MA.2.GR.2.1

Overarching Standard: ***MA.2.GR.2*** *Describe perimeter and find the perimeter of polygons.*

Benchmark of Focus

MA.2.GR.2.1: Explore perimeter as an attribute of a figure by placing unit segments along the boundary without gaps or overlaps. Find perimeters of rectangles by counting unit segments.

Benchmark Clarifications

Clarification 1: Instruction emphasizes the conceptual understanding that perimeter is an attribute that can be measured for a two-dimensional figure.

Clarification 2: Instruction includes real-world objects, such as picture frames or desktops.

Related Benchmark/Horizontal Alignment

- MA.2.NSO.2.3
- MA.2.M.1.1

Vertical Alignment

Previous Benchmarks	Next Benchmarks
Perimeter is a new concept in 2nd grade	MA.3.GR.2.3

Terms from the K-12 Glossary

- Rectangle

Purpose and Instructional Strategies

The purpose of this benchmark is to introduce the concept of perimeter as a measurement attribute along the exterior of a two-dimensional figure that can be determined by counting unit segments. *(MTR.5.1)*

- Instruction includes the understanding that the measurement is only valid when units are placed and counted without space or overlay.
- Instruction includes informal language of length and width.

Common Misconceptions or Errors

- Students may miscount or double count the number of unit segments.

Strategies to Support Tiered Instruction

- Instruction includes teacher modeling how to make tic marks on each unit as you count around the edge of a figure.
- Instruction includes the opportunity to use tiles to mark the edge of a figure before touching and counting the units to find the perimeter. Teacher makes a connection to the drawn figure with tic marks.
- Instruction includes showing how to line up a ruler. Students measure an unsharpened pencil with the ruler and then verify by lining up 1-inch tiles.

- Teacher measures an object using tiles but leaving gaps. Then, the teacher measures the same object again but this time ensuring there are no gaps and uses the tiles to illustrate how leaving gaps can change the measurement.

Questions to ask students:

- **Explain how you could find the perimeter of a shape.**
  - Sample answer that indicates understanding: *I can measure the distance around the shape. If I count all the units that will tell me the perimeter.*
- **Point to a student's book or desk. Ask the student to find the perimeter and explain their thinking.**
  - Sample answer that indicates understanding: *I can use my snap cubes and lay them side by side without any gaps or overlaps. I lay them along the length and width, all the way around the outside of the book. When I count them all, the perimeter is 22 units.*

Instructional Tasks

Instructional Task 1

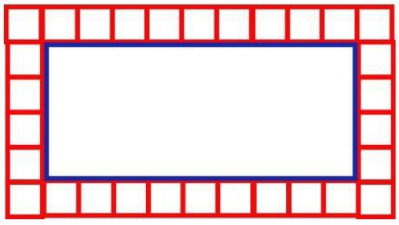
Provide students with centimeter cubes or snap cubes.

- Part A: Using centimeter cubes or snap cubes, construct several rectangles (12" by 6," 5" by 3," 14" by 8").
- Part B: Determine the perimeter of each rectangle constructed. What do you notice about the numbers of cubes and the perimeter?

Instructional Items

Instructional Item 1

A student lays down unit cubes to find the perimeter of a rectangle. If the student determines the length is 30-unit cubes long, explain what they may have done incorrectly.



Additional Resources:

CPALMS Resources

Resources/Tasks to Support Your Child at Home:

Give your child the opportunity to measure and find the perimeter of various flat rectangles around the house. Have your child explain the process they used to measure the perimeter.

Ask your child about the dimensions of different rectangles in the real world. What is the length of this table? What is the width? How could we find the perimeter of this table if we knew the length and width?

LearnZillion Videos: Find the Perimeter of a Polygon (focus only on perimeter, not area)

Perimeter Climber – online game that asks students to find the perimeter of rectangles.