

# Calendar-Based Curriculum Map: \_\_\_Physics\_\_\_

	<b>August/September</b>	<b>October</b>	<b>November</b>
<b>Essential Question</b>	What is physics? How are units utilized in physic calculations? How is motion measured?	How are vectors utilized to describe two-dimensional vectors?	What are forces and how do they effect motion?
<b>Content</b>	-Describe the nature of physics and the fields that relate to it -Investigate SI units and apply the in conversions and significant numbers -Develop relationships between displacement, time, speed, and velocity	-Apply scalar and vector quantities to trigonometric functions and projectile motion	-Define force and introduce free body diagrams -Define and apply Newton's three laws -Examine the applications of friction and force concepts
<b>Skills</b>	-Group Cooperation -Lab Skills -Conversions and Algebraic Calculations -Critical Thinking -Problem Solving	-Group Cooperation -Conversions and Algebraic Calculations -Critical Thinking -Problem Solving -Trigonometric Functions	--Group Cooperation -Conversions and Algebraic Calculations -Critical Thinking -Problem Solving -Trigonometric Functions
<b>Assessments</b>	-In class questioning -Portfolio Assessment of Problems	-In class questioning -Portfolio Assessment of Problems	-In class questioning -Portfolio Assessment of Problems
<b>Activities/Resources</b>	-Chapter 1 &2 problems -Chapter 1&2 Reviews -Scientific Method Lab	-Chapter 3 problems -Chapter 3 Reviews	- CH 4 problems - CH 4 Review - Force Tutorial packets

# Calendar-Based Curriculum Map:     Physics

	December	January	February
<b>Essential Question</b>	What is work and how is energy conserved? How is conservation of energy applied to momentum and collisions?	How do objects travel in a circular path and what forces are involved in this motion?	What is torque? How is rotational equilibrium used in the real world?
<b>Content</b>	<ul style="list-style-type: none"> <li>-Define work</li> <li>- Define KE, PE and apply them to different forms</li> <li>- Investigate the conservation of energy</li> <li>-Define momentum and apply conservation of momentum to elastic and inelastic collisions</li> </ul>	<ul style="list-style-type: none"> <li>- Introduction into angular units and angular measurements</li> <li>-Kinematic interpretation of circular motion</li> <li>-Examine the causes of circular motion</li> </ul>	<ul style="list-style-type: none"> <li>- Define and use the torque equation</li> <li>-Analyze equilibrium situations to determine motion of a rotating body</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>-Group Cooperation</li> <li>-Conversions and Algebraic Calculations</li> <li>-Critical Thinking</li> <li>-Problem Solving</li> <li>-Trigonometric Functions</li> </ul>	<ul style="list-style-type: none"> <li>-Group Cooperation</li> <li>-Conversions and Algebraic Calculations</li> <li>-Critical Thinking</li> <li>-Problem Solving</li> <li>-Trigonometric Functions</li> </ul>	<ul style="list-style-type: none"> <li>-Group Cooperation</li> <li>-Conversions and Algebraic Calculations</li> <li>-Critical Thinking</li> <li>-Problem Solving</li> <li>-Trigonometric Functions</li> </ul>
<b>Assessments</b>	<ul style="list-style-type: none"> <li>-In class questioning</li> <li>-Portfolio Assessment of Problems</li> </ul>	<ul style="list-style-type: none"> <li>-In class questioning</li> <li>-Portfolio Assessment of Problems</li> </ul>	<ul style="list-style-type: none"> <li>-In class questioning</li> <li>-Portfolio Assessment of Problems</li> </ul>
<b>Activities/Resources</b>	<ul style="list-style-type: none"> <li>-Chapter 5&amp;6 problems</li> <li>-Chapter 5&amp;6 Reviews</li> </ul>	<ul style="list-style-type: none"> <li>-Chapter 7 problems</li> <li>-Chapter 7 Reviews</li> </ul>	<ul style="list-style-type: none"> <li>-Chapter 8 problems</li> <li>-Chapter 8 Reviews</li> </ul>

# Calendar-Based Curriculum Map:            Physics

	March	April	May
<b>Essential Question</b>	What are the mechanisms which govern the behavior of fluids?	What is heat? How is heat and energy conserved through thermodynamic processes?	What is a wave? How is wave phenomena evident in both sound and electromagnetic radiation?
<b>Content</b>	<ul style="list-style-type: none"> <li>- Define ideal fluids</li> <li>- Examine and calculate buoyant force</li> <li>- Apply pressure calculations to Pascal and Bernoulli's principles</li> <li>- Define and describe an ideal gas</li> </ul>	<ul style="list-style-type: none"> <li>-Define heat and relate it to molecular motion</li> <li>- Define and describe temperature</li> <li>-Apply temperature and heat to specific heat capacity</li> <li>-Develop the relationship between heat and work</li> <li>- Describe the first and second laws of thermodynamics</li> </ul>	<ul style="list-style-type: none"> <li>- Define simple harmonic motion and apply that to a wave</li> <li>- Develop and understanding of wave motion and propagation</li> <li>- Analyze of the wave equation</li> <li>-Apply applications of wave motion to sound waves and electromagnetic radiation</li> <li>-Discuss the particle portion of a wave</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>-Group Cooperation</li> <li>-Conversions and Algebraic Calculations</li> <li>-Critical Thinking</li> <li>-Problem Solving</li> <li>-Trigonometric Functions</li> </ul>	<ul style="list-style-type: none"> <li>-Group Cooperation</li> <li>-Conversions and Algebraic Calculations</li> <li>-Critical Thinking</li> <li>-Problem Solving</li> <li>-Trigonometric Functions</li> </ul>	<ul style="list-style-type: none"> <li>-Group Cooperation</li> <li>-Conversions and Algebraic Calculations</li> <li>-Critical Thinking</li> <li>-Problem Solving</li> <li>-Trigonometric Functions</li> </ul>
<b>Assessments</b>	<ul style="list-style-type: none"> <li>-In class questioning</li> <li>-Portfolio Assessment of Problems</li> </ul>	<ul style="list-style-type: none"> <li>-In class questioning</li> <li>-Portfolio Assessment of Problems</li> </ul>	<ul style="list-style-type: none"> <li>-In class questioning</li> <li>-Portfolio Assessment of Problems</li> </ul>
<b>Activities/Resources</b>	<ul style="list-style-type: none"> <li>Chapter 9 problems</li> <li>-Chapter 9 Reviews</li> </ul>	<ul style="list-style-type: none"> <li>-Chapter 10&amp;11 problems</li> <li>-Chapter 10&amp;11 Reviews</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 12,13,14,15,16 problems</li> <li>-Chapter 12,13,14,15,16 Reviews</li> </ul>