Lesson 5: More Multiples

Standards Alignments

Addressing   4.OA.A.3, 4.OA.B.4

Teacher-facing Learning Goals

- Apply understanding of multiplication and multiples in the range 1–100 to solve real-world problems.

Student-facing Learning Goals

- Let's solve problems that involve factors and multiples.

Lesson Purpose

The purpose of this lesson is for students to use multiples of single-digit numbers to solve real-world problems. This includes situations with multiple solutions and situations with no solutions.

In previous lessons, students used the area of rectangles to develop an understanding of factors and multiples. They also worked on their fluency with multiplication facts. In this lesson, they apply these understandings to solve problems.

In some problems, the solutions are whole-number results of multiplying or dividing. For example: If eggs come in packages of 12, how many eggs are in 5 packages? (60 eggs). But in others, students need to make sense of products or quotients in terms of the situation. For instance: How many packages should we buy if we need exactly 50 eggs? Students reason that it is impossible to get exactly 50 eggs, since there are 48 eggs in 4 packages and 60 eggs in 5 packages.

As they examine the numbers in these situations, including interpreting remainders in division problems, students make sense of problems and persevere in solving them (MP1) and reason quantitatively and abstractly (MP2).

Math Community

Tell students that, at the end of the lesson, they will be asked to identify specific examples of norms they experienced as they did math.

Access for:

♿ Students with Disabilities

- Representation (Activity 1)

🌐 English Learners

- MLR2 (Activity 1)

Instructional Routines

Estimation Exploration (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

What strategies do students use most often to decide if a number is a multiple of a given whole number?

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

Fourth-grade Party

Standards Alignments

Addressing   4.OA.B.4

Student-facing Task Statement

All of the fourth-grade classes are getting together for a party. They have tables where 6 people can sit and tables where 8 people can sit. There will be 72 students that need seats.

If you may only use one type of table, which type of table would you choose? Explain or show your reasoning.

Student Responses

Sample responses:

- I would choose the tables that seat 8 because 72 is a multiple of 8 and $8 \times 9 = 72$.
- I would choose the tables that seat 8 because 72 is a number I say when I skip count by 8.
- I would choose 12 tables that seat 6 because $12 \times 6 = 72$.
- I would choose the tables that seat 6 because 72 is a number I say when I skip count by 6.