



Scope and Sequence

Grade: 8th Month: Sept/Nov

Content Area: Science

Sub Content/Unit: Scientific Method/inquiry

<i>What our students will know and be able to do</i>	<i>Learning Activities</i>	<i>Materials</i>	<i>Assessment tools</i>	<i>Notes</i>
<ul style="list-style-type: none"> ● Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. ● Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the 	<ul style="list-style-type: none"> ● Notes ● Weekly warm-ups ● In class Experimental activities ● Task cards ● Choice Projects: your own designs 	<ul style="list-style-type: none"> ● Interactive Notebooks ● Weekly handouts ● Videos ● Digital Activities 	<ul style="list-style-type: none"> ● Assignment completion (task cards and weekly warm-ups) ● Project completions, presentations, and reflection. ● End of unit test 	<p>Unit(s) from Tpt bundle</p>

<p>problem.</p> <ul style="list-style-type: none">Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.				
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Scope and Sequence

Grade: 8th Month: Dec-March

Content Area: Science

Sub Content/Unit: Forces and Motion

Energy

<i>What our students will know and be able to do</i>	<i>Learning Activities</i>	<i>Materials</i>	<i>Assessment tools</i>	<i>Notes</i>
<ul style="list-style-type: none"> ● Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. ● Ask questions about data to determine the factors that affect the strength of electric and magnetic forces. ● Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects. ● Construct and 	<ul style="list-style-type: none"> ● Notes ● Weekly warm ups/ Task cards ● In class activities ● Choice Project ● Rube Goldberg Project (simple machines and Newton's Laws) 	<ul style="list-style-type: none"> ● Interactive notebook ● Handouts ● Videos ● Digital Activities 	<ul style="list-style-type: none"> ● Assignments completion and turn in (notes, handouts) ● In class activities ● Project(s) completion, presentations, and reflections ● Unit test(s) 	<p>Units from Tpt bundle</p>

<p>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> <ul style="list-style-type: none">• Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.•				
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Scope and Sequence

Grade: 8th Month: April-May

Content Area: Science

Sub Content/Unit: Waves

<i>What our students will know and be able to do</i>	<i>Learning Activities</i>	<i>Materials</i>	<i>Assessment tools</i>	<i>Notes</i>
<ul style="list-style-type: none"> ● Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave. ● Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials. ● 	<ul style="list-style-type: none"> ● Notes ● Weekly warm ups/ Task cards ● In class activities ● Choice Project 	<ul style="list-style-type: none"> ● Interactive Notebooks ● Weekly handouts ● Videos ● Digital Activities 	<ul style="list-style-type: none"> ● Assignments completion and turn in (notes, handouts) ● In class activities ● Project(s) completion, presentations, and reflections ● Unit test(s) 	<p>Tpt Unit Bundle</p>