



Sixth Grade Science

School: _____ **Teacher Name:** _____

Below is a list of all the units with the key indicators and standards for this course. All key indicators and standards are to be addressed with fidelity throughout the course. Please use the “Content Taught” column as a checklist and list the date that you completed the key indicator and/or standard.

Unit 1: Engineering Design and Nature of Science

Content Taught (Check box)	Date of Completion	Standards
		Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
		Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
		Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.
		Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.

Unit 2: Dynamic Earth and Geologic History

Content Taught (Check box)	Date of Completion	Standards
		Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.



		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.
		Construct an explanation based on evidence for how geoscience processes have changed Earth's surface varying time and spatial scales.
		Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.
		Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
		Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
		Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

Unit 3: Rocks and Minerals

Content Taught (Check box)	Date of Completion	Standards
		Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.
		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.



		Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
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Unit 4: Weather and Climate

Content Taught (Check box)	Date of Completion	Standards
		Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and force of gravity.
		Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.
		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.
		Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.
		Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

Unit 5: Ecology

Content Taught (Check box)	Date of Completion	Standards
		Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
		Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.



		Construct an argument supported by evidence for how increases in human population and per capita consumption of natural resources impact Earth's systems.
		Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

Please provide any additional notes that are pertinent to the content that was covered throughout the academic year.