Lesson 10: Multi-step Measurement Problems

Standards Alignments

Addressing   4.MD.A.2, 4.OA.A.2, 4.OA.A.3

Teacher-facing Learning Goals

- Solve multi-step problems that involve multiplicative comparison and measurement with whole numbers.

Student-facing Learning Goals

- Let's solve multi-step measurement problems.

Lesson Purpose

The purpose of this lesson is for students to apply what they learned about metric units of measurement and multiplicative comparison to solve multi-step problems.

In the preceding lessons, students learned about the relationship between centimeters and meters, grams and kilograms, and liters and milliliters. In this lesson, students integrate what they learned to solve problems that are less straightforward and require them to reason in multiple steps.

Access for:

⊕ Students with Disabilities

- Action and Expression (Activity 1)

🌐 English Learners

- MLR7 (Activity 2)

Instructional Routines

MLR1 Stronger and Clearer Each Time (Activity 1), Notice and Wonder (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	20 min
Activity 2	15 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

In what ways did your students show they had depth of understanding beyond what you expected in this lesson? Why do you think this surprised you?

Cool-down (to be completed at the end of the lesson)   🕐   5 min

Hydration Here and There

Standards Alignments

Addressing   4.MD.A.2, 4.OA.A.3

Student-facing Task Statement

Halfway through a soccer game, Han drank 210 mL of water. At the end of the game, he drank 4 times as much as he did at halftime.

Did Han drink more or less than 1 L of water in total? Explain or show your reasoning.

Student Responses

More than 1 L. Sample reasoning: One liter is 1,000 mL. At the end of the game, Han drank 4×210 or 840 mL. Combined with the 210 mL from halftime, that is $840 + 210$ or 1,050 mL. This is 50 mL more than 1 L.