

Science 6<sup>th</sup> grade

**Next Generation Science Standards**

- MS-ESS1 Earth's Place in the Universe
- MS-ESS2 Earth's Systems
- MS-ESS3 Earth and Human Activity
- MS-ETS1 Engineering Design

**Technology**

SMART Board, Elmo, projector, computer, iPads, YouTube, lab equipment, Discovery Education

Standards	Essential Questions	Content	Skills	Assessment	Resources
<b>Scientific Method</b> MS-ETS1	<b>Scientific Method</b> How can the scientific method be used to solve a question or problem?	<b>Scientific Method</b> -Question and inferences -Hypothesis -Research and experiment -Data -Result analysis -Conclusion -Lab safety	<b>Scientific Method</b> -Name and explain the steps -Utilize past knowledge and observations to form a question -Develop a hypothesis -Gain background knowledge on topic through research -Carry out a guided experiment -Identify constants within an experiment -Understand the difference between dependent and independent variables -Construct an organized table and graph to analyze data -Analyze and communicate results to prove or disprove hypothesis -Discuss the importance of repeating experiment -Model appropriate lab safety rules and procedures	<b>Scientific Method</b> -Group work -Tests	<b>Scientific Method</b> - <i>Elevate Science Earth</i> by Pearson (2019) -Labs -Interactive notebook

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<p><b>Earth's Systems</b> MS-ESS2 MS-ESS3</p>	<p><b>Earth's Systems</b> How do Earth's processes interact with each other?</p>	<p><b>Earth's Systems</b> Lithosphere: -Five layers of the Earth -Tectonic processes -Convection currents -Rock and mineral relationships due to weathering and erosion -Human impact</p> <p>Hydrosphere: -Water cycle: related to sun and gravity -Ocean water -Human impact</p> <p>Atmosphere: -Layers -Global and local winds -Weather -Human impact</p>	<p><b>Earth's Systems</b> Lithosphere: -Compare and contrast the five layers -Explain the relationship between the layers and tectonic processes -Report evidence of tectonic processes -Analyze convection currents -Understand the cycling of Earth's materials -Discuss how humans positively and negatively impact the lithosphere</p> <p>Hydrosphere: -Describe how the water cycle is driven by the sun and gravity -Explain how climate, waves, and currents drive ocean movement -Discuss how humans positively and negatively impact the hydrosphere</p> <p>Atmosphere: -Compare and contrast the layers of the atmosphere -Differentiate between global and local winds -Discuss how fronts affect weather -Identify weather instruments -Recognize symbols used on weather maps -Discuss how humans positively and negatively impact the atmosphere</p>	<p><b>Earth's Systems</b> -Projects -Tests</p>	<p><b>Earth's Systems</b> -<i>Elevate Science Earth</i> by Pearson (2019) -Labs</p>

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<p><b>The Universe</b> MS-ESS1</p>	<p><b>The Universe</b> How do fossils map Earth’s history?  How do celestial bodies interact/form?</p>	<p><b>The Universe</b> -Geologic time scale -Lunar phases -Eclipses -Daily and seasonal patterns -Tides -Gravitational pull, orbits, formation of objects -Scale of objects -Milky Way Galaxy</p>	<p><b>The Universe</b> -Understand the geologic time scale -Discuss how fossils record geologic time -Model lunar phases -Distinguish between different types of eclipses -Describe the movements of the sun, moon, and Earth in relation to the rotation, revolution, and seasons -Understand how planets were formed -Interpret data to understand the scale of objects in the solar system -Understand Earth’s cosmic address</p>	<p><b>The Universe</b> -Group work -Projects -Tests</p>	<p><b>The Universe</b> -<i>Elevate Science Earth</i> by Pearson (2019) -Labs -Models</p>
<p><b>Earth and Human Activity</b> MS-ESS3</p>	<p><b>Earth and Human Activity</b> How do Earth and humans interact and affect each other?</p>	<p><b>Earth and Human Activity</b> -Renewable vs. non-renewable resources -Alternative energy resources -Global climate change</p>	<p><b>Earth and Human Activity</b> -Distinguish between renewable and non-renewable resources -Investigate alternative energy resources -Research the impact of global climate change</p>	<p><b>Earth and Human Activity</b> -Project: Off the Grid -Group work</p>	<p><b>Earth and Human Activity</b> -<i>Elevate Science Earth</i> by Pearson (2019)</p>