

Grade 4 Science

Diary map is based on the 2014-2015 school year. Information may change year to year. Months are guidelines and items may be done at different times of the year.

Month	Essential Questions	Content	Skills	Assessment	Resources	Technology
Jan.	<p>Earth How are Earth's features above and below the ground unique?</p> <p>The Moving Crust How can Earth's crust change?</p> <p>Weathering and Erosion How do different forces shape and change Earth's landforms?</p>	<p>Earth -Landforms -River Deltas -Drainage Basins -Continental Shelves -Layers of the Earth</p> <p>The Moving Crust -Plates -Faults -Folds -Mountains -Earthquakes -Volcanoes</p> <p>Weathering and Erosion -Physical weathering -Chemical weathering -Erosion -Glaciers -Human changes</p>	<p>Earth -Identify landforms and the features of the ocean floor -Describe the layers of the Earth</p> <p>The Moving Crust -Describe how the movement of plates builds mountains and causes earthquakes and volcanoes -Explain how scientists use seismic waves to study earthquakes</p> <p>Weathering and Erosion -Define and give examples of physical and chemical weathering -Explain how erosion helps break down and build up Earth's land -Understand how glaciers and human changes cause weathering and erosion</p>	-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011) Cloze and Vocabulary Assessments	-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011) -Macmillan/McGraw-Hill <i>Science-A Closer Look Building Skills Reading and Writing</i> (2011)	-Computer -Elmo
Feb.	<p>Changes Caused by the Weather How does the weather shape and change the land?</p>	<p>Changes Caused by the Weather -Floods -Fires -Storms -Landslides -Avalanches</p>	<p>Changes Caused by the Weather -Describe the effects of floods, fires, tornadoes, and hurricanes -Explain the causes and effects of landslides and avalanches</p>	-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011) Cloze and Vocabulary Assessments	-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011) -Macmillan/McGraw-Hill <i>Science-A Closer Look Building Skills Reading and Writing</i> (2011)	-Computer -Elmo

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	<p>Air and Weather How can you tell that air is around you?</p> <p>The Water Cycle How is water recycled?</p>	<p>Air and Weather -Gases -Temperature -Humidity -Air pressure -Precipitation -Measuring weather</p> <p>The Water Cycle -Evaporation -Condensation -Precipitation -Clouds</p>	<p>Air and Weather -Define the atmosphere as a mixture of different gases -Describe four properties of weather and the tools used to measure them</p> <p>The Water Cycle -Sequence the steps of the water cycle -Identify and describe types of clouds and precipitation</p>			
March	<p>Heat How do we use energy?</p> <p>Sound How can you make sound?</p> <p>Light How does light behave?</p>	<p>Heat -Heat -Conduction -Convection -Radiation -Insulator -Conductor</p> <p>Sound -Vibration -Sound wave -Echo -Wavelength -Frequency -Pitch -Amplitude -Volume</p> <p>Light -Prism -Electromagnetic spectrum</p>	<p>Heat -Explain that heat flows from warmer materials to cooler materials -Describe and define conduction, convection, and radiation</p> <p>Sound -Explain how sound is produced and how it travels through a medium -Identify the characteristics of sound, including frequency, pitch, volume, and echoes</p> <p>Light -Demonstrate that light travels in a straight line -Describe ways that light</p>	<p>-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011) Cloze and Vocabulary Assessments</p>	<p>-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011)</p> <p>-Macmillan/McGraw-Hill <i>Science-A Closer Look Building Skills Reading and Writing</i> (2011)</p>	<p>-Computer -Elmo</p>

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	<p>Electricity How does electricity affect your life?</p>	<ul style="list-style-type: none"> -Refraction -Reflection -Transparent -Translucent -Opaque <p>Electricity</p> <ul style="list-style-type: none"> -Static electricity -Discharge -Circuit -Current electricity -Series circuit -Parallel circuit 	<p>can be absorbed, reflected, or refracted by objects</p> <p>Electricity</p> <ul style="list-style-type: none"> -Describe the characteristics of electrically charged objects -Explain the difference between static and current electricity 			
April	<p>Magnetism and Electricity How are electricity and magnetism related?</p> <p>Introduction to Ecosystems How do the parts of an ecosystem interact?</p>	<p>Magnetism and Electricity</p> <ul style="list-style-type: none"> -Attract -Repel -Pole -Magnetic field -Electromagnetic -Motor -Generator <p>Introduction to Ecosystems</p> <ul style="list-style-type: none"> -Biotic Factor -Abiotic Factor -Ecosystem -Habitat -Population -Community 	<p>Magnetism and Electricity</p> <ul style="list-style-type: none"> -Describe a magnetic field and the effect of distance on magnetic force -Understand how an electromagnet, an electric motor, and a generator work <p>Introduction to Ecosystems</p> <ul style="list-style-type: none"> -Identify abiotic and biotic factors in an ecosystem -Describe ecosystems, communities, and populations 	<p>-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011) Cloze and Vocabulary Assessments</p>	<p>-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011)</p> <p>-Macmillan/McGraw-Hill <i>Science-A Closer Look Building Skills Reading and Writing</i> (2011)</p>	<p>-Computer</p> <p>-Elmo</p>
May	<p>Biomes How do ecosystems compare?</p>	<p>Biomes</p> <ul style="list-style-type: none"> -Biome -Grassland 	<p>Biomes</p> <ul style="list-style-type: none"> -Define a biome -Describe Earth's six 	<p>-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011) Cloze and</p>	<p>-Macmillan/McGraw-Hill <i>Science-A Closer Look</i> (2011)</p>	<p>-Computer</p> <p>-Elmo</p>

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	<p>Relationships in Ecosystems How do organisms get energy?</p>	<ul style="list-style-type: none"> -Deciduous Forest -Tropical Rain Forest -Desert -Taiga -Tundra <p>Relationships in Ecosystems</p> <ul style="list-style-type: none"> -Producer -Consumer -Decomposer -Food chain -Food web -Competition -Energy pyramid 	<p>main biomes</p> <p>Relationships in Ecosystems</p> <ul style="list-style-type: none"> -Explain how energy is cycled through an ecosystem -Describe food webs and give examples of predator-and- prey relationships 	Vocabulary Assessments	<p>-Macmillan/McGraw-Hill <i>Science-A Closer Look Building Skills Reading and Writing</i> (2011)</p>	