

General Brown Central School District Curriculum Map

Course Title: Forces in Motion	Prepared By: D. Newvine
Time Frame: 1/27 - 2/27	Unit/Theme Measurements / Conversions / Graphing
Essential Questions: What are measurements? What are the purposes of units? How can I convert from two different units?	
NYS Standards: HSN-Q.A.1 HSN-Q.A.2 HSN-Q.A.3	Vocabulary: Meters Mass Kilograms Time Distance Seconds Velocity Prefixes Scientific Notation Dimensional Analysis
Student Objectives (The student will...): TSW use proper units when presenting quantitative answers. TSW show calculations whenever necessary. TSW complete dimensional analysis when converting. TSW use graphs to interpret data and make comparisons between data and equations.	
Assessment: Discussions, Worksheets, Labs, Quiz, & Test	
Recommended Texts: Physical Setting - Physics	Resources: Powerpoint Online Media

General Brown Central School District Curriculum Map

Course Title: Forces in Motion	Prepared By: D. Newvine
Time Frame: 2/28 - 3/20	Unit/Theme Kinematics
<p>Essential Questions:</p> <p>How can we measure the quality of motion for objects?</p> <p>How are velocity and acceleration different?</p> <p>What happens when an object is in free fall?</p>	
<p>NYS Standards:</p> <p>HSA - CED.A.1</p> <p>HSA - CED.A.2</p>	<p>Vocabulary:</p> <p>Free Fall</p> <p>Linear Motion</p> <p>2D Motion</p> <p>Constant Velocity</p> <p>Acceleration</p> <p>Initial / Final Quantities</p> <p>Projectiles</p> <p>Gravitational Acceleration</p>
<p>Student Objectives (The student will...):</p> <p>TSW solve for initial and final quantities, using mathematics, in specific physical situations.</p> <p>TSW determine the acceleration due to gravity near the surface of the Earth.</p> <p>TSW conceptualize two dimensional motion.</p>	
<p>Assessments:</p> <p>Discussions, Worksheets, Labs, Quiz, and Test</p>	
<p>Recommended Texts:</p> <p>Physical Setting - Physics</p>	<p>Resources:</p> <p>Powerpoint</p> <p>Online Media</p>

General Brown Central School District Curriculum Map

Course Title: Forces in Motion	Prepared By: D. Newvine
Time Frame: 3/21 - 4/30	Unit/Theme Forces
<p>Essential Questions:</p> <p>What is a force?</p> <p>How can an object be in equilibrium?</p> <p>What is a Free Body Diagram?</p> <p>What are Newton's Laws of Motion?</p>	
<p>NYS Standards:</p> <p>HS - PS2 - 1</p> <p>HSN - Q.A.1</p> <p>HSS - ID.A.1</p>	<p>Vocabulary:</p> <p>Equilibrium</p> <p>Weight</p> <p>Force of Gravity</p> <p>Force of Thrust</p> <p>Normal Force</p> <p>Force of Tension</p> <p>Force of Friction</p> <p>Centripetal Force</p>
<p>Student Objectives (The student will...):</p> <p>TSW determine an object's net force from applying Newton's Second Law of Motion.</p> <p>TSW understand the different types of forces that are present in a given situation.</p> <p>TSW verify Newton's Third Law of Motion.</p>	
<p>Assessments:</p> <p>Discussions, Worksheets, Labs, Quiz, and Test.</p>	
<p>Recommended Texts:</p> <p>Physical Setting - Physics</p>	<p>Resources:</p> <p>Powerpoint</p> <p>Online Media</p>

General Brown Central School District Curriculum Map

Course Title: Forces in Motion	Prepared By: D. Newvine
Time Frame: 4/21 - 5/20	Unit/Theme Momentum / Impulse
<p>Essential Questions:</p> <p>What does the quantity of motion look like for a moving object?</p> <p>What happens physically during any type of collision?</p> <p>What is conservation of momentum?</p>	
<p>NYS Standards:</p> <p>HS - PS2 - 2</p> <p>HSA - CED.A.4</p> <p>MP.4</p>	<p>Vocabulary:</p> <p>Collisions</p> <p>Elastic</p> <p>Inelastic</p> <p>Momentum</p> <p>Impulse</p> <p>Conservation</p> <p>Changing System</p>
<p>Student Objectives (The student will...):</p> <p>TSW determine initial and final quantities from applying conservation of momentum.</p> <p>TSW use graphical analysis to understand the process that occurs during a collision.</p> <p>TSW identify the differences and similarities between and elastic and inelastic collision.</p>	
<p>Assessments:</p> <p>Discussions, worksheets, Labs, quiz, and test.</p>	
<p>Recommended Texts:</p> <p>Physical Setting - Physics</p>	<p>Resources:</p> <p>Powerpoint</p> <p>Online Media</p>

General Brown Central School District Curriculum Map

Course Title: Forces in Motion	Prepared By: D. Newvine
Time Frame: 5/21 - 6/10	Unit/Theme Review - Combination Systems
<p>Essential Questions:</p> <p>Can we apply all physical knowledge into complicated real-world situations?</p> <p>Can we determine different quantities of motion during a collision that occurs in a closed system?</p> <p>Can we identify any gaps that may require additional review?</p>	
<p>NYS Standards:</p> <p>HS - PS2 - 3</p> <p>WHST.9 - 12.7</p>	<p>Vocabulary:</p> <p>Closed System</p> <p>Conservative Forces</p> <p>Non-Conservative Forces</p> <p>Wind Resistance</p>
<p>Student Objectives (The student will...):</p> <p>TSW use a strategic process to solve for unknown quantities.</p> <p>TSW apply their knowledge of forces and motion into real-world situations.</p> <p>TSW provide evidence-based explanations to their calculated answers.</p>	
<p>Assessments:</p> <p>Discussions, Worksheets, Labs, quiz, and final project.</p>	
<p>Recommended Texts:</p> <p>Physical Setting - Physics</p>	<p>Resources:</p> <p>Powerpoint</p> <p>Online Media</p>

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