



Topic D

Measurement Word Problems with Whole Number and Decimal Multiplication

5.NBT.5, 5.NBT.7, 5.MD.1, 5.NBT.1, 5.NBT.2

Focus Standard:	5.NBT.5	Fluently multiply multi-digit whole numbers using the standard algorithm.
	5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
	5.MD.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.
Instructional Days:	3	
Coherence	-Links from:	G4–M2 Unit Conversions and Problem Solving with Metric Measurement
	-Links to:	G5–M4 Multiplication and Division of Fractions and Decimal Fractions
		G6–M1 Ratios and Unit Rates

In Topic D, students explore multiplication as a method for expressing equivalent measures. For example, they multiply to convert between meters and centimeters or ounces and cups with measurements in whole number, fraction, and decimal form (**5.MD.1**). These conversions offer opportunities for students to not only apply their newfound knowledge of multi-digit multiplication of both whole and decimal numbers but to also reason deeply about the relationships between unit size and quantity, i.e., how the choice of one affects the other. Students are given the opportunity to review multiplication of a whole number by a fraction, a skill taught in Grade 4.

A Teaching Sequence Towards Mastery of Measurement Word Problems with Whole Number and Decimal Multiplication

**Objective 1: Use whole number multiplication to express equivalent measurements.
(Lesson 13)**

**Objective 2: Use fraction and decimal multiplication to express equivalent measurements.
(Lesson 14)**

**Objective 3: Solve two-step word problems involving measurement conversions.
(Lesson 15)**