

# GOOD SHEPHERD EPISCOPAL SCHOOL

## 6<sup>TH</sup> GRADE SCIENCE YEAR AT A GLANCE

Month	Unit/ Content Focus	Skills	NGSS Aligned
<b>August</b> (1/2 Week)	Expectations Lab Safety	Lab Safety	N/A
<b>September</b> (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.
<b>October</b> (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.
<b>November</b> (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>
<b>December</b> (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>
<b>January</b> (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><b>February</b> (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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<b>March</b> (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.
<b>April</b> (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.
<b>May</b> (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.