonstrate the land forms discussed.	Power Points on Web	Teacher generated test from test generated CD
2.07 Discuss and analyze how humans influence erosion and deposition in local communities, including school grounds, as a result of: <ul style="list-style-type: none"> • Clearing land • Planting vegetation • Building dams 	E	W	What is the relationship between humans and how erosion and deposition affects local communities?	Research/Internet Thinking Maps (Multi flow) Interviews of City Officials Justify the appropriateness of humans to clear land and build dams.	Soil Erosion site Soil Erosion causes and effects	Research Rubric Teacher generated

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Goals and Objectives	Priority	Time	Essential Questions	Suggested Activities	Resources	Assessments
Goal 3: The learner will conduct investigations and use appropriate technology to build an understanding of weather and climate.						
3.01 Investigate the water cycle including the processes of: <ul style="list-style-type: none"> • Evaporation • Condensation • Precipitation • Run-off 	E	O	What are the stages of the water cycle?	Students make illustration of water cycle. Compare/contrast evaporation, condensation, and precipitation. Vocabulary "bank"	Transparencies Graphic organizers Cycle graph	Fill in chart of water cycle. Word map completion. Draw a picture/diagram of water cycle.
3.02 Discuss and determine how the following are affected by predictable patterns of weather: <ul style="list-style-type: none"> • Temperature • Wind direction and speed • Precipitation • Cloud cover • Air pressure 	E	O	How does air pressure change with altitude? What conditions make up weather?	Build a weather station and graph results daily. Create an air pressure model. Field trip to weather station.	Grade level book – <u>The Sky-Watchers</u> Newspapers Graphs Activity book	Ticket out the door. Research project rubric.
3.03 Describe and analyze the formation of various types of clouds and discuss their relation to weather systems.	E	O	How do clouds form? How are cloud type and precipitation related?	Compare/contrast different types of clouds. Write a paragraph telling favorite precipitation, where it comes from, and why your chose it. Completer K-W-L chart.	Transparencies Activity book Internet Newspapers	Collaborative pair research. Wordsplash
3.04 Explain how global atmospheric movement patterns affect local weather.	E	O	How does global atmospheric movement patterns affect our local weather?	Research the "coriolis" effect. Make a table listing different global wind zones and current conditions locally – compare/contrast.	Newspapers Internet Graphs Videos Diagrams	Chapter test. Complete thinking map. Write a brief summary of patterns affecting climates.
3.05 Compile and use weather data to establish a climate record and reveal any trends.	E	O	What are the main factors that are used to describe the climate of an area? Why are climates different at different places on Earth?	Create a climate chart Graph weather data. Students make models of climates (soil conditions, etc.)	Newspapers Internet Graphs Climate maps Videos Diagrams	Chapter test. Research project on humidity. Report on changing climates.

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Goal 3: The learner will conduct investigations and use appropriate technology to build an understanding of weather and climate.						
3.06 Discuss and determine the influence of geography on weather and climate: <ul style="list-style-type: none"> Mountains Sea breezes Water bodies 	E	O	How are sea and land breezes produced? What are some things that affect climate?	Have students interpret an illustration of sea and land breezes. Students draw their own illustrations.	Videos Diagrams Internet	Chapter test. Research different land forms and how they affect the weather and climate.

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Goal 4: The learner will conduct investigations and use appropriate technology to build an understanding of forces and motion in technological designs.						
4.01 Determine the motion of an object by following and measuring its position over time.	E	6 Weeks	How can the motion of an object be determined over time?	Define motion and elapsed time. Observe objects to determine their movement. Measure movement of objects over a set time, then graph results	Graph paper Activity Resources Textbook	Chapter Reviews/Test Rubric for experiments
4.02 Evaluate how pushing or pulling forces can change the position and motion of an object.	E	6 Weeks	How do different forces affect an object's motion?	Illustration – p 329 from Resource book. Cause/Effect using graph from textbook (F18-textbook). Differentiate between pushing/pulling.	Reading in science Resources book Grade level science book: <u>The Rise and Fall of Galloping Gertie</u>	Students summarize the results of an applied force.
4.03 Explain how energy is needed to make machines move: • moving air • gravity	E	6 Weeks	What types of energy are needed to make machines move?	Students create poster showing effects of gravity. Define energy and gravity. Discuss and evaluate sources of energy. Conduct experiment in which energy sources are gradually removed from machines and evaluate the results.	Internet Textbook	Student complete research project on force.
4.04 Determine that an unbalanced force is needed to move an object or change its direction.	E	6 Weeks	What does it take to make an object move? What happens to an object's motion when the forces acting on it are unbalanced?	Cause/effect lesson. Show balanced/unbalanced forces playing tug-of-war. Use pictures of planes in flight to show forces.	Activity Resources book Pictures Diagrams	Teacher generated test. Chapter review.
4.05 Determine factors that affect motion including: • force • friction • inertia • momentum	E	6 Weeks	What does it take to change an objects state of motion?	• Give students experience pushing different objects. Discuss these experiences • Have students draw a sketch showing all of the forces acting on a sled being dragged.	Activity Resources book Pictures Diagrams	Teacher generated test. Chapter review

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Goal 4: The learner will conduct investigations and use appropriate technology to build an understanding of forces and motion in technological designs.						
4.06 Build and use a model to solve a mechanical design problem: <ul style="list-style-type: none"> • Devise a test for the model • Evaluate the results of test 	E	6 Weeks	How important are the machines we use? How do I solve a mechanical design problem using a model?	Use scientific method to design and test a design problem. Brainstorm a list of machines we use daily and how we depend on them.	Activity Resources book Trade books Poster of scientific method	Science project Chapter review
4.07 Determine how people use simple machines to solve problems.	E	O	How do people use simple machines to solve problems?	Define: simple machines Brainstorm list of simple machines and explain their uses. Analyze how people use simple machines to solve problems.	Textbook Magazines Transparencies	Learning Focus rubric Teacher generated quiz Written assessment