**BIG IDEAS**

- Continuous linear relationships can be identified and represented in many connected ways to identify regularities and make generalizations.

<table>
<thead>
<tr>
<th>CURRICULAR CONTENT</th>
<th>CURRICULAR COMPETENCIES</th>
<th>CORE COMPETENCIES</th>
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</thead>
<tbody>
<tr>
<td>Two-variable linear relations, using graphing, interpolation, and extrapolation</td>
<td>Use reasoning and logic to explore, analyze, and apply mathematical ideas</td>
<td>Communication</td>
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<tr>
<td>Multi-step one-variable linear equations</td>
<td>Use tools or technology to explore and create patterns and relationships, and test conjectures</td>
<td>Acquire, interpret, and present information (includes inquiries)</td>
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<td>Model mathematics in contextualized experiences</td>
<td>Critical Thinking</td>
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<td></td>
<td>Apply multiple strategies to solve problems in both abstract and contextualized situations</td>
<td>Question and investigate</td>
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<td>Communicate mathematical thinking in many ways</td>
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## GOALS/ASSESSMENT

**What am I looking for? How will I know the students have achieved these goals?**

Students will be able to demonstrate what they have learned about a continuous linear relationship.

## HOOK: Multiple Means of Engagement

Show a box of paper clips. Ask the questions:

- How do we measure the length of a paper clip?
- What is the length of a paper clip?
- 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.)
- What patterns/relationships can you find out between the length and the number of paper clips?

## LESSON PLAN ACTIVITY: Multiple Means of Representation

- Show video on a linear relationship (e.g. something created by the teacher, YouTube, Khan Academy, etc.)
- Display a linear graph with a linear equation poster
- Mini-lesson on a linear relationship
- Vocabulary study
**ASSIGNMENT: Multiple Means of Expression**

Students can choose one assignment from the following choices:

- Create a mini-lesson explaining different ways to represent a (continuous) linear relationship using Explain Everything
- Create a poster explaining a (continuous) linear relationship.
- Find a real-life word problem that involves a (continuous) linear relationship and show different ways to represent that relationship.

**EXTENSIONS**

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.