

Family Support Materials

Measuring Length

In this unit, students measure and estimate lengths in standard units, and solve measurement story problems within 100.

Section A: Metric Measurement

In this section, before learning to use a ruler, students use base-ten blocks, which have lengths of 1 cm and 10 cm, to measure objects in the classroom. Using these tools to measure the length of objects reinforces place value concepts. Students use metric units to create their own centimeter ruler to see the tick marks as noting the distance in centimeters from the 0 mark and the accumulation of length units as they move along the ruler. They learn the importance of placing the end of an object at the starting point of zero and discuss that the numbers on the ruler represent the distance from zero. Students learn about the meter, which is equivalent to 100 centimeters, further reinforcing place value concepts. They make estimations about metric units and measure shorter objects with centimeters and longer objects with decimeters and meters.

Section B: Customary Measurement

In this section, students learn about customary units of linear measurement (inches and feet). They apply length measurement concepts and skills from the previous section in order to measure and estimate with customary units. Students develop the generalization that when a unit of measure is longer, it requires fewer of those units to measure the length of the object. Students make choices about which tool would be appropriate based on the size of the object.

Section C: Line Plots

In this section, students represent their measurement data on a line plot. Students learn that the horizontal scale is marked off in whole number units that represent the counting sequence. Students use a template to create line plots and understand that each data point is represented by an x made above the number on the number line representing the length of the object. They label line plots with titles and the measurement unit used.

Try it at home!

Near the end of the unit, ask your student to measure objects around the house with a ruler or other measuring tool.

Questions that may be helpful as they work:

- Why did you choose to measure that object using _____ (feet, inches, centimeters, and so on)?
- If you measured it using _____ (feet, inches, centimeters, and so on) would there be more or fewer of those units needed?