Domain: Measurement and Data Grade: 2

## Core Content

| **Cluster Title:** Relate addition and subtraction to length. |
|---|
| **Standard 5:** Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. |
| **MASTERY Patterns of Reasoning:** |
| **Conceptual:**<br>Students will understand how to add and subtract lengths.<br>Students will understand how to interpret a word problem involving lengths.<br>Students will understand how to set up equations, including a measurement unit, and solve for the unknown number.<br><br>**Procedural:**<br>Students can measure different lengths (objects or activities such as jumping distances).<br>Students can record measurements.<br>Students can compute different length equations with the unknown in different positions. Use a variety of lengths within 100 (sum of 100 or less; e.g., 45 + 36).<br>Students can solve word problems involving lengths of various objects.<br><br>**Representational:**<br>Students can use pictures, words, and or numbers to solve measurement equations. Record the results. |

## Supports for Teachers

| **Critical Background Knowledge** |
|---|
| **Conceptual:**<br>Students will understand addition and subtraction within 100.<br>Students will understand units of measure.<br>Students will understand that numbers represent SOMETHING. For length, numbers represent a linear quantity.<br>Students will understand that a missing quantity or the unknown can happen at the start, the change, or the result.<br>Students will understand how to extract information from word problems, write equations, and solve. |

Code: 2MD5

**Procedural:**

Students should know how to keep their calculations organized so that the addition of measurement units does not pose a problem.

Students should know how to write an equation using information from a word problem.

**Representational:**

Students can record with pictures, words, and or numbers how to solve the equations.

**Academic Vocabulary and Notation**

addition, subtraction, measurement, length, equation, unit, unknown, symbol

| **Instructional Strategies Used** | **Resources Used** |
|---|---|
| Measure, draw picture and record answer including equation.<br><br>Gather and chart measurement data. Use this class data to compare lengths, add lengths, or subtract lengths. Use this data in word problems.<br><br>Have students create their own word problems. They can create questions from the class data or create their own data.<br><br>Tell “fish” stories. (“My fish was this big!”) Compare the sizes of the different fish. | Connelly, Luella. *Let’s Measure It (Learn to Read Math Series)*. Creative Teaching Press, 1996. |

**Assessment Tasks Used**

| **Skill-Based Task:** | **Problem Task:** |
|---|---|
| I have two twelve-inch rulers in my desk. How many inches do I have? Draw a picture and write an equation to show your work.<br><br>Each lunch table is sixteen feet long. How long are two tables together? Draw a picture and write an equation to show your work. | Work with a partner. Mark a starting line. Each partner throws a small paper plate like a Frisbee. Measure how far your plate went. Work with your partner to answer these questions and show the equation.<br><br>How far did Partner A throw? How far did Partner B throw? How far did you throw together? How much longer distance did one travel than the other? How much shorter distance did one travel than the other? |