Lesson 14: What Makes Sense in the Problem?

Standards Alignments

Addressing   3.MD.A.1, 3.MD.A.2, 3.NBT.A.2

Teacher-facing Learning Goals

- Reason about quantities, questions, and solutions that make sense in measurement problems.
- Solve one-step word problems involving time and liquid volume.

Student-facing Learning Goals

- Let's think about what numbers and questions make sense in problems.

Lesson Purpose

The purpose of this lesson is for students to consider quantities and questions that make sense in situations and solve problems accordingly.

In earlier lessons, students encountered and solved problems about time and liquid volume. In this lesson, students model with mathematics (MP4) as they determine quantities, questions, and solutions that make sense in given situations and adhere to mathematical and real-world constraints when solving problems.

Access for:

♿ Students with Disabilities

- Representation (Activity 1)

🌐 English Learners

- MLR8 (Activity 2)

Instructional Routines

Number Talk (Warm-up)

Lesson Timeline

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

Teacher Reflection Question

This lesson pushed students to make sense of problems in new ways, by filling in numbers that make sense and generating questions that could match. How did you see students persevering in these tasks?

Cool-down   5 min

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

A Show at the Carnival

Standards Alignments

Addressing   3.MD.A.2

Student-facing Task Statement

1. A show at the carnival starts at 2:45 p.m. and lasts 47 minutes. What time does the show end? Explain or show your reasoning.

2. Another show that is 24 minutes long ends at 5:10 p.m. Kiran says that the show starts before 4:40 p.m. Do you agree? Explain or show your reasoning.

Student Responses

1. 3:32 p.m. Sample responses:
   - From 2:45, it is 15 minutes from 2:45 to 3:00 and another 30 minutes to 3:30. That's 45 minutes, so 47 minutes from 2:45 would be 3:32.
   - I know that 60 minutes from 2:45 is 3:45, and 47 minutes is 13 minutes before 3:45, which is 3:32 p.m.

2. No. Sample response:
   - I know that 4:40 is 30 minutes from 5:10 p.m. If the show is shorter than 30 minutes, it must have started after 4:40.
   - I know that 20 minutes before 5:10 is 4:50, so 24 minutes before 5:10 is 4:46, which is after 4:40.