

Lesson 22: School Community Garden (Optional)

Standards Alignments

Addressing 3.MD.C.7, 3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.D.8

Building Towards 3.OA.A.3

Teacher-facing Learning Goals

- Represent and solve “How many groups?” and “How many in each group?” problems in a real-world context.
- Solve two-step problems in a real-world context.

Student-facing Learning Goals

- Let’s plan a school garden.

Lesson Purpose

The purpose of this lesson is to use multiplication and division to model a real-world design problem.

This lesson is optional because it does not address any new mathematical content standards. This lesson does provide students with an opportunity to apply precursor skills of mathematical modeling.

In previous lessons, students multiplied and divided numbers within 100. They related division to multiplication by understanding division as an unknown factor problem. They used properties of operations and place value understanding to develop strategies to multiply and divide within 100.

In this lesson, they use their understanding of multiplication and division to plan a school garden. In the first activity, students solve problems that involve the spacing between plants in a row and between the rows. In the second activity, they plan a garden. They choose the types of vegetables and fruit to grow, how many plants to grow, and the arrangement of the plants. They also consider the yield of the garden. Students represent their plans with diagrams and expressions or equations.

Students model with mathematics (MP4) as they consider constraints, make assumptions and decisions about quantities, think about how to represent the relationships among quantities, and check their solutions in terms of the situation.

Access for:



Students with Disabilities

- Action and Expression (Activity 2)



English Learners

- MLR7 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	25 min
Lesson Synthesis	10 min

Materials to Copy

- Centimeter Grid Paper - Standard (groups of 2): Activity 2

Teacher Reflection Question

In what ways has the math community you are fostering improved? What actions can you take to improve areas that need work?
