



## Topic D

# Relate Addition and Subtraction to Length

**2.MD.5, 2.MD.6, 2.MD.1, 2.MD.3, 2.MD.4**

Focus Standards:	2.MD.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.
	2.MD.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.
Instructional Days:	3	
Coherence	-Links from:	
	GK–M3	Comparison of Length, Weight, Capacity, and Numbers to 10
	G1–M3	Ordering and Comparing Length Measurements as Numbers
	G1–M6	Place Value, Comparison, Addition and Subtraction to 100
	G2–M7	Problem Solving with Length, Money, and Data
	-Links to:	
	G3–M2	Place Value and Problem Solving with Units of Measure
	G3–M4	Multiplication and Area
	G3–M7	Geometry and Measurement Word Problems

In Topic D, students relate addition and subtraction to length. They apply their conceptual understanding to choose appropriate tools and strategies (e.g., the ruler as a number line, benchmarks for estimation, tape diagrams for comparison) to solve word problems (**2.MD.5, 2.MD.6**).

Students had their first experience creating and using a ruler as a number line in Topic A. Now, in Lesson 8, students solve addition and subtraction word problems using the ruler as a number line. This concept is reinforced and practiced throughout the module in fluency activities that involve using the meter strip for counting on and counting back and is incorporated into the accompanying Problem Sets. In Lesson 9, students progress from concrete to abstract by creating tape diagrams to represent and compare lengths. Lesson 10 culminates with students solving two-step word problems involving measurement using like units.

**A Teaching Sequence Toward Mastery of Relating Addition and Subtraction to Length**

**Objective 1:** Solve addition and subtraction word problems using the ruler as a number line.  
(Lesson 8)

**Objective 2:** Measure lengths of string using measurement tools, and use tape diagrams to represent and compare lengths.  
(Lesson 9)

**Objective 3:** Apply conceptual understanding of measurement by solving two-step word problems.  
(Lesson 10)