


Planned Course: Physical Science	Course Number: 400	Department: Science	
Unit 2: Forces	Grade Level: 9th		
Estimated Time: 3 weeks	Level/Track: General	Date Approved: 9/25/2014	
PA Academic Standards	Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

<p>3.2 Physical Sciences: Chemistry and Physics</p> <p>3.2.10.B1</p> <ul style="list-style-type: none"> Analyze the relationships among the net forces acting on a body, the mass of the body, and the resulting acceleration using Newton's Second Law of Motion Apply Newton's Law of Universal Gravitation to the forces between two objects. Use Newton's Third Law to explain forces as interactions between bodies. Describe how interactions between objects conserve momentum. 	<p>How do the Laws of Newton apply to the world around us?</p> <ul style="list-style-type: none"> The student will be able to distinguish between mass and weight The student will be able to calculate the speed of an object by dividing distance moved by time taken The student will be able to distinguish between instantaneous speed, constant speed, and average speed The student will be able to describe moving objects in terms of acceleration and deceleration The student will be able to describe friction The student will be able to calculate force using the mass of an object and its rate of acceleration The student will be able to describe an object in freefall as weightless The student will be able to calculate the velocity of a 	<ul style="list-style-type: none"> Car Race Graph Friction lab Marble Speed Lab Graphing Speed Force and Motion Webquest Forces and Motion Simulation Friction Simulation Gravity Force Lab Forces and Motion Basics 	<ul style="list-style-type: none"> Hands on Lab Assessment (Marble Speed, Weight vs. Mass, Speed Lab, etc.) Lab Simulations Assessment (Pendulum Lab, Projectile Motion, Ramp Forces of Motion, etc.) Quizzes on major concepts Homework to reinforce major concepts Unit Test
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	falling object				
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