

GOOD SHEPHERD EPISCOPAL SCHOOL

6TH GRADE SCIENCE YEAR AT A GLANCE

Month	Unit/ Content Focus	Skills	NGSS Aligned
August (1/2 Week)	Expectations Lab Safety	Lab Safety	N/A
September (4 Weeks)	Lab Safety Scientific Method Metric Invention Convention Atoms and Molecules	Lab safety Metric Scientific Method Invention Convention Plan and carry out an investigation Develop Models	PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.
October (5 Weeks)	Newton's Law and Forces	Design a solution to a problem Plan an investigation Construct and interpret graphical displays of data	PS2-1 Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects. PS2-3 Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.
November (3 Weeks)	Newton's Laws and Forces Cont. Weather	Design a solution to a problem Plan an investigation Construct, analyze and interpret graphical displays of data Develop and use a model Collect, analyze, and interpret data Ask questions to clarify evidence	PS2-1 Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects. PS2-3 Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.

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			<p>ESS2-5 Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.</p> <p>ESS3-2 Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.</p> <p>ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>
December (3 Weeks)	MSOSW (Middle Schoolers Out to Save the World)	Collect, analyze, and interpret data Ask questions to clarify evidence	<p>ESS3-2 Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.</p> <p>ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>
January (4 Weeks)	Cells, Mitosis, and Body Systems	Develop and use a model Use argument supported by data Conduct an investigation to provide evidence Gather and Synthesize information	<p>LS1-1 Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.</p> <p>LS1-2 Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.</p> <p>LS1-3 Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.</p> <p>LS1-8 Gather and synthesize information that sensory receptors</p>

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			<p>respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.</p>
<p>February (4 Weeks)</p>	<p>Cells and Body Systems Cont. Gravity Earth/Sun System Galaxies</p>	<p>Develop and use a model Use argument supported by data Conduct an investigation to provide evidence Gather and Synthesize information Analyze and interpret data Construct and present arguments using data as evidence</p>	<p>LS1-1 Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. LS1-2 Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. LS1-3 Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. LS1-8 Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories. ESS1-1 Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. ESS1-2 Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. ESS1-3 Analyze and interpret data to determine scale properties of objects in the solar system. PS2-4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.</p>

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March (2 Weeks) ERBs	Earth/Sun System Galaxies Cont.	Analyze and interpret data Construct and present arguments using data as evidence Develop and use a model	ESS1-1 Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. ESS1-2 Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. ESS1-3 Analyze and interpret data to determine scale properties of objects in the solar system. PS2-4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.
April (5 Weeks)	Rock Cycle, Plate Tectonics, COE	Construct a scientific explanation based on evidence Develop a model Plan and carry out an investigation	ESS1-4 Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history. ESS2-1 Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
May (2 Weeks) FINALS	Geologic Processes	Construct a scientific explanation based on evidence Develop a model Plan and carry out an investigation	ESS1-4 Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history. ESS2-1 Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

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			ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
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* This YAG will change. It is meant only to provide a quick look at the topics that will be addressed during the school year. Class progress, ERB testing, school trips, and inclement weather will all merit YAG adjustments.