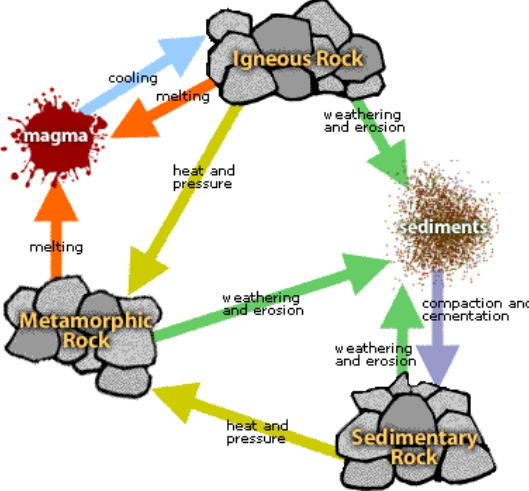
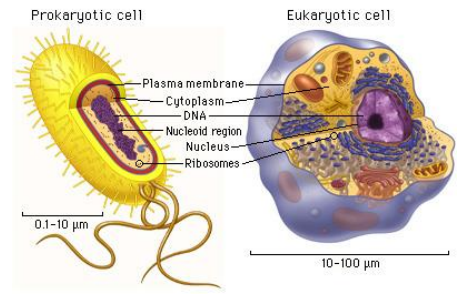


<p align="center">1st Six Weeks August 22 – September 30</p>	<p align="center">2nd Six Weeks October 3 – November 4</p>	<p align="center">3rd Six Weeks November 7 – December 20</p>
<p>Nature of Science</p> <ul style="list-style-type: none"> Use of scientific inquiry methods during lab and field investigations Plan and implement comparative and descriptive investigations by <ul style="list-style-type: none"> Making observations Asking well-defined questions and Using appropriate equipment and technology Design and implement experimental investigations using the above steps and including the formulation of a testable hypothesis Displaying data and scientific results using <ul style="list-style-type: none"> Models Simulations Tables Graphs Know the history of science and the contributions of specific scientists that are relevant to the content Make informed decisions using critical thinking, scientific reasoning, and problem solving <p align="center">Scientific Method</p>	<p>Matter</p> <ul style="list-style-type: none"> Matter can be classified as elements, compounds, or mixtures <ul style="list-style-type: none"> Elements are classified based on their physical properties as <ul style="list-style-type: none"> metals nonmetals metalloids Know that an element is a pure substance. Know that elements are represented by chemical symbols. <ul style="list-style-type: none"> Recognize that a limited number of the many known elements comprise the largest portion of solid Earth, living matter, oceans, and the atmosphere. Differentiate between elements and compounds on the most basic level. Know that matter has physical properties that can be used in classification. Compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, malleability, and density Calculate density to identify an unknown substance. 	<p>Energy</p> <ul style="list-style-type: none"> Formation of a new substance using the evidence of a chemical change such as production of a gas, change in temperature, production of a precipitate, or color change Law of Conservation of Energy: energy can neither be created nor destroyed, it just changes form. Investigate methods of thermal energy transfer, including conduction, convection, and radiation. Verify through investigations that thermal energy moves in a predictable pattern. Demonstrate energy transformations such as mechanical energy to electrical energy. <p>Force and Motion</p> <ul style="list-style-type: none"> Know force and motion is related to potential and kinetic energy. <ul style="list-style-type: none"> Compare and contrast potential and kinetic energy. Identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces. Calculate average speed using distance and time measurements. Measure and graph changes in motion. Investigate how inclined planes and pulleys can be used to change the amount of force to move an object. $\text{speed} = \frac{\text{distance}}{\text{time}}$

<p align="center">4th Six Weeks January 5 – February 17</p>	<p align="center">5th Six Weeks February 21 – April 7</p>	<p align="center">6th Six Weeks April 10 – May 25</p>														
<p>Energy Resources</p> <ul style="list-style-type: none"> Know energy resources are available on a renewable, nonrenewable, or indefinite basis. Debate the advantages and disadvantages of coal, oil, wind, natural gas, nuclear power, biomass, hydropower, geothermal, solar resources. Design a logical plan to manage energy resources in the home, school, or community. <p>Earth</p> <ul style="list-style-type: none"> Understand the structure of Earth, the rock cycle, and plate tectonics.  <ul style="list-style-type: none"> Build a model to illustrate the structural layers of Earth. Identify the major tectonic plates. Describe how plate tectonics causes major geological events. Test the physical properties of minerals, including hardness, color, luster, and streak Classify rocks by the processes of their formation, such as metamorphic, igneous, or sedimentary 	<p>Solar System and Space Exploration</p> <ul style="list-style-type: none"> Understand the organization of our solar system and the relationships among the various bodies that comprise it. Describe the physical properties, locations, and movements of the <ul style="list-style-type: none"> Sun planets Galilean moons meteors asteroids comets Understand that gravity is the force that governs the motion of our solar system. Describe the history and future of space exploration including <ul style="list-style-type: none"> types of equipment transportation needed 	<p>Organisms</p> <ul style="list-style-type: none"> Understand that all organisms are composed of one or more cells. Determine whether a cell is prokaryotic or eukaryotic.  <table border="1" data-bbox="1417 690 1953 933"> <thead> <tr> <th>Prokaryotic Cells</th> <th>Eukaryotic Cells</th> </tr> </thead> <tbody> <tr> <td>Very minute in size</td> <td>Fairly large in size</td> </tr> <tr> <td>Nuclear region (nucleoid) not surrounded by a nuclear membrane</td> <td>Nuclear material surrounded by a nuclear membrane</td> </tr> <tr> <td>Single chromosome present</td> <td>More than one chromosome present</td> </tr> <tr> <td>Nucleolus absent</td> <td>Nucleolus present</td> </tr> <tr> <td>Membrane bound cell organelles are absent</td> <td>Membrane bound cell organelles are present</td> </tr> <tr> <td>Cell division by fission or budding (no mitosis)</td> <td>Cell division by mitosis or meiosis</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Recognize that the broadest taxonomic classification of living organisms is divided into currently recognized Domains. Identify the basic characteristics of organisms, including <ul style="list-style-type: none"> prokaryotic or eukaryotic unicellular or multicellular autotrophic or heterotrophic mode of reproduction <p>Ecology</p> <ul style="list-style-type: none"> Describe biotic and abiotic parts of an ecosystem in which organisms interact. Diagram the levels of organization within an ecosystem, including <ul style="list-style-type: none"> organism population community ecosystem 	Prokaryotic Cells	Eukaryotic Cells	Very minute in size	Fairly large in size	Nuclear region (nucleoid) not surrounded by a nuclear membrane	Nuclear material surrounded by a nuclear membrane	Single chromosome present	More than one chromosome present	Nucleolus absent	Nucleolus present	Membrane bound cell organelles are absent	Membrane bound cell organelles are present	Cell division by fission or budding (no mitosis)	Cell division by mitosis or meiosis
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**Scientific Investigations and Reasoning skills are taught throughout the entire school year. Specific skills have been noted in the six weeks that most heavily addresses that topic.

PROCESS STANDARDS	
Scientific Investigations and Reasoning Skill TEKS are taught throughout the school year during all content units.	
Safe and Environmental Practices	<ul style="list-style-type: none"> • demonstrate safe practices during laboratory and field investigations as outlined in the Texas Safety Standards; and • practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials.
Scientific Inquiry	<ul style="list-style-type: none"> • plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology; • design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology; • collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers; • construct tables and graphs, using repeated trials and means, to organize data and identify patterns; and • analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.
Scientific Problem Solving	<ul style="list-style-type: none"> • in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student; • use models to represent aspects of the natural world such as a model of Earth's layers; • identify advantages and limitations of models such as size, scale, properties, and materials; and • relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content.
Tools and Models	<ul style="list-style-type: none"> • use appropriate tools to collect, record, and analyze information, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, triple beam balances, microscopes, thermometers, calculators, computers, timing devices, and other equipment as needed to teach the curriculum; and • use preventative safety equipment, including chemical splash goggles, aprons, and gloves, and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher.