

**PBL Lesson Planner**

BIG IDEAS		
<ul style="list-style-type: none"> <li>Continuous linear relationships can be identified and represented in many connected ways to identify regularities and make generalizations.</li> </ul>		
CURRICULAR CONTENT	CURRICULAR COMPETENCIES	CORE COMPETENCIES
<ul style="list-style-type: none"> <li>Two-variable linear relations, using graphing, interpolation, and extrapolation</li> <li>Multi-step one-variable linear equations</li> </ul>	<ul style="list-style-type: none"> <li>Use reasoning and logic to explore, analyze, and apply mathematical ideas</li> <li>Use tools or technology to explore and create patterns and relationships, and test conjectures</li> <li>Model mathematics in contextualized experiences</li> <li>Apply multiple strategies to solve problems in both abstract and contextualized situations</li> <li>Communicate mathematical thinking in many ways</li> </ul>	<ul style="list-style-type: none"> <li>Communication                             <ul style="list-style-type: none"> <li>Acquire, interpret, and present information (includes inquiries)</li> </ul> </li> <li>Critical Thinking                             <ul style="list-style-type: none"> <li>Question and investigate</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Reflect on mathematical thinking</li> </ul>	
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<p><b>GOALS/ASSESSMENT</b></p> <p>What am I looking for? How will I know the students have achieved these goals?</p>	<p>Students will be able to demonstrate what they have learned about a continuous linear relationship.</p>
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<b>ALL</b>	<p><b>HOOK: Multiple Means of Engagement</b></p>	
	<p>Show a box of paper clips. Ask the questions:</p> <ul style="list-style-type: none"> <li>• How do we measure the length of a paper clip?</li> <li>• What is the length of a paper clip?</li> <li>• What is the length of a chain of 2 paper clips? 3, 4, 5, 10, etc.? (Provide a table so that students can fill it out.)</li> <li>• What patterns/relationships can you find out between the length and the number of paper clips?</li> </ul>	
	<p><b>LESSON PLAN ACTIVITY: Multiple Means of Representation</b></p>	
<ul style="list-style-type: none"> <li>• Show video on a linear relationship (e.g. something created by the teacher, YouTube, Khan Academy, etc.)</li> <li>• Display a linear graph with a linear equation poster</li> <li>• Mini-lesson on a linear relationship</li> <li>• Vocabulary study</li> </ul>		

<b>ALL/MOST</b>	<p><b>ASSIGNMENT: Multiple Means of Expression</b></p>
	<p>Students can choose one assignment from the following choices:</p> <ul style="list-style-type: none"> <li>• Create a mini-lesson explaining different ways to represent a (continuous) linear relationship using Explain Everything</li> <li>• Create a poster explaining a (continuous) linear relationship.</li> <li>• Find a real-life word problem that involves a (continuous) linear relationship and show different ways to represent that relationship.</li> </ul>
<b>FEW</b>	<p><b>EXTENSIONS</b></p>
	<p>How are different graphs and relationships used in a variety of careers? Explore a career of your choice that uses graphs and relationships and report how they are used.</p>