Today, we will connect our study of **rate of change** to the formal definition of **slope**. We will also begin to **define the meaning of slope and intercepts in the context of real-world situations**. For the rest of this topic, we will study situations in which multiple representations of linear functions (including diagrams, pictures, verbal descriptions, tables, charts, graphs, and different forms of equations) will be used to answer questions and make decisions.

<table>
<thead>
<tr>
<th>Objective: (What are we learning today? How does it connect to previous learning? How does it connect to unit objectives? How does it connect to long-term goals?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today, we will connect our study of <strong>rate of change</strong> to the <strong>formal definition of slope</strong>. We will also begin to <strong>define the meaning of slope and intercepts in the context of real-world situations</strong>. For the rest of this topic, we will study situations in which multiple representations of linear functions (including diagrams, pictures, verbal descriptions, tables, charts, graphs, and different forms of equations) will be used to answer questions and make decisions.</td>
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<tr>
<th>Agenda (What activities are planned?)</th>
<th>Potential Misconceptions or Barriers: (How might students struggle to ACCESS this lesson?)</th>
</tr>
</thead>
</table>
| 11:30-11:34 – Do Now Staying Sharp  
11:34-11:38 – Close Read (Partner) plus Story Time  
11:38-11:45 – Complete Opener  
11:45-11:47 – Objective  
11:47-12:15 – Problem #1 – Skateboard Problem  
- **Constant Rate of Change**  
- **Meaning of Intercept**  
- **1st Differences**  
- **Change in y over Change in x** |
| Representation:  
- Reading the Problems – from the book and the animation  
- Vocabulary-heavy: “x-axis” “y-axis” “rate” “linear” “slope”  
- Reading graphs  
- Delta sign and  
- Differentiation of vertical vs. horizontal |
| Expression:  
- Writing thinking in words  
- Labeling y-axis with arrows  
- Translating to an ordered pair  
- Filling in very small boxes for “change in” first differences  
- Speaking answers to class |
| Engagement: |

<table>
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<tr>
<th>Plan to Tailor Instruction to Address Misconceptions or Barriers: (How will you address the needs of all students in your classroom?)</th>
</tr>
</thead>
</table>
| Representation:  
- Close Read - Partner/Think Aloud/Read Pair Share  
- Story Time  
- Word Wall and Glossary  
- Create coordinate plane on ground and rulers and iPhone  
- Poster-sized tables with different colors for 1st differences  
- Use animation for differences and “change in” for delta |
| Expression:  
- Close Read - Partner/Think Aloud/Read Pair Share  
- Story Time  
- Partners act out plan  
  o Choose partners to use animation and explain  
- Refer to Word Wall and Add to Glossary  
- Create coordinate plane on ground and rulers and iPhone – act out change in y and change in x with movement and iPhone  
- Create Poster-sized tables with colors  
  o Choose partners to use animation/floor/poster to explain |
| Engagement: |