Core Content

<table>
<thead>
<tr>
<th>Cluster Title: Relate addition and subtraction to length.</th>
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**Standard 6:** Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers (0, 1, 2,...), and represent whole-number sums and differences within 100 on a number line diagram.

**MASTERY Patterns of Reasoning:**

**Conceptual:**
- Students will understand that 0 represents the beginning point of the number line.
- Students will understand that numbers can label an equal space marked on a number line.
- Students will understand that numbers from 0 to 100 can be placed on the number line.
- Students will understand that addition and subtraction problems can be solved using a number line that does not begin at zero.

**Procedural:**
- Students can consider the numbers in the addition or subtraction problem to determine the range of numbers needed for the number line.
- Students can create a number line using the numbers that correspond to an addition or subtraction problem, and solve the problem using the number line to perform the operation.

**Representational:**
- Students can draw a number line with equally spaced points to illustrate thinking used in finding sums and differences of given problems.

Code: 2MD6
## Supports for Teachers

### Critical Background Knowledge

<table>
<thead>
<tr>
<th>Conceptual:</th>
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<tr>
<td>Students will understand that numbers are assigned a position on a number line to represent equally spaced points.</td>
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<td>Students will understand that when using the number line, it is the space between each line that represents the number, not the line itself.</td>
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<td>Students will understand that as you move to the right on a number line the numbers will be greater, but as you move to the left on a number line the numbers will be less.</td>
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<td>Students will understand what a number line looks like.</td>
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### Procedural: |
| Students can expose students to the visual concept of a number line using numbers within 100. |

### Representational: |
| Students can create a classroom number line and demonstrate classroom contextual situations. |

### Academic Vocabulary and Notation

- number line, sum, difference, greater, less

### Instructional Strategies Used

| I Do: Using the NCTM Illuminations lesson at the right, model using the number line to solve addition and subtraction equations within 100. |
| We Do: Guide students in using the number line to solve addition and subtraction. |

### Resources Used

You Do: Provide opportunities for using a number line during practice.

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<thead>
<tr>
<th>Assessment Tasks Used</th>
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<tbody>
<tr>
<td><strong>Skill-Based Task:</strong></td>
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<tr>
<td>Have students use a number line to solve addition and subtraction equations (e.g., $5 + 4 = 9$).</td>
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<td><strong>Problem Task:</strong></td>
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<tr>
<td>Have students use a number line to solve addition and subtraction situations in context (e.g., “We have 11 girls and 13 boys in our class. How many total students are in our class?”).</td>
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