Lesson 19: Solve Problems Involving Arrays

Standards Alignments

Addressing   3.OA.A.1, 3.OA.A.3, 3.OA.C.7, 3.OA.D.9

Teacher-facing Learning Goals

- Represent an array situation with an equation with a symbol for the unknown number.
- Solve multiplication problems involving arrays.

Student-facing Learning Goals

- Let's solve problems involving arrays.

Lesson Purpose

The purpose of this lesson is for students to represent an array situation using an equation with a symbol for the unknown number and solve.

In previous lessons, students represented multiplication situations using arrays and multiplication expressions with an emphasis on equal groups. Equal groups continue to be emphasized in this lesson as students learn that finding the product in a multiplication equation gives the total number of objects in the related array.

As students connect arrays to equations, they may write $3 \times 5 = 15$ or $5 \times 3 = 15$ to represent 3 rows of 5 chairs. This is fine as long as students can correctly describe where the "3 rows of 5 chairs" are in their array or equation. Keep collecting ideas that arise about commutativity.

Access for:

⬤ Students with Disabilities

- Action and Expression (Activity 2)

⬤ English Learners

- MLR8 (Activity 2)

Instructional Routines

MLR5 Co-craft Questions (Activity 1), Number Talk (Warm-up)

Lesson Timeline

Warm-up	10 min

Teacher Reflection Question

Who has been sharing their ideas in class lately? Make a note of students whose ideas have not

Activity 1	25 min
Activity 2	10 min
Lesson Synthesis	10 min
Cool-down	5 min

been shared and look for an opportunity for them to share their thinking in tomorrow's lesson.

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

Clare's Cards

Standards Alignments

Addressing   3.OA.A.3

Student-facing Task Statement

Clare has 3 rows of baseball cards. Each row has 10 cards. How many cards does she have?

1. Write an equation with a symbol for the unknown number to represent the situation.
2. Find the number that makes the equation true. Explain or show your reasoning.

Student Responses

1. $3 \times 10 = ?$ or $10 \times 3 = ?$
2. 30. Sample response: 30 because 3 rows of 10 is 10, 20, 30.