

## 6<sup>th</sup> Grade Science

<p><b>Year Long</b>          Scientific Method          Scientific Inquiry          Measurement</p>	<p><u><i>NATURE OF SCIENCE</i></u>  <b>1.2 Understand concepts and processes of evidence, models, and explanations</b>          1.2.1 Explain how observations and data are used as evidence on which to base scientific explanations and predictions          1.2.2 Use observations to make inferences          1.2.4 Use models to explain or demonstrate a concept  <b>1.3 Understand consistency, changes, and measurement</b>          1.3.2 Measure in both US and metric system (emphasis on metric)  <b>1.6 Understand scientific inquiry and develop critical thinking skills</b>          1.6.1. Write and analyze questions that can be answered by conducting scientific experiments          1.6.2 Conduct scientific investigations using a control and variable. Repeat same experiment using alternate variables          1.6.3 Select and use appropriate tools and techniques to gather and display data          1.6.4 Use evidence to analyze data in order to develop descriptions, explanations, predictions, and models          1.6.5 Test a hypothesis based on observations          1.6.6 Communicate scientific procedures and explanations</p>	
<p><b>September/October</b>          Scientific Method          Scientific Inquiry          Plate Tectonics          Natural Resources</p>	<p><u><i>EARTH AND SPACE SYSTEMS</i></u>  <b>4.1 Understand Scientific Theories of origin and subsequent changes in the universe and Earth systems</b>          4.1.1 Explain interactions among the solid earth, oceans, atmosphere, and organisms  <u><i>NATURE OF SCIENCE</i></u>  <b>1.1 Understand systems, order, and organization</b>          1.1.1 Analyze different systems  <b>1.3 Understand consistency, changes, and measurement</b>          1.3.1 Analyze changes that occur in and among systems  <b>1.5 Understand Concept of form and function</b>          1.5.1 Analyze how the shape or form of an object or system is frequently related to its use and or function</p> <p><u><i>PERSONAL AND SOCIAL PERSPECTIVES; TECHNOLOGY</i></u>  <b>5.1 Understand common environmental quality issues, both natural and human induced</b></p>	<p>8 Plate Tectonics          11 Earth's Resources</p>

	<p>5.1.1 Identify issues for environmental studies</p> <p><b>5.3 Understand the importance of natural resources and the need to manage and conserve them</b></p> <p>5.3.1 Explain the difference between renewable and nonrenewable resources</p>	
<p><b>October/November</b></p> <p>Atmosphere</p> <p>Weather and Clouds</p>	<p><u><i>EARTH AND SPACE SYSTEMS</i></u></p> <p><b>4.1 Understand Scientific Theories of origin and subsequent changes in the universe and Earth systems</b></p> <p>4.1.1 Explain interactions among the solid earth, oceans, atmosphere, and organisms</p> <p>4.1.2 Explain the water cycle and relationship to weather and climate</p> <p>4.1.3 Identify cumulus, cirrus, and stratus clouds and how they relate to weather changes</p>	<p>12 Climate and Weather</p>
<p><b>December</b></p> <p>Technology</p>	<p><u><i>PERSONAL AND SOCIAL PERSPECTIVES; TECHNOLOGY</i></u></p> <p><b>5.2 Understand the relationship between science and technology</b></p> <p>5.2.1 Describe how science and technology are part of our society</p> <p>5.2.2 Describe how science and technology are interrelated</p> <p><u><i>NATURE OF SCIENCE</i></u></p> <p><b>1.8 Understand technical communication</b></p> <p>1.8.1 Read, give, and execute technical instructions</p>	<p>21 Technology</p>
<p><b>January/February</b></p> <p>Classifications</p> <p>Cells</p> <p>Heredity</p> <p>Plants</p>	<p><u><i>BIOLOGY</i></u></p> <p><b>3.3 Understanding Cells are a basic form and function for all living things</b></p> <p>3.3.1 Structure of organisms (cells, tissues, organs, organ systems, and organisms)</p> <p>3.3.2 Structure differences of plant and animal cells</p> <p>3.3.3 Describe how traits are passed from parent to offspring</p> <p><u><i>NATURE OF SCIENCE</i></u></p> <p><b>1.1 Understand systems, order, and organization</b></p> <p>1.1.1 Analyze different systems</p> <p><b>1.3 Understand consistency, changes, and measurement</b></p> <p>1.3.1 Analyze changes that occur in and among systems</p> <p><b>1.5 Understand Concept of form and function</b></p> <p>1.5.1 Analyze how the shape or form of an object or system is frequently related to its use and or function</p>	<p>1 Classification 2 Cells</p> <p>3 Reproduction</p> <p>5 Plants</p>

<p><b>March</b> Biomes Ecosystem</p>	<p><u>PERSONAL AND SOCIAL PERSPECTIVES; TECHNOLOGY</u>  <b>5.1 Understand common environmental quality issues, both natural and human induced</b>  5.1.1 Identify issues for environmental studies  <b>5.3 Understand the importance of natural resources and the need to manage and conserve them</b>  5.3.1 Explain the difference between renewable and nonrenewable resources</p>	<p>6 Biomes 7 Ecosystems</p>
<p><b>April</b> Matter Chemistry</p>	<p><u>PHYSICAL SCIENCE</u>  <b>2.1 Understand the structure and function of matter and molecules and their interaction</b>  2.1.1 Compare and contrast the differences among elements, compounds, and mixtures  2.1.2 Define the properties of matter  2.1.3 Compare densities of equal volumes of a solid, liquid, or gas  2.1.4 Describe the effects of temperature on density  2.1.5 Explain the nature of physical change and how it relates to physical properties (the distance between molecules as water changes from ice to liquid water, and to water vapor)</p>	<p>13 Matter 14 Building Blocks of Matter</p>
<p><b>May</b> Force/Motion</p>	<p><u>PHYSICAL SCIENCE</u>  <b>2.2 Understand concept of motion and forces</b>  2.2.1 Describe the effects of different forces (gravity and friction) on the movement, speed, and direction of an object</p>	<p>15 Forces and Motion</p>