

# Physical Science

		Description of Average Weekly Outside Requirements (may vary by teacher)	
<p><b>Main Topics</b> (What main ideas/concepts are covered):</p> <ul style="list-style-type: none"> <li>• Laboratory Procedures</li> <li>• The Science of Physics</li> <li>• Linear Motion</li> <li>• Forces</li> <li>• Work and Energy</li> <li>• Earth &amp; Solar System</li> <li>• Sound and Light</li> <li>• Electricity and Magnetism</li> <li>• Periodic Table</li> <li>• Chemical Formulas and Reactions</li> </ul>	<p><b>Rationale</b> (Why a student should take this course):</p> <p>Through this course, students will better understand how the world works by examining the science of matter. They will get an introduction to the sciences of Physics and Chemistry to better prepare them for future courses in the STEM fields.</p>	<p><b>Reading</b> (Text, document, etc.):</p> <ul style="list-style-type: none"> <li>• Students may be expected to read from the textbook frequently.</li> <li>• Students may be responsible for supplemental reading to support the textbook.</li> </ul>	<p><b>Written</b> (Terms, questions, outlines, free response, etc.):</p> <ul style="list-style-type: none"> <li>• Students will solve 2-3 problems from the book between 1-2 times per week</li> <li>• Students will read from the textbook, approximately 5-10 pages at a time, between 1 and 2 times per week</li> <li>• Students will analyze and answer 2-10 vocabulary and free-response questions once per week</li> </ul>
<p><b>Grade Composition</b> (How grades are determined):</p> <ul style="list-style-type: none"> <li>• Tests</li> <li>• Quizzes</li> <li>• Classwork</li> <li>• Homework</li> <li>• Projects</li> <li>• Laboratory reports</li> </ul>	<p><b>Skill Development</b> (Skills developed in this course and how):</p> <p>Critical Thinking – Students will apply their knowledge of physics to observe, analyze, and explain a variety of situations presented through word problems, laboratory experiments and demonstrations</p> <p>Problem Solving – Students will understand how to identify a problem, determine the relevant information, and apply physics concepts and equations to solve the problem</p> <p>Text analysis – Students will be able to parse a document for the relevant information.</p>	<p><b>Sample Textbook Excerpt:</b></p> <p>“Have you ever seen lightning strike Earth? Lightning is a large static discharge. A static discharge is a transfer of charge between two objects because of a buildup of static electricity. A thundercloud is a mighty generator of static electricity. As air masses move and swirl in the cloud, areas of positive and negative charge build up. Eventually, enough charge builds up to cause a static discharge between the cloud and the ground. As the electric charges move through the air, they collide with atoms and molecules. These collisions cause the atoms and molecules in air to emit light. You see this light as a spark, as shown in <b>Figure 8.</b>”</p>	
<p><b>Required Skills</b> (Skills necessary to be successful in this course):</p> <ul style="list-style-type: none"> <li>• Reading/Comprehension</li> <li>• Work Ethic</li> <li>• Math Skills – Algebra 1</li> <li>• Basic Writing</li> </ul>			