

# 6th Grade Science Pacing Guide

## 2023-2024

<b>Quarter 1</b> August 28- October 28	<b>Intro/Getting to Know Students/ Scientific Method- 2 weeks</b>
	<b>Solar System- 5 weeks</b>
	6.E.1.1 Explain how the relative motion and relative position of the sun, Earth and moon affect the seasons, tides, phases of the moon, and eclipses. 6.E.1.2 Explain why Earth sustains life while other planets do not based on their properties (including types of surface, atmosphere and gravitational force) and location to the Sun. 6.E.1.3 Summarize space exploration and the understandings gained from them.
	<b>Lithosphere- 2 weeks</b>
	6.E.2.1 Summarize the structure of the earth, including the layers, the mantle and core based on the relative position, composition, and density. 6.E.2.2 Explain how crustal plates and ocean basins are formed, move and interact using earthquakes, heat flow, and volcanoes to reflect forces within the earth.
<b>Quarter 2</b> October 31- January 19	<b>Lithosphere- 2 weeks</b>
	6.E.2.3 Explain how the formation of soil is related to the parent rock type and the environment in which it develops. 6.E.2.4 Conclude that the good health of humans requires: monitoring the lithosphere, maintaining soil quality and stewardship.
	<b>Plants- 3 weeks</b>
	6.L.1.1 Summarize the basic structures and functions of flowering plants required for survival, reproduction, and defense. 6.L.1.2 Explain the significance of the processes of photosynthesis, respiration, and transpiration to the survival of green plants and other organisms
	<b>Ecosystems- 4 weeks</b>
	6.L.2.1 Summarize how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within food chains and food webs (terrestrial and aquatic) from producers to consumers to decomposers. 6.L.2.2 Explain how plants respond to external stimuli (including dormancy and forms of tropism) to enhance survival in an environment.
<b>Quarter 3</b> January 24- March 28  <small>*Quarter 3 is continued on the next page</small>	<b>Ecosystems- 3 weeks</b>
	6.L.2.3 Summarize how the abiotic factors (such as temperature, water, sunlight, and soil quality) of biomes (freshwater, marine, forest, grasslands, desert, Tundra) affect the ability of organisms to grow, survive and /or create their own food through photosynthesis.
	<b>Light/Sound- 4 weeks</b>
	6.P.1.1 Compare the properties of waves to the wavelike property of energy in earthquakes, light, and sound 6.P.1.2 Explain the relationship among visible light, the electromagnetic spectrum, and sight. 6.P.1.3 Explain the relationship among the rate of vibration, the medium through which vibrations travel, sound, and hearing.

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	<b>Matter- 2 weeks</b>
	6.P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements.
<b>Quarter 4</b> April 9- June 11	<b>Matter- 2 weeks</b>
	6.P.2.2 Explain the effect of heat on the motion of atoms through a description of what happens to particles during a change in phase.
	6.P.2.3 Compare the physical properties of pure substances that are independent of the amount of matter present including density, melting point, boiling point, and solubility to properties that are dependent on the amount of matter present to include volume, mass, and weight.
	<b>Energy Transfer- 4 weeks</b>
6.P.3.1 Illustrate the transfer of heat energy from warmer objects to cooler ones using examples of conduction, radiation, and convection and the effects that may result	
6.P.3.2 Explain the effects of electromagnetic waves on various materials to include absorption, scattering, and change in temperature.	
6.P.3.3 Explain the suitability of materials for use in technological design based on a response to heat (to include conduction, expansion, and contraction) and electrical energy (conductors and insulators).	