

	Trimester 1	Trimester 2	Trimester 3
Essential Questions	<p>What skills do scientists use to conduct a scientific investigation?</p> <p>What is the relationship between atoms, elements, and the periodic table?</p> <p>How do we describe chemical reactions?</p>	<p>How do we describe and measure motion, forces and energy?</p>	<p>What is work and how do machines work?</p> <p>How do we describe the effect of buoyant force?</p> <p>How does the density of an object determine whether it floats or sinks?</p>
Content Overview	<p>Students study the atom and its basic structure and arrangement. They construct models of the atom that show the arrangement of subatomic particles. Students learn how the periodic table is organized and how the atoms of elements form chemical bonds. Students research an element from the periodic table and present information to the class. The trimester concludes with the study of chemical and physical changes, chemical reactions and evidence used to identify chemical reactions. Students study acids, bases and the pH</p>	<p>Students study the concepts of motion, speed, and acceleration. Through hands-on activities, students learn how to calculate the speed and acceleration of various moving objects. Students engage in a physics project where they work in collaborative groups to design and build a roller coaster. Through this project, students demonstrate various concepts such as speed, acceleration, friction, centrifugal force and Newton's Laws of Motion. Students engage in a mini-unit about sound, light and heat energy.</p>	<p>Students study of work, power and simple machines. Through a hands-on project, students build simple machines that work together to complete a simple task. They also utilize their math skills to calculate the work, power, mechanical advantage and efficiency of various machines. Students complete a physics project where students work in collaborative groups to design and build a cardboard boat. Through this project, students demonstrate their understanding of buoyant force, density, floating and sinking,</p>

Content Overview	scale. Through laboratory investigations, students identify the pH of various chemicals using an indicator. Students utilize scientific process skills as they conduct investigations about chemistry concepts.	Students complete power point projects on a sound, light or heat topic.	and Archimedes's principle.
Strategies and Skills	<ul style="list-style-type: none"> • Develop scientific process skills • Use of metric measurement and tools • Demonstrate scientific safety • Use of graphic organizers to manage information • Develop and implement reading comprehension skills • Develop an understanding about science and technology • Understand and use the periodic table of elements • Describe how chemical reactions occur between elements • Explain the properties of acids and bases and understand how to use 	<ul style="list-style-type: none"> • Develop scientific process skills • Use of metric measurement and tools • Demonstrate scientific safety • Use of graphic organizers to manage information • Develop and implement reading comprehension skills • Develop an understanding about science and technology • Describe and calculate speed and acceleration • Explain, demonstrate and illustrate Newton's laws of motion • Describe how forces work • Describe friction and gravity 	<ul style="list-style-type: none"> • Develop scientific process skills • Use of metric measurement and tools • Demonstrate scientific safety • Use of graphic organizers to manage information • Develop and implement reading comprehension skills • Develop an understanding about science and technology • Describe and calculate work and power • Examine and understand how simple machines work • Determine what makes an object float or sink • Describe buoyant force

	the pH scale	<ul style="list-style-type: none"> Describe energy and the forms of energy 	
Content Standards	From NSTA: Develop abilities necessary to do scientific inquiry Develop an understanding about scientific inquiry Develop an understanding of properties and changes to properties in matter	From NSTA: Develop abilities necessary to do scientific inquiry Develop an understanding about scientific inquiry Develop an understanding of motion and forces Develop an understanding of energy	From NSTA: Develop abilities necessary to do scientific inquiry Develop an understanding about scientific inquiry Develop an understanding of motion and forces Develop abilities of technological design Develop understandings about science and technology
Assessments	<ul style="list-style-type: none"> Tests and quizzes Labs and hands-on activities Daily homework Vocabulary and concept building class work assignments Current event assignments Atom model project Element research project Microsoft Publisher Chemistry project 	<ul style="list-style-type: none"> Tests and quizzes Labs and hands-on activities Daily homework Vocabulary and concept building class work assignments Current event assignments Newton's First Law of Motion and sports comic strip analogy project Roller coaster physics project Sound, light and heat energy power point presentation 	<ul style="list-style-type: none"> Tests and quizzes Labs and hands-on activities Daily homework Vocabulary and concept building class work assignments Current event assignments Simple machines project Cardboard boat project

Resources	<i>Chemical Interactions</i> , Prentice Hall <i>Science World</i> , Scholastic	<i>Motion, Forces, and Energy</i> , Prentice Hall <i>Sound and Light</i> , Prentice Hall <i>Science World</i> , Scholastic	<i>Motion, Forces, and Energy</i> , Prentice Hall <i>Science World</i> , Scholastic
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