

Lesson 7: Meters and Centimeters

Standards Alignments

Building On 2.MD.A.1

Addressing 4.MD.A.1

Teacher-facing Learning Goals

- Express meters in terms of centimeters.
- Understand the relative size of meters and centimeters.

Student-facing Learning Goals

- Let's explore lengths in meters and centimeters.

Lesson Purpose

The purpose of this lesson is for students to make sense of the relative size of meters and centimeters and to express meters in terms of centimeters.

In earlier grades, students measured and estimated lengths in centimeters and meters to develop a sense of each. They learned that there are 100 centimeters in 1 meter. This lesson helps students see the relationship between centimeters and meters in terms of multiplicative comparison (MP7). Building on their work in previous lessons, students recognize 1 meter as being 100 times as long as 1 centimeter. They use this understanding to convert measurements in meters into centimeters.

Access for:

Students with Disabilities

- Representation (Activity 2)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Scissors: Activity 1
- Tape: Activity 1

Materials to Copy

- Centimeter Grid Paper - Standard (groups of 2): Activity 1

Lesson Timeline

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

Teacher Reflection Question

What evidence do you have that students are thinking conceptually about “100 times as many” and not simply adding zeros to the end of a number without reasoning?

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

 5 min

The Longest Creatures

Standards Alignments

Addressing 4.MD.A.1

Student-facing Task Statement

1. The longest stick insect ever found was more than 62 centimeters long. Is that insect shorter or longer than 1 meter? Explain your reasoning.
2. The world’s longest snakes can grow up to 9 meters long. What is that length in centimeters?

Student Responses

1. Shorter than 1 meter, because 1 meter is 100 centimeters, and 62 is less than 100.
2. 900 centimeters long, because $9 \times 100 = 900$.