

Grade: 8th Grade

Subject: Science

Energy: Mass and Speed Relationships Unit 1

Timeframe:

Standards & Essential Question(s)	Student Friendly Daily Learning Targets	Resources	Critical Vocabulary	Assessments	Accommodations (Yearly for each Unit)
<p>08-PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.</p> <p>Why is it that a large moving object can have as much kinetic energy as a small fast moving car?</p> <p>https://www.nextgenscience.org/sites/default/files/evidence_statement/black_white/MS-PS3-1%20Evidence%20Statement%20June%202015%20asterisks.pdf</p>	<p>I can: collect data and construct graphs to describe relationships between kinetic energy, mass, and speed.</p> <p>I can: describe the relationship between kinetic energy and mass</p> <p>I can: describe the relationship between kinetic energy and speed</p> <p>I can: gather, collect, and use evidence to analyze energy and motion</p>	<p>The resources below are set up in a model lesson format. The ppt provides guidance for the entire lesson including activating, teaching and summarizing strategies. The activities listed below the ppt are used during the lesson and are identified in the ppt for use where they are most likely appropriate. The resources can be used as an entire lesson or pulled out for use separately.</p> <p>♣ Concept</p>	<ul style="list-style-type: none"> ● kinetic energy ● mass ● speed ● energy ● potential energy 	<p>https://drive.google.com/open?id=0B4YptBNrkcd1bUstY29vQIVvQIk</p> <p>https://drive.google.com/open?id=0B4YptBNrkcd1aTJRQ2ZRUmN2VDQ</p>	<p>Extended time</p> <p>One on one instruction</p> <p>Small group instruction</p> <p>Reader</p> <p>Calculator</p> <p>Shortened assignments</p> <p>Retake tests</p> <p>Graphic organizers</p> <p>Technology</p> <p>Visual prompts</p> <p>Paraphrase directions</p> <p>Manipulatives</p> <p>Re-reads</p>

		<p>Attainment: Potential and Kinetic Energy ["I Do" and "We Do"] – Activating Strategy in which the teacher provides Yes and No examples of a concept to the class while the class tries to guess the concept. ♣</p> <p>Kinetic and Potential Energy PPT [Includes "I Do", "We Do", and "You Do"] - See "Notes" on ppt slides for suggested instructional approaches where applicable or view the Kinetic and Potential Energy PPT Notes ♣</p> <p>Kinetic and Potential Energy Graphic Organizer ["You Do"] - Students should use the graphic organizer throughout the</p>			
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		<p>lesson to record important information ♣</p> <p>Formative Assessment: Kinetic and Potential Energy ["You Do"] – Students identify potential and kinetic energy using three diagrams. The teacher should use student responses to determine student mastery and if differentiation is needed. ♣</p> <p>Suggested Activities [select one or two activities] Some of the activities may also be used for differentiation:</p> <ul style="list-style-type: none">o Watch the cartoon video clip of the Road Runner http://www.youtube.com/watch?v=8H41zbqrwVo ["You Do"]- Have students identify at least two examples of kinetic			
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energy and two examples of potential energy. Note: the video clip is 5 minutes 42 seconds long. It does not take the entire time to get enough examples of Changing Kinetic & Potential Energy QR Activity ["We Do"]: Students work in groups of 2-3. Each group scans a QR code to see an animated picture demonstrating the relationship between kinetic energy and potential energy. The groups work to answer questions. o Kinetic & Potential Energy Images ["You Do" or "We Do"] – Use the images for students or groups of students to identify the type of energy shown in the image o Thrill Ride Activity ["You Do" or "We Do"] –

		students create			
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