



**- Curriculum Map  
Honors Physics #233  
Saugus High School  
Saugus, MA 01906**

Week 1	
<b>Performance Standards</b>	
<p><i>The students will:</i></p> <p>Be able to make observations from a scientific perspective.</p> <p>Be able to read, <b>interpret</b> &amp; examine scientific claims.</p> <p>Be able to pose questions &amp; form hypotheses based on personal observations, scientific articles, experiments &amp; knowledge.</p>	
<b>Unit/Topic./Lesson</b>	
A Physics Toolkit Mathematics and Physics Measurement	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Demonstrate</b> scientific methods use the metric system</p> <p><b>Evaluate</b> answers using dimensional analysis</p> <p>Perform arithmetic operations using scientific notation</p> <p><b>Distinguish</b> between accuracy and precision</p> <p><b>Determine</b> the precision of measured quantities</p> <p><b>Graph</b> the relationship between independent and dependent variables</p> <p><b>Interpret</b> graphs</p> <p><b>Recognize</b> common relationships in graphs</p>	<p>How is mathematics used in physics?</p>
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Handout:</b> Syllabus</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 1</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 1 Review Chapter 1 Problems	<p><b>Completed by:</b></p> <p><b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 2	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.3 – Create</b> and <b>interpret</b> graphs of 1-dimensional motion, such as position vs. time, distance vs. time, speed vs. time, velocity vs. time, and constant acceleration vs. time</p>	
<b>Unit/Topic./Lesson</b>	
Representing Motion Picturing Motion Where and When	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Draw</b> motion diagrams to <b>describe</b> motion</p> <p><b>Develop</b> a particle model to represent a moving object</p> <p><b>Define</b> coordinate systems for motion problems</p> <p><b>Recognize</b> that the chosen coordinate system affects the signs of the objects' positions</p> <p><b>Define</b> displacement</p> <p><b>Determine</b> a time interval</p> <p><b>Use</b> a motion diagram to answer questions about an object's position or displacement</p>	<p>What are some ways to represent motion?</p>
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Lab:</b> Whirligigs</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 2</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 2 Review Chapter 2 Problems Lab Report	<p><b>Completed by:</b></p> <p><b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 3	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.3 – Create</b> and <b>interpret</b> graphs of 1-dimensional motion, such as position vs. time, distance vs. time, speed vs. time, velocity vs. time, and constant acceleration vs. time</p>	
<b>Unit/Topic./Lesson</b>	
Representing Motion Position-Time Graphs	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Develop</b> position-time graphs for moving objects</p> <p><b>Use</b> a position-time graph to <b>interpret</b> an object's position or displacement</p> <p><b>Make</b> motion diagrams, pictorial representations, and position-time graphs that are equivalent representations describing an object's motion</p> <p><b>Define</b> velocity</p> <p><b>Differentiate</b> between speed and velocity</p> <p><b>Create</b> pictorial, physical, and mathematical models of motion problems</p>	How do uncertainties in measurement affect the way results are presented?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Lab:</b> How fast?
<b>Teacher Resources</b>	<b>Media Resources</b>
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<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 2 Review Chapter 2 Problems	<b>Completed by:</b>
	<b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 4	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.3 – Create</b> and <b>interpret</b> graphs of 1-dimensional motion, such as position vs. time, distance vs. time, speed vs. time, velocity vs. time, and constant acceleration vs. time</p>	
<b>Unit/Topic./Lesson</b>	
Accelerated Motion Acceleration Motion with Constant Acceleration	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Define</b> acceleration</p> <p><b>Relate</b> velocity and acceleration to the motion of objects</p> <p><b>Create</b> velocity-time graphs</p> <p><b>Interpret</b> position-time graphs for motion with constant acceleration</p>	What is acceleration?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Lab:</b> Merrily we roll along
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 3</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 3 Review Chapter 3 Problems Lab Report	<b>Completed by:</b>
	<b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 5	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.3 – Create</b> and <b>interpret</b> graphs of 1-dimensional motion, such as position vs. time, distance vs. time, speed vs. time, velocity vs. time, and constant acceleration vs. time</p>	
<b>Unit/Topic./Lesson</b>	
Accelerated Motion Motion with Constant Acceleration Free Fall	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Determine</b> mathematical relationships among position, velocity, acceleration, and time</p> <p><b>Apply</b> graphical and mathematical relationships to solve constant-acceleration problems</p> <p><b>Define</b> acceleration due to gravity</p> <p><b>Solve</b> problems involving objects in free fall</p>	What is free fall?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 3</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 3 Review Chapter 3 Problems Test: Chapters 2 & 3	<p><b>Completed by:</b></p> <p><b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster</p>

Week 6	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.4 – Demonstrate</b> an operational understanding of Newton's three laws of motion.</p> <p><b>Physics 1.5 – Use</b> a free-body force diagram to show forces acting on a system consisting of a pair of interacting objects. For a diagram of only co-linear forces, <b>determine</b> the net force acting on a system and between the objects.</p>	
<b>Unit/Topic./Lesson</b>	
Forces in One Dimension Force and Motion Using Newton's Laws	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Define</b> force</p> <p><b>Use</b> Newton's second law to solve problems</p> <p><b>Explain</b> the meaning of Newton's first law</p> <p><b>Describe</b> how the weight and the mass of an object are related</p> <p><b>Differentiate</b> between actual weight and apparent weight</p>	What are Newton's first two laws of motion?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 4</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 4 Review Chapter 4 Problems	<p><b>Completed by:</b></p> <p><b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster</p>

Week 7	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.4 – Demonstrate</b> an operational understanding of Newton’s three laws of motion.</p> <p><b>Physics 1.5 – Use</b> a free-body force diagram to show forces acting on a system consisting of a pair of interacting objects. For a diagram of only co-linear forces, <b>determine</b> the net force acting on a system and between the objects.</p>	
<b>Unit/Topic./Lesson</b>	
Forces in One Dimension Interaction Forces	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Define</b> Newton’s third law</p> <p><b>Explain</b> the tension in ropes and strings in terms of Newton’s third law</p> <p><b>Define</b> the normal force</p> <p><b>Determine</b> the value of the normal force by</p> <p><b>Applying</b> Newton’s second law</p>	What is Newton’s third law of motion?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 4</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 4 Review Chapter 4 Problems	<b>Completed by:</b>
	<b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 8	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.4 – Demonstrate</b> an operational understanding of Newton’s three laws of motion.</p> <p><b>Physics 1.5 – Use</b> a free-body force diagram to show forces acting on a system consisting of a pair of interacting objects. For a diagram of only co-linear forces, <b>determine</b> the net force acting on a system and between the objects.</p> <p><b>Physics 1.6 – Describe</b> a simple model for frictional force, including static and kinetic friction</p>	
<b>Unit/Topic./Lesson</b>	
Forces in Two Dimensions Vectors	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Evaluate</b> the sum of two or more vectors in two dimensions graphically</p> <p><b>Determine</b> the components of vectors</p> <p><b>Solve</b> for the sum of two or more vectors, algebraically, by adding the components of the vectors</p>	What are vectors?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 5</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 5 Review Chapter 5 Problems	<b>Completed by:</b>
	<b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 9	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.4 – Demonstrate</b> an operational understanding of Newton’s three laws of motion.</p> <p><b>Physics 1.5 – Use</b> a free-body force diagram to show forces acting on a system consisting of a pair of interacting objects. For a diagram of only co-linear forces, <b>determine</b> the net force acting on a system and between the objects.</p> <p><b>Physics 1.6 – Describe</b> a simple model for frictional force, including static and kinetic friction</p>	
<b>Unit/Topic./Lesson</b>	
Forces in Two Dimensions Friction Force and Motion in Two Dimensions	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Define</b> friction force</p> <p><b>Distinguish</b> between static and kinetic friction</p> <p><b>Determine</b> the force that produces equilibrium when three forces act on an object</p> <p><b>Analyze</b> the motion of an object on an inclined plane with and without friction</p>	How does an object slide down an inclined plane?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Lab:</b> Friction
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 5</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 5 Review Chapter 5 Problems Lab Report Test: Chapters 4 & 5	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 10	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.4 – Demonstrate</b> an operational understanding of Newton’s three laws of motion.</p> <p><b>Physics 1.5 – Use</b> a free-body force diagram to show forces acting on a system consisting of a pair of interacting objects. For a diagram of only co-linear forces, <b>determine</b> the net force acting on a system and between the objects.</p>	
<b>Unit/Topic./Lesson</b>	
Motion in Two Dimensions Projectile Motion	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Recognize</b> that the vertical and horizontal motions of a projectile are independent</p> <p><b>Relate</b> the height, time in the air, and initial vertical velocity of a projectile using its vertical motion, and then <b>determine</b> the range using the horizontal motion</p> <p><b>Explain</b> how the trajectory of the projectile depends upon the frame of reference from which it is observed</p>	What is projectile motion?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Lab:</b> Right on target
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 6</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 6 Review Chapter 6 Problems Lab Report	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 11	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.4 – Demonstrate</b> an operational understanding of Newton’s three laws of motion.</p> <p><b>Physics 1.5 – Use</b> a free-body force diagram to show forces acting on a system consisting of a pair of interacting objects. For a diagram of only co-linear forces, <b>determine</b> the net force acting on a system and between the objects.</p>	
<b>Unit/Topic./Lesson</b>	
Motion in Two Dimensions Circular Motion Relative Velocity	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Explain</b> why an object moving in a circle at a constant speed is accelerated</p> <p><b>Describe</b> how centripetal acceleration depends upon the object’s speed and the radius of the circle</p> <p><b>Identify</b> the force that causes centripetal acceleration</p> <p><b>Solve</b> relative velocity problems</p>	What is circular motion?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 6</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 6 Review Chapter 6 Problems Test: Chapter 6	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 12	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.5 – Use</b> a free-body force diagram to show forces acting on a system consisting of a pair of interacting objects. For a diagram of only co-linear forces, <b>determine</b> the net force acting on a system and between the objects.</p> <p><b>Physics 1.7 – Understand</b> conceptually Newton’s law of universal gravitation.</p>	
<b>Unit/Topic./Lesson</b>	
Gravitation Planetary Motion and Gravitation Using the Law of Universal Gravitation	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Relate</b> Kepler’s laws to the law of universal gravitation</p> <p><b>Calculate</b> orbital speeds and periods</p> <p><b>Describe</b> the importance of Cavendish’s experiment</p> <p><b>Solve</b> orbital motion problems</p> <p><b>Relate</b> weightlessness to objects in free fall</p> <p><b>Describe</b> gravitational fields</p> <p><b>Compare</b> views on gravitation</p>	What is universal gravitation?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 7</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> <li>• Foldables</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 7 Review Chapter 7 Problems	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 13	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 1.2 – Distinguish</b> between displacement, distance, velocity, speed, and acceleration. <b>Solve</b> problems involving displacement, distance, velocity, speed, and constant acceleration.</p> <p><b>Physics 1.5 – Use</b> a free-body force diagram to show forces acting on a system consisting of a pair of interacting objects. For a diagram of only co-linear forces, <b>determine</b> the net force acting on a system and between the objects.</p>	
<b>Unit/Topic./Lesson</b>	
Rotational Motion Describing Rotational Motion Rotational Dynamics Equilibrium	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> angular displacement</p> <p><b>Calculate</b> angular velocity</p> <p><b>Calculate</b> angular acceleration</p> <p><b>Solve</b> problems involving rotational motion</p> <p><b>Describe</b> torque and the factors that determine it</p> <p><b>Calculate</b> net torque</p> <p><b>Calculate</b> the moment of inertia</p> <p><b>Define</b> center of mass</p> <p><b>Explain</b> how the location of the center of mass affects the stability of an object</p> <p><b>Define</b> the conditions for equilibrium</p> <p><b>Describe</b> how rotating frames of reference give rise to apparent forces</p>	What is torque?
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Lab:</b> Torque Feeler activity</p> <p><b>Activity:</b> Balance, Centripetal Force</p> <p><b>Demo:</b> Angular momentum</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>Glencoe Physics: Principals and Problems (2009) Chapter 8</li> <li>Teacher Works Plus DVD</li> <li>Standardized Test Practice</li> <li>Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>Content Outline WS</li> <li>Transparency Activity WS</li> <li>Enrichment/reinforcement WS</li> <li>Foldables</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Classroom CD-ROM (ppt's)</li> <li>Section Focus transparencies</li> <li>Teaching transparencies</li> <li>Math Skills transparencies</li> <li>Virtual Chemistry Lab CD-ROM</li> <li>Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 8 Review Chapter 8 Problems Lab Report Test: Chapters 7 & 8	<b>Completed by:</b>  <b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 14	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 2.5 – Interpret</b> and provide examples that linear momentum is the product of mass and velocity and can be conserved (law of conservation of momentum). <b>Calculate</b> the momentum of an object.</p>	
<b>Unit/Topic./Lesson</b>	
Momentum and Its Conservation Impulse and Momentum Conservation of Momentum	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Define</b> the momentum of an object</p> <p><b>Determine</b> the impulse give to an object</p> <p><b>Define</b> the angular momentum of an object</p> <p><b>Relate</b> Newton's third law to conservation of momentum in collisions and explosions</p> <p><b>Recognize</b> the conditions under which momentum is conserved</p> <p><b>Solve</b> conservation of momentum problems in two dimensions</p>	What is momentum?
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Demo:</b> Collisions</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>Glencoe Physics: Principals and Problems (2009) Chapter 9</li> <li>Teacher Works Plus DVD</li> <li>Standardized Test Practice</li> <li>Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>Content Outline WS</li> <li>Transparency Activity WS</li> <li>Enrichment/reinforcement WS</li> <li>Foldables</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Classroom CD-ROM (ppt's)</li> <li>Section Focus transparencies</li> <li>Teaching transparencies</li> <li>Math Skills transparencies</li> <li>Virtual Chemistry Lab CD-ROM</li> <li>Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 9 Review Chapter 9 Problems Test: Chapter 9	<b>Completed by:</b>  <b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 15	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 2.3 – Describe</b> both conceptually and quantitatively how work can be expressed as a change in mechanical energy.</p> <p><b>Physics 2.4 – Describe</b> both conceptually and quantitatively the concept of power as work done per unit time</p>	
<b>Unit/Topic./Lesson</b>	
Energy, Work, and Simple Machines Energy and Work Machines	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> the relationship between work and energy</p> <p><b>Calculate</b> work</p> <p><b>Calculate</b> the work done by a variable force</p> <p><b>Calculate</b> the power used</p> <p><b>Demonstrate</b> a knowledge of the usefulness of simple machines</p> <p><b>Differentiate</b> between ideal and real machines in terms of efficiency</p> <p><b>Analyze</b> compound machines in terms of simple machines</p> <p><b>Calculate</b> efficiencies for simple and compound machines</p>	What is work?
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Lab:</b> Muscle up</p> <p><b>Demo:</b> Simple machines</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>Glencoe Physics: Principals and Problems (2009) Chapter 10</li> <li>Teacher Works Plus DVD</li> <li>Standardized Test Practice</li> <li>Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>Content Outline WS</li> <li>Transparency Activity WS</li> <li>Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Classroom CD-ROM (ppt's)</li> <li>Section Focus transparencies</li> <li>Teaching transparencies</li> <li>Math Skills transparencies</li> <li>Virtual Chemistry Lab CD-ROM</li> <li>Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 10 Review Chapter 10 Problems Lab Report	<b>Completed by:</b>
	<b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 16	
<b>Performance Standards</b>	
<p><b>Physics 1.1 – Distinguish</b> between vector quantities (such as displacement, velocity, acceleration, weight, and linear momentum) and scalar quantities (such as distance, speed, energy, mass, and work).</p> <p><b>Physics 2.1 – Interpret</b> and provide examples that illustrate the law of conservation of energy.</p> <p><b>Physics 2.2 – Interpret</b> and provide examples of how energy can be converted from gravitational potential energy to kinetic energy and vice versa.</p> <p><b>Physics 2.3 – Describe</b> both conceptually and quantitatively how work can be expressed as a change in mechanical energy.</p> <p><b>Physics 2.4 – Describe</b> both conceptually and quantitatively the concept of power as work done per unit time.</p>	
<b>Unit/Topic./Lesson</b>	
Energy and Its Conservation The Many Forms of Energy Conservation of Energy	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Use</b> a model to <b>relate</b> work and energy</p> <p><b>Calculate</b> kinetic energy</p> <p><b>Determine</b> the gravitational potential energy of a system</p> <p><b>Identify</b> how elastic potential energy is stored</p> <p><b>Solve</b> problems using the law of conservation of energy</p> <p><b>Analyze</b> collisions to find the change in kinetic energy</p>	What is conservation of energy?
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Handout:</b> Chapter 9 packet</p> <p><b>Lab:</b> Making a Precipitate</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>Glencoe Physics: Principals and Problems (2009) Chapter 11</li> <li>Teacher Works Plus DVD</li> <li>Standardized Test Practice</li> <li>Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>Content Outline WS</li> <li>Transparency Activity WS</li> <li>Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Classroom CD-ROM (ppt's)</li> <li>Section Focus transparencies</li> <li>Teaching transparencies</li> <li>Math Skills transparencies</li> <li>Virtual Chemistry Lab CD-ROM</li> <li>Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 11 Review Chapter 11 Problems Test: Chapters 10 & 11	<b>Completed by:</b>
	<b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 17	
<b>Performance Standards</b>	
<p><b>Physics 3.1 – Understand</b> conceptually that when two objects are placed in contact, energy will move as heat from the object with a higher temperature to the object with a lower temperature until both reach the same temperature.</p> <p><b>Physics 3.2 – Demonstrate</b> a conceptual understanding of the relationship between average molecular kinetic energy and temperature.</p> <p><b>Physics 3.3 – Explain</b> the relationship among temperature change in a substance for a given amount of heat transferred, the amount (mass) of the substance, and the specific heat of the substance.</p> <p><b>Physics 3.4 – Describe</b> the phase change of a substance into a solid, liquid, and gas and <b>Describe</b> the transfer of thermal energy during these phase changes.</p>	
<b>Unit/Topic./Lesson</b>	
Thermal Energy Temperature and Thermal Energy	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> thermal energy and <b>compare</b> it to potential and kinetic energies</p> <p><b>Distinguish</b> temperature from thermal energy</p> <p><b>Define</b> specific heat</p> <p><b>Calculate</b> heat transfer</p>	What is heat?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Lab:</b> Specific Heat, Freezing Good Time
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 12</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 12 Review Chapter 12 Problems Lab Report	<b>Completed by:</b>
	<b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 18	
<b>Performance Standards</b>	
<p><b>Physics 3.1 – Understand</b> conceptually that when two objects are placed in contact, energy will move as heat from the object with a higher temperature to the object with a lower temperature until both reach the same temperature.</p> <p><b>Physics 3.2 – Demonstrate</b> a conceptual understanding of the relationship between average molecular kinetic energy and temperature.</p> <p><b>Physics 3.3 – Explain</b> the relationship among temperature change in a substance for a given amount of heat transferred, the amount (mass) of the substance, and the specific heat of the substance.</p> <p><b>Physics 3.4 – Describe</b> the phase change of a substance into a solid, liquid, and gas and <b>Describe</b> the transfer of thermal energy during these phase changes.</p>	
<b>Unit/Topic./Lesson</b>	
Thermal Energy Changes of State and the Laws of Thermodynamics	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Define</b> heats of fusion and vaporization</p> <p><b>State</b> the first and second laws of thermodynamics</p> <p><b>Distinguish</b> between heat and work</p> <p><b>Define</b> entropy</p>	What is the difference between a molecular formula and an empirical formula?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Handout:</b> Chapter 10 packet <b>Lab:</b> Examples of Chemical Reactions
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 12</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 12 Review Chapter 12 Problems	<b>Completed by:</b>
	<b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 19	
<i>Performance Standards</i>	
<b>Unit/Topic./Lesson</b>	
States of Matter Properties of Fluids Forces within Liquids	
<b>Objectives (Students will...)</b> <b>Describe</b> how fluids <b>create</b> pressure <b>Calculate</b> the pressure, volume, and number of moles of a gas <b>Compare</b> gases and plasma <b>Explain</b> how cohesive forces cause capillary action <b>Discuss</b> evaporative cooling and the role of condensation in cloud formation	<b>Essential Question</b> What is the ideal gas law?  <b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b> <ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 13</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<b>Media Resources</b> <ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b> Chapter 13 Review Chapter 13 Problems	<b>Completion date:</b> <b>Completed by:</b> <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 20	
<i>Performance Standards</i>	
<b>Unit/Topic./Lesson</b>	
States of Matter Fluids at rest and in motion Solids	
<b>Objectives (Students will...)</b> <b>Relate</b> Pascal's principle to simple machines and occurrences <b>Apply</b> Archimedes' principle to buoyancy <b>Apply</b> Bernoulli's principle to airflow <b>Relate</b> the properties of solids to their structures <b>Explain</b> why solids expand when the temperature changes <b>Calculate</b> the expansion of solids <b>Explain</b> the importance of thermal expansion	<b>Essential Question</b> What determines and object's buoyancy?  <b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b> <ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 13</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<b>Media Resources</b> <ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b> Chapter 13 Review Chapter 13 Problems Test: Chapters 12 & 13	<b>Completion date:</b> <b>Completed by:</b> <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 21	
<b>Performance Standards</b>	
<p><b>Physics 4.1 – Describe</b> the measureable properties of waves (velocity, frequency, wavelength, amplitude, period) and <b>explain</b> the relationships among them. <b>Describe</b> a simple harmonic motion.</p> <p><b>Physics 4.2 – Distinguish</b> between mechanical and electromagnetic waves.</p> <p><b>Physics 4.3 – Distinguish</b> between two types of mechanical waves, transverse and longitudinal.</p> <p><b>Physics 4.6 – Interpret</b> graphs of constructive and destructive interference of waves.</p>	
<b>Unit/Topic./Lesson</b>	
Vibrations and Waves Periodic motion Wave properties Wave behavior	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> the force in an elastic spring</p> <p><b>Determine</b> the energy stored in an elastic spring</p> <p><b>Compare</b> simple harmonic motion and the motion of a pendulum</p> <p><b>Identify</b> how waves transfer energy without transferring matter</p> <p><b>Contrast</b> transverse and longitudinal waves</p> <p><b>Relate</b> wave speed, wavelength, and frequency</p> <p><b>Relate</b> a wave's speed to the medium in which the wave travels</p> <p><b>Describe</b> how waves are reflected and refracted at boundaries between media</p> <p><b>Apply</b> the principle of superposition to the phenomenon of interference</p>	What are waves/  <b>Labs/Demonstrations/Handouts</b> <b>Lab:</b> Pendulum <b>Demo:</b> Standing waves
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>Glencoe Physics: Principals and Problems (2009) Chapter 14</li> <li>Teacher Works Plus DVD</li> <li>Standardized Test Practice</li> <li>Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>Content Outline WS</li> <li>Transparency Activity WS</li> <li>Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Classroom CD-ROM (ppt's)</li> <li>Section Focus transparencies</li> <li>Teaching transparencies</li> <li>Math Skills transparencies</li> <li>Virtual Chemistry Lab CD-ROM</li> <li>Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 14 Review Chapter 14 Problems Lab Report	<b>Completed by:</b>  <b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 22	
<b>Performance Standards</b>	
<p><b>Physics 4.1 – Describe</b> the measureable properties of waves (velocity, frequency, wavelength, amplitude, period) and <b>explain</b> the relationships among them. <b>Describe</b> a simple harmonic motion.</p> <p><b>Physics 4.2 – Distinguish</b> between mechanical and electromagnetic waves.</p> <p><b>Physics 4.3 – Distinguish</b> between two types of mechanical waves, transverse and longitudinal.</p> <p><b>Physics 4.4 – Describe</b> the basic principles of reflection, refraction, and diffraction of waves. <b>Explain</b> the relationship between the speed of a sound wave and the medium it travels through.</p> <p><b>Physics 4.5 – Describe</b> the Doppler effect.</p> <p><b>Physics 4.6 – Interpret</b> graphs of constructive and destructive interference of waves.</p>	
<b>Unit/Topic./Lesson</b>	
Sound Properties and detection of sound The physics of music	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Demonstrate</b> the properties that sound shares with other waves</p> <p><b>Relate</b> the physical properties of sound waves to our perception of sound</p> <p><b>Identify</b> some applications of the Doppler effect</p> <p><b>Describe</b> the origin of sound</p> <p><b>Demonstrate</b> an understanding of resonance, especially as applied to air columns and strings</p> <p><b>Explain</b> why there are variations in sound among instruments and among voices</p>	What is sound?  <b>Labs/Demonstrations/Handouts</b> <b>Lab:</b> Straw oboes <b>Demo:</b> Resonance
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>Glencoe Physics: Principals and Problems (2009) Chapter 15</li> <li>Teacher Works Plus DVD</li> <li>Standardized Test Practice</li> <li>Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>Content Outline WS</li> <li>Transparency Activity WS</li> <li>Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Classroom CD-ROM (ppt's)</li> <li>Section Focus transparencies</li> <li>Teaching transparencies</li> <li>Math Skills transparencies</li> <li>Virtual Chemistry Lab CD-ROM</li> <li>Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 15 Review Chapter 15 Problems Test: Chapters 14 & 15	<b>Completed by:</b>  <b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 23	
<b>Performance Standards</b>	
<p><b>Physics 4.1 – Describe</b> the measureable properties of waves (velocity, frequency, wavelength, amplitude, period) and <b>explain</b> the relationships among them. <b>Describe</b> a simple harmonic motion.</p> <p><b>Physics 4.2 – Distinguish</b> between mechanical and electromagnetic waves.</p> <p><b>Physics 6.1 – Describe</b> the electromagnetic spectrum in terms of wavelength and energy, and be able to <b>identify</b> specific regions such as visible light. <b>Explain</b> how all electromagnetic waves have the same velocity, and that they can be <b>differentiated</b> by wavelength, frequency and amplitude.</p> <p><b>Physics 6.2 – Explain</b> that different regions of the electromagnetic spectrum have different characteristics that <b>determine</b> their use, such as heating, illumination, medical imaging, radio, microwave appliances, television, cellular telephones and radar.</p>	
<b>Unit/Topic./Lesson</b>	
Fundamentals of Light Illumination The wave nature of light Color: The eye	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Develop</b> the ray model of light</p> <p><b>Predict</b> the effect of distance on light's illuminance</p> <p><b>Solve</b> problems involving the speed of light</p> <p><b>Describe</b> how diffraction <b>demonstrates</b> that light is a wave</p> <p><b>Predict</b> the effect of mixing colors of light and pigments</p> <p><b>Explain</b> phenomena such as polarization and the Doppler effect</p>	What is light?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Demo:</b> Color
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>Glencoe Physics: Principals and Problems (2009) Chapter 16</li> <li>Teacher Works Plus DVD</li> <li>Standardized Test Practice</li> <li>Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>Content Outline WS</li> <li>Transparency Activity WS</li> <li>Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Classroom CD-ROM (ppt's)</li> <li>Section Focus transparencies</li> <li>Teaching transparencies</li> <li>Math Skills transparencies</li> <li>Virtual Chemistry Lab CD-ROM</li> <li>Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 16 Review Chapter 16 Problems	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 24	
<b>Performance Standards</b>	
<p><b>Physics 4.2 – Distinguish</b> between mechanical and electromagnetic waves.</p> <p><b>Physics 4.4 – Describe</b> the basic principles of reflection, refraction, and diffraction of waves. <b>Explain</b> the relationship between the speed of a sound wave and the medium it travels through.</p>	
<b>Unit/Topic./Lesson</b>	
Reflection and Mirrors Reflection from plane mirrors Curved mirrors	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Explain</b> the law of reflection</p> <p><b>Distinguish</b> between specular and diffuse reflection</p> <p><b>Locate</b> the images formed by plane mirrors</p> <p><b>Explain</b> how concave and convex mirrors form images</p> <p><b>Describe</b> properties and uses of spherical mirrors</p> <p><b>Determine</b> the locations and sizes of spherical mirror images</p>	What is reflection?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Lab:</b> Kaleidoscope
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>Glencoe Physics: Principals and Problems (2009) Chapter 17</li> <li>Teacher Works Plus DVD</li> <li>Standardized Test Practice</li> <li>Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>Content Outline WS</li> <li>Transparency Activity WS</li> <li>Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Classroom CD-ROM (ppt's)</li> <li>Section Focus transparencies</li> <li>Teaching transparencies</li> <li>Math Skills transparencies</li> <li>Virtual Chemistry Lab CD-ROM</li> <li>Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 17 Review Chapter 17 Problems Lab Sheets	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 25	
<b>Performance Standards</b>	
<p><b>Physics 4.2 – Distinguish</b> between mechanical and electromagnetic waves.</p> <p><b>Physics 4.4 – Describe</b> the basic principles of reflection, refraction, and diffraction of waves.</p> <p><b>Explain</b> the relationship between the speed of a sound wave and the medium it travels through</p>	
<b>Unit/Topic./Lesson</b>	
Refraction and Lenses Refraction of light Convex and concave lenses Applications of lenses	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Solve</b> problems involving refraction</p> <p><b>Explain</b> total internal reflection</p> <p><b>Explain</b> some optical effects caused by refraction</p> <p><b>Describe</b> how real and virtual images are formed by single convex and concave lenses</p> <p><b>Locate</b> images formed by lenses using ray tracing and equations</p> <p><b>Explain</b> how chromatic aberration can be reduced</p> <p><b>Describe</b> how the eye focuses light to form an image</p> <p><b>Explain</b> nearsightedness and farsightedness and how eyeglass lenses correct these defects</p> <p><b>Describe</b> the optical systems in some common optical instruments</p>	What is refraction?
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Lab:</b> Center of focus</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 18</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 18 Review Chapter 18 Problems Lab Report	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 26	
<b>Performance Standards</b>	
<p><b>Physics 4.4 – Describe</b> the basic principles of reflection, refraction, and diffraction of waves.</p> <p><b>Explain</b> the relationship between the speed of a sound wave and the medium it travels through</p>	
<b>Unit/Topic./Lesson</b>	
Interference and Diffraction Interference Diffraction	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Explain</b> how light falling on two slits produces an interference pattern</p> <p><b>Calculate</b> light wavelengths from interference patterns</p> <p><b>Apply</b> modeling techniques to thin-film interference</p> <p><b>Explain</b> how diffraction gratings form diffraction patterns</p> <p><b>Describe</b> how diffraction gratings are used in grating spectrometers</p> <p><b>Discuss</b> how diffraction limits the ability to</p> <p><b>Distinguish</b> between two closely spaced objects with a lens.</p>	What are interference and diffraction?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 19</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 19 Review Chapter 19 Problems Test Chapters 17, 18 & 19	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 27	
<b>Performance Standards</b>	
<p><b>Physics 5.1 – Recognize</b> that an electric charge tends to be static on insulators and can move on conductors, and that mechanical energy can produce charge separation.</p> <p><b>Physics 5.3 – Demonstrate</b> a conceptual understanding of Coulomb’s law.</p>	
<b>Unit/Topic./Lesson</b>	
Static Electricity Electric charge Electric force	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Demonstrate</b> that charged objects exert forces, both attractive and repulsive</p> <p><b>Recognize</b> that charging is the separation, not the creation, of electric charge</p> <p><b>Describe</b> the differences between conductors and insulators</p> <p><b>Summarize</b> the relationships between electric forces, charges, and distance</p> <p><b>Explain</b> how to charge objects by conduction and induction</p> <p><b>Develop</b> a model of how charged objects can attract a neutral object</p> <p><b>Apply</b> Coulomb’s law to problems in one and two dimensions</p>	What is an electrostatic force?
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Demo:</b> Van de Graaf generator</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 20</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 20 Review Chapter 20 Problems	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 28	
<b>Performance Standards</b>	
<p><b>Physics 5.1 – Recognize</b> that an electric charge tends to be static on insulators and can move on conductors, and that mechanical energy can produce charge separation.</p>	
<b>Unit/Topic./Lesson</b>	
Electric Fields Creating and measuring electric fields Applications of electric fields	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Define</b> an electric field</p> <p><b>Solve</b> problems relating to charge, electric fields, and forces</p> <p><b>Diagram</b> electric field lines</p> <p><b>Define</b> electric potential difference</p> <p><b>Calculate</b> potential difference from the work required to move a charge</p> <p><b>Describe</b> how charges are distributed on solid and hollow conductors</p> <p><b>Solve</b> problems pertaining to capacitance</p>	What is an electric field?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 21</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 21 Review Chapter 21 Problems Test Chapters 20 & 21	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 29	
<b>Performance Standards</b>	
<p><b>Physics 5.2 – Develop</b> a qualitative and quantitative understanding of current, voltage, resistance, and the connection between them (Ohm’s law).</p> <p><b>Physics 5.4 – Explain</b> how electric current is a flow of charge caused by a potential difference (voltage) and how power is equal to current multiplied by voltage.</p>	
<b>Unit/Topic./Lesson</b>	
Current Electricity Current and circuits Using electric energy	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> conditions that <b>create</b> current in an electric circuit</p> <p><b>Explain</b> Ohm’s law</p> <p>Design closed circuits</p> <p><b>Differentiate</b> between power and energy in an electric circuit</p> <p><b>Explain</b> how electric energy is converted into thermal energy</p> <p><b>Explore</b> ways to deliver electric energy to consumers near and far</p> <p><b>Define</b> kilowatt-hour</p>	What is electric current?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Labs:</b> Battery and bulb
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 22</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 22 Review Chapter 22 Problems Lab Sheets	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 30	
<b>Performance Standards</b>	
<p><b>Physics 5.2 – Develop</b> a qualitative and quantitative understanding of current, voltage, resistance, and the connection between them (Ohm’s law).</p> <p><b>Physics 5.4 – Explain</b> how electric current is a flow of charge caused by a potential difference (voltage) and how power is equal to current multiplied by voltage.</p>	
<b>Unit/Topic./Lesson</b>	
Series and Parallel Circuits Simple circuits Applications of circuits	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> series and parallel circuits</p> <p><b>Calculate</b> currents, voltage drops, and equivalent resistances in series and parallel circuits</p> <p><b>Explain</b> how fuses, circuit breakers, and ground-fault interrupters protect household wiring</p> <p><b>Analyze</b> and <b>solve</b> problems involving combined series-parallel circuits</p> <p><b>Explain</b> how voltmeters and ammeters are used in circuits</p>	What are series and parallel circuits?
	<b>Labs/Demonstrations/Handouts</b>
	<b>Labs:</b> Circuits
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 23</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM’s Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt’s)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 23 Review Chapter 23 Problems Lab Report Test Chapters 22 & 23	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 31	
<b>Performance Standards</b>	
<p><b>Physics 5.5 – Explain</b> how electric current is a flow of charge caused by a potential difference (voltage) and how power is equal to current multiplied by voltage.</p>	
<b>Unit/Topic./Lesson</b>	
<p>Magnetic Fields Magnets: Permanent and temporary Forces caused by magnetic fields</p>	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> the properties of magnets and the origins of magnetism in materials <b>Compare</b> and <b>contrast</b> various magnetic fields <b>Relate</b> magnetic induction to the direction of the force on a current-carrying wire in a magnetic field <b>Solve</b> problems involving magnetic field strength and the forces on current-carrying wires, and on moving, charged particles in magnetic fields <b>Describe</b> the design and operation of an electric motor</p>	<p>What are magnets?</p>
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Demo:</b> Electromagnets</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 24</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
<p>Chapter 24 Review Chapter 24 Problems</p>	<p><b>Completed by:</b></p> <p><b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 32	
<b>Performance Standards</b>	
<p><b>Physics 5.5 – Explain</b> how electric current is a flow of charge caused by a potential difference (voltage) and how power is equal to current multiplied by voltage.</p>	
<b>Unit/Topic./Lesson</b>	
<p>Electromagnetic Induction Electric current from changing magnetic fields Changing magnetic fields induce EMF</p>	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Explain</b> how a changing magnetic field produces an electric current <b>Define</b> electromotive force <b>Solve</b> problems involving wires moving in magnetic fields <b>Apply</b> Lenz's law <b>Explain</b> back-<i>EMF</i> and how it affects the operation of motors and generators <b>Explain</b> self-inductance and how it affects circuits <b>Solve</b> transformer problems involving voltage, current, and turn ratios</p>	<p>What is electromagnetic induction?</p>
	<b>Labs/Demonstrations/Handouts</b>
	<p><b>Demo:</b> Jumping rings</p>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 25</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
<p>Chapter 25 Review Chapter 25 Problems</p>	<p><b>Completed by:</b></p> <p><b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 33	
<b>Performance Standards</b>	
<p><b>Physics 5.5 – Explain</b> how electric current is a flow of charge caused by a potential difference (voltage) and how power is equal to current multiplied by voltage.</p>	
<b>Unit/Topic./Lesson</b>	
Electromagnetism Interactions of electric and magnetic fields and matter Electric and magnetic fields in space	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> the operation of a cathode-ray tube</p> <p><b>Solve</b> problems involving the interaction of charged particles with electric and magnetic fields in cathode-ray tubes and mass spectrometers</p> <p><b>Explain</b> how a mass spectrometer separates ions of different masses</p> <p><b>Describe</b> how electromagnetic waves propagate through space</p> <p><b>Solve</b> problems involving electromagnetic wave properties</p> <p><b>Describe</b> the factors affecting an antenna's ability to receive an electromagnetic wave of a specific wavelength</p> <p><b>Solve</b> problems involving electromagnetic wave propagation through dielectrics</p>	What are electromagnetic waves?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 26</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 26 Review Chapter 26 Problems Test Chapters 24, 25 & 26	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 34	
<b>Performance Standards</b>	
<p><b>Physics 5.5 – Explain</b> how electric current is a flow of charge caused by a potential difference (voltage) and how power is equal to current multiplied by voltage.</p>	
<b>Unit/Topic./Lesson</b>	
Quantum Theory A particle model of waves Matter waves	
<b>Objectives (Students will...)</b>	<b>Essential Question</b>
<p><b>Describe</b> the spectrum emitted by a hot body</p> <p><b>Explain</b> the photoelectric and Compton effects</p> <p><b>Solve</b> problems involving the photoelectric effect</p> <p><b>Describe</b> evidence of the wave nature of matter</p> <p><b>Solve</b> problems involving the de Broglie wavelength of particles</p> <p><b>Describe</b> the dual nature of waves and particles, and the importance of the Heisenberg uncertainty principle</p>	What is the particle theory of light?
	<b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b>	<b>Media Resources</b>
<ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 27</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b>	<b>Completion date:</b>
Chapter 27 Review Chapter 27 Problems	<b>Completed by:</b>  <b>Comments:</b> <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 35	
<i>Performance Standards</i>	
<b>Unit/Topic./Lesson</b>	
The Atom The Bohr model of the atom The quantum model of the atom	
<b>Objectives (Students will...)</b> <b>Describe</b> the structure of the nuclear atom <b>Compare</b> and <b>contrast</b> continuous spectra and line-emission spectra <b>Solve</b> problems using orbital-radius and energy-level equations <b>Describe</b> the shortcomings of Bohr's atomic model <b>Describe</b> the quantum model of the atom <b>Explain</b> how a laser works <b>Describe</b> the properties of laser light	<b>Essential Question</b> What is meant by the dual nature of waves and particles?  <b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b> <ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 28</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<b>Media Resources</b> <ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b> Chapter 28 Review Chapter 28 Problems Test Chapters 27 & 28	<b>Completion date:</b>  <b>Completed by:</b>  <b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

Week 36	
<i>Performance Standards</i>	
<b>Unit/Topic./Lesson</b>	
Solid-State Electronics Conduction in solids Electronic devices	
<b>Objectives (Students will...)</b> <b>Describe</b> electron motion in conductors and semiconductors <b>Compare</b> and <b>contrast</b> <i>n</i> -type and <i>p</i> -type semiconductors <b>Describe</b> how diodes limit current to motion in only one direction <b>Explain</b> how a transistor can amplify or increase voltage changes	<b>Essential Question</b> What is a semiconductor?  <b>Labs/Demonstrations/Handouts</b>
<b>Teacher Resources</b> <ul style="list-style-type: none"> <li>• Glencoe Physics: Principals and Problems (2009) Chapter 29</li> <li>• Teacher Works Plus DVD</li> <li>• Standardized Test Practice</li> <li>• Exam View CD-ROM's Test Generator, Test Manager, Test Player</li> <li>• Content Outline WS</li> <li>• Transparency Activity WS</li> <li>• Enrichment/reinforcement WS</li> </ul>	<b>Media Resources</b> <ul style="list-style-type: none"> <li>• Interactive Classroom CD-ROM (ppt's)</li> <li>• Section Focus transparencies</li> <li>• Teaching transparencies</li> <li>• Math Skills transparencies</li> <li>• Virtual Chemistry Lab CD-ROM</li> <li>• Internet labs and resources</li> </ul>
<b>Assessment Activities</b> Chapter 29 Review Chapter 29 Problems	<b>Completion date:</b>  <b>Completed by:</b>  <b>Comments: <i>Alternative Evaluation:</i></b> Paper, Project, Poster

**Week 37**

*Performance Standards*

**Unit/Topic./Lesson**

Nuclear Physics  
 The nucleus  
 Nuclear decay and reactions  
 The building blocks of matter

**Objectives (Students will...)**

**Determine** the number of neutrons and protons in nuclides  
**Define** the binding energy of the nucleus  
**Relate** the energy released in a nuclear reaction to the change in binding energy during the reaction  
**Describe** three forms of radioactive decay  
**Solve** nuclear equations  
**Calculate** the amount remaining and the activity of radioactive material after a given time  
**Define** nuclear fission and fusion  
**Describe** the operation of a nuclear reactor  
**Describe** the operation of particle accelerators and particle detectors  
**Describe** the Standard Model of matter and  
**Explain** the role of force carriers

**Essential Question**

Where does the energy come from in a nuclear reaction?

**Labs/Demonstrations/Handouts**

**Teacher Resources**

- Glencoe Physics: Principals and Problems (2009) Chapter 30
- Teacher Works Plus DVD
- Standardized Test Practice
- Exam View CD-ROM's Test Generator, Test Manager, Test Player
- Content Outline WS
- Transparency Activity WS
- Enrichment/reinforcement WS

**Media Resources**

- Interactive Classroom CD-ROM (ppt's)
- Section Focus transparencies
- Teaching transparencies
- Math Skills transparencies
- Virtual Chemistry Lab CD-ROM
- Internet labs and resources

**Assessment Activities**

Chapter 30 Review  
 Chapter 30 Problems  
 Test Chapters 29 & 30

**Completion date:**

**Completed by:**

**Comments:** *Alternative Evaluation:*  
 Paper, Project, Poster

