

TIME: When and for how long will the content be taught	Standard: List the exact standard as adopted or our locally adopted skill	Topic: Brief explanation of what you will be doing to teach this standard	Assessments: How and when students will be assessed
1st Semester			
<p><b>1st Quarter:</b> <b>August-October</b></p> <p><b>Branches of Science:</b> <b>PHYSICAL</b></p> <p><b>Units:</b> -Scientific Explanations -Energy &amp; Forces</p> <p><b>Chapters:</b> -NOS Scientific Explanations -Chapter 1 Laws of Motion -Chapter 2 Using Energy &amp; Heat</p>	<p><b>ENGINEERING DESIGN</b></p> <ul style="list-style-type: none"> <li>6-8.ETS 1-1, 6-8.ETS 1-2, 6-8.ETS 1-3, 6-8.ETS 1-4</li> </ul> <p><b>6-8.ETS1-1</b> 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.</p> <p><b>6-8.ETS1-2</b> Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.</p> <p><b>6-8.ETS1-3</b> 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.</p> <p><b>6-8.ETS1-4</b> 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.</p> <p><b>MOTION &amp; STABILITY:FORCES &amp; INTERACTIONS</b></p> <ul style="list-style-type: none"> <li>MS-PS2-1, MS-PS2-2, MS-PS2-3, MS-PS2-4, MS-PS2-5,</li> </ul> <p><b>MS-PS2-1</b> Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects</p> <p><b>MS-PS2-2</b> 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</p> <p><b>MS-PS2-3</b> Ask questions and design a plan to determine the factors that affect the strength of electric and magnetic forces.</p> <p><b>MS-PS2-4</b> Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects</p> <p><b>MS-PS2-5</b> Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact</p> <p><b>ENERGY</b></p> <ul style="list-style-type: none"> <li>MS-PS3-1, MS-PS3-2, MS-PS3-3, MS-PS3-4, MS-PS3-5</li> </ul> <p><b>MS-PS3-1</b> 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.</p> <p><b>MS-PS3-2</b> Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are</p>	<p><b>Engineering Design (Chapter NOS)</b> <u>The following are links that I use to teach these standards</u></p> <p>-SHOW WHAT YOU KNOW -SLIDE SHOW -DOODLE NOTES -READING PASSAGE -POWERPOINT -STUDENT NOTES -Scientific Method Homework and Study Guide -PRACTICE IDENTIFYING PARTS OF THE SCIENTIFIC METHOD AND GRAPHING -SCIENTIFIC SCENARIOS -Exploring the Scientific Method -Can You Write a Clear &amp; Concise Lab Procedure? -Radish Lab</p> <p><b>Motion &amp; Stability:Forces &amp; Interactions</b> <u>Chapter 1 Laws of Motion &amp; the following links:</u></p> <p>-Ch. 1 L1 NoteTaking -Ws 9 -Main ideas WS -notes for lesson 1 (outline) -Ws 35 -Lesson 2 outline -Net force questions -L. 3 Main idea ws -Ws 52 -Ws 54 -Lesson 3 outline -L. 4 Main Idea ws -Compilation Poster</p> <p><b>Energy</b> <u>Chapter 2 Using Energy &amp; Heat &amp; the following links:</u></p> <p>-L. 1 MAIN IDEA WS -Ws 9 -Lesson 2 main idea -Ws 28 &amp; 39 -Told ya so (ws 37) -Lesson 2 outline -L. 3 MAIN IDEA</p>	<p><b>Engineering Design</b> At the end of each lesson and chapter Tests/Quizzes (Vocabulary &amp; Content)</p> <p><b>Motion &amp; Stability:Force s &amp; Interactions</b> -Compilation Poster -Ch 1 review -Short answer questions Test/Quizzes (Vocabulary &amp; Content)</p> <p><b>Energy</b> -Practice quiz -Chapter 2 Review and study guide &amp; change of states Test/Quizzes (Vocabulary &amp; Content)</p>

	<p>stored in the system.</p> <p><u>MS-PS3-3</u> Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.</p> <p><u>MS-PS3-4</u> Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample</p> <p><u>MS-PS3-5</u> Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object</p>	-Ws 46	
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<p>2nd Quarter October-December</p> <p><u>Branches of Science:</u> <u>Earth</u></p> <p><u>Units:</u> -Exploring Earth -Dynamic Earth</p> <p><u>Chapters:</u> -Chapter 6 Earth's Structure -Chapter 11 Earth's History -Chapter 7 Minerals &amp; Rocks</p>	<p><u>Earth's Place in the Universe</u></p> <ul style="list-style-type: none"> <li>MS-ESS 1-4</li> </ul> <p><u>MS-ESS 1-4</u> 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. [Clarification Statement: Emphasis is on how analyses of rock formations and the fossils they contain are used to establish relative ages of major events in Earth's history. Examples of Earth's major events could range from being very recent (such as the last Ice Age or the earliest fossils of homo sapiens) to very old (such as the formation of Earth or the earliest evidence of life). Examples can include the formation of mountain chains and ocean basins, the evolution or extinction of particular living organisms, or significant volcanic Eruptions.]</p> <p><u>Earth's Systems</u></p> <ul style="list-style-type: none"> <li>MS-ESS 2-1</li> </ul> <p><u>MS-ESS 1-4</u> Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. [Clarification Statement: Emphasis is on the processes of melting, crystallization, weathering, deformation, and sedimentation, which act together to form minerals and rocks through the cycling of Earth's materials.]</p>	<p><u>Earth's Place in the Universe</u> <u>Chapter 6 Earth's Structure</u> -Layers of Earth's Interior -Movie notes -Interior of Earth -Main idea-chapter 6 lesson 1 -Ws 14 -Main idea chapter 6 lesson 2 -Ch 6 review and study guide</p> <p><u>Chapter 11 Earth's History</u> - Ch 11 lesson 1 Lesson 1 main idea -Ws 9 -booklet -Lesson 2 main idea -Ws 34 -Venn Diagram -Ws 55 &amp; 57 -Lesson 3 main idea -Chapter 11 study guide and review</p> <p><u>Earth's Systems</u> <u>Chapter 7 Minerals &amp; Rocks</u> -Rock packet</p>	<p>Quizzes/Tests</p>

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<b>3rd Quarter</b> <b>January-March</b>  <u>Branches of Science:</u> <b>Earth</b>  <u>UNITS:</u> -Exploring Earth -Dynamic Earth  <u>Chapters</u> -Chapter 8 Erosion & Deposition -Chapter 9 Plate Tectonics -Chapter 12 Natural Resources	<b>Earth's Systems</b> <ul style="list-style-type: none"> <li>MS-ESS 2-2, MS-ESS 2-3, MS-ESS 3-1, MS-ESS 3-2</li> </ul> <u>MS-ESS 2-2</u> Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales. [Clarification Statement: Emphasis is on how processes change Earth's surface at time and spatial scales that can be large (such as slow plate motions or the uplift of large mountain ranges) or small (such as rapid landslides or microscopic geochemical reactions), and how many geoscience processes (such as earthquakes, volcanoes, and meteor impacts) usually behave gradually but are punctuated by catastrophic events. Examples of geoscience processes include surface weathering and deposition by the movements of water, ice, and wind. Emphasis is on geoscience processes that shape local geographic features, where appropriate.] <u>MS-ESS 2-3</u> Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions. [Clarification Statement: Examples of data include similarities of rock and fossil types on different continents, the shapes of the continents (including continental shelves), and the locations of ocean structures (such as ridges, fracture zones, and trenches).] <u>MS-ESS 3-1</u> 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. [Clarification Statement: Emphasis is on how these resources are limited and typically non-renewable, and how their distributions are significantly changing as a result of removal by humans. Examples of uneven distributions of resources as a result of past processes include but are not limited to petroleum (locations of the burial of organic marine sediments and subsequent geologic traps), metal ores (locations of past volcanic and hydrothermal activity associated with subduction zones), and soil (locations of active weathering and/or deposition of rock).] <u>MS-ESS 3-2</u> Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects. [Clarification Statement: Emphasis is on how some natural hazards, such as	<b>Earth's Systems</b> <b>Chapter 8 Erosion &amp; Deposition</b> -Chapter 8 lesson 1 main idea -lesson 2 main idea -lesson 3 main idea -erosion/deposition slides  <b>Chapter 9</b> -Main Idea lesson 1 -Lesson 2 main idea -WEBQUEST -Lesson 3 main idea -Ch 9 Study guide  <b>Chapter 12</b> -lessons 1-4 main ideas	quizzes/tests

	<p>volcanic eruptions and severe weather, are preceded by phenomena that allow for reliable predictions, but others, such as earthquakes, occur suddenly and with no notice, and thus are not yet predictable. Examples of natural hazards can be taken from interior processes (such as earthquakes and volcanic eruptions), surface processes (such as mass wasting and tsunamis), or severe weather events (such as hurricanes, tornadoes, and floods). Examples of data can include the locations, magnitudes, and frequencies of the natural hazards. Examples of technologies can be global (such as satellite systems to monitor hurricanes or forest fires) or local (such as building basements in tornado-prone regions or reservoirs to mitigate droughts).]</p>		
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<p><b>4th Quarter</b> <b>March-May</b></p> <p><u>Branches of</u> <u>Science:</u> <u>Life</u></p> <p><u>Unit:</u> <u>Life Structure &amp;</u> <u>Function</u></p> <p><u>Chapters:</u> -Ch 14 Cell Structure &amp; Function -Ch 15 From a Cell to an Organism -Ch 16 Human Body Systems</p>	<p><b>From Molecules to Organisms:Structure &amp; Processes</b></p> <ul style="list-style-type: none"> <li>MS-LS 1-1, MS-LS 1-2, MS-LS 1-3, MS-LS 1-7, MS-LS 1-8</li> </ul> <p><u>MS-LS 1-1</u> Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. [Clarification Statement: Emphasis is on developing evidence that living things are made of cells, distinguishing between living and non-living things, and understanding that living things may be made of one cell or many and varied cells.]</p> <p><u>MS-LS 1-2</u> Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. [Clarification Statement: Emphasis is on the cell functioning as a whole system and the primary role of identified parts of the cell, specifically the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall.]</p> <p><u>MS-LS 1-3</u> Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. [Clarification Statement: Emphasis is on the conceptual understanding that cells form tissues and tissues form organs specialized for particular body functions. Examples could include the interaction of subsystems within a system and the normal functioning of those systems.]</p> <p><u>MS-LS 1-7</u> Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism. [Clarification Statement: Emphasis is on describing that molecules are broken apart and put back together and that in this process, energy is released.]</p> <p><u>MS-LS 1-8</u> Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.</p>	<p><b>From Molecules to Organisms:Structure &amp; Processes</b></p> <p><u>Ch 14 Cell Structure &amp; Function</u></p> <ul style="list-style-type: none"> <li>-Wacky History of the Cell ws</li> <li>-LESSON 1 MAIN IDEA</li> <li>-WS 9</li> <li>-WS 15</li> <li>-LESSON 2 MAIN IDEA</li> <li>-WS 26</li> <li>-Ws 30</li> <li>-Lesson 3 main idea</li> <li>-Ws 47</li> <li>-Ws 56</li> <li>-Lessons 1-3 review</li> <li>-Lesson 4 main idea</li> <li>-Ws 67</li> <li>-Photosynthesis or Cellular Respiration?</li> <li>-Venn Diagram with word bank.</li> <li>-Photosynthesis &amp; C.R. Web</li> <li>-Essay questions for ch 14 test</li> <li>-Chapter review and study guide</li> </ul> <p><u>Ch 15 From a Cell to an Organism</u></p> <ul style="list-style-type: none"> <li>-Lesson 1 main idea</li> <li>-Ws 9</li> <li>-Cell cycle book directions</li> <li>-Color by number</li> <li>-Main Idea Notes</li> <li>-Ws 29</li> <li>-Video notes</li> <li>-Cell differentiation and questions</li> <li>-Study guide and review</li> </ul> <p><u>Chapter 16 Human Body Systems</u></p> <ul style="list-style-type: none"> <li>-Ws 9</li> <li>-Lesson 1 main idea</li> <li>-Lesson 2 main idea</li> </ul>	<p>quizzes/tests /cell cycle book</p>
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