

# Unit 13

## Family Letter

Dear Family,

In this unit, *Units of Measurement and Data*, your child will learn how to convert larger units of measure to smaller units. Your child will also learn how to display and interpret data on line plots.

### STEM Career Kid for this Unit

**Hi, I'm Noah.**

I want to be a nurse. I will use math in my job when I measure patients' heights and when I give patients medicine that is measured in milliliters.



### What math terms will your child use?

Term	Student Understanding
metric system	the decimal system of measurement; metric units of measurement: length: millimeter, centimeter, meter, kilometer; liquid volume: liter and milliliter; mass: gram and kilogram
convert	change; example: use multiplication to convert, or change, from a larger unit of measurement to a smaller unit of measurement.
customary system	the measurement system most often used in the United States; customary units of measurement: length: inch, foot, yard, and mile; liquid volume: fluid ounce, cup, pint, quart, and gallon; weight: ounce, and ton.

### What can your child do at home?

Have your child practice converting larger units of length, liquid volume, and weight to smaller units of measure. For example, have your child look for measurements on food containers that he or she can convert to smaller units of measure. Your child can also measure the lengths of household objects and then convert the measurements to smaller units of measure.



# What Will Students Learn in This Unit?

## Converting Larger Units of Measure to Smaller Units of Measure

Your child will learn about metric and customary units of measure for length, liquid volume, and mass or weight. He or she will learn how to use multiplication to convert larger units of measure to smaller units of measure. It may be helpful to your child to use number lines and equivalency tables when converting units of measure. Your child will use what he or she has learned about conversions to solve word problems.

*Example:*

Lucas throws a ball 6 yards. Oliver throws the ball 16 feet. How much farther does Lucas throw the ball than Oliver? Explain.

Lucas throws the ball  $6 \times 3 = 18$  feet, which is  $18 - 16 = 2$  feet farther than Oliver throws the ball.

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## Converting Units of Time

Your child will learn how to convert hours to minutes and minutes to seconds. He or she will use the same techniques that were used when converting metric and customary measurements. It is important for your child to understand how hours, minutes, and seconds are related.

*Example:*

Alexis works for  $7\frac{1}{2}$  hours. How many minutes does Alexis work?

$$\begin{array}{r} 7 \text{ hours} \\ \downarrow \times 60 \\ 420 \text{ minutes} \end{array} + \begin{array}{r} \frac{1}{2} \text{ hour} \\ \downarrow \\ 30 \text{ minutes} \end{array} = 450 \text{ minutes}$$

So, Alexis works for 450 minutes.

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## Representing and Interpreting Data

Your child will learn how to display and interpret measurement data in a line plot. Line plots contain Xs that show the frequency of data along a number line. Your child will use data in line plots to solve word problems that involve adding and subtracting fractions.

*Example:*

Liz is using a wheelbarrow to move rocks. She can move 40 pounds of rocks at a time. The weights of the rocks are shown in the line plot below. Can Liz move all of the rocks in one load?

Liz can move all of the rocks in one load because the total weight of the rocks is

$$4 + 4\frac{1}{4} + 4\frac{2}{4} + 4\frac{2}{4} + 4\frac{3}{4} + 4\frac{3}{4} + 5 = 36\frac{1}{4} \text{ pounds, which is less than 40 pounds.}$$

**Rock Weights (lb)**

