

# Lesson 15: Design Your Own Robot

## Standards Alignments

Addressing 3.MD.D.8

### Teacher-facing Learning Goals

- Apply geometric understanding to solve problems about robots.

### Student-facing Learning Goals

- Let's use perimeter and area to design robots.

## Lesson Purpose

The purpose of this lesson is for students to draw rectangles with specified perimeters to create a robot.

In previous lessons, students used geometric understanding to solve problems involving the design of wax prints and parks. In this lesson, students create a robot as they draw parts with specified perimeters. Students then find the area of robot's body parts they drew and consider different areas that can be drawn with the same perimeter. If time allows, students can color their robots to highlight their mathematical ideas. When students recognize mathematical features of objects in the real world, they model with mathematics (MP4).

This lesson has a Student Section Summary.

### Access for:

#### Students with Disabilities

- Engagement (Activity 1)

#### English Learners

- MLR8 (Activity 1)

## Instructional Routines

What Do You Know About \_\_\_\_? (Warm-up)

### Materials to Gather

- Tape: Activity 1

### Materials to Copy

- Square Dot Paper Standard (groups of 1): Activity 1

## Lesson Timeline

Warm-up	10 min
Activity 1	35 min
Lesson Synthesis	10 min
Cool-down	5 min

## Teacher Reflection Question

As you finish up this unit, reflect on the norms and activities that have supported each student in learning math. How have you seen yourself grow as a teacher? What are the things you most want to work on as you head into the final unit of the year?

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## Cool-down (to be completed at the end of the lesson)

 5 min

Reflect on Learning About Perimeter

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### Student-facing Task Statement

Which lesson about shapes and perimeter was your favorite? Why?

### Student Responses

Sample responses: I liked the lesson where we sorted shapes because it was fun trying to get someone to guess how I sorted them. I liked the lesson on having the same perimeter and different areas because I didn't know that was possible before. I liked designing the wax print because we were able to use math to do art.