



# SECOND GRADE MATHEMATICS – Unit 4

Dear Parents,

During Unit 4, your child will develop an understanding of the meaning and processes of measurement, including transitivity (e.g., if object A is longer than object B and object B is longer than object C, then object A is longer than object C). They will understand linear measure as an iteration of units and use rulers and other measurement tools with that understanding. They will understand the need for equal-length units, the use of standard units of measure (centimeter and inch), and the inverse relationship between the size of a unit and the number of units used in a particular measurement. Your child will recognize that the smaller the unit, the more iterations that are needed to cover a given length. Time is a bit different from the other attributes that are commonly measured in school because it cannot be seen and because it is more difficult for students to comprehend units of time or how they are matched against a given time period or duration.

## MEASUREMENT

### *Students need to:*

- Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
- Estimate lengths using units of inches, feet, centimeters, and meters.
- Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
- Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
- Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
- Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
- Given the dimensions of a polygon, determine the perimeter.
- Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

## KEY VOCABULARY

Analog clock	Line Plot
Centimeter	Measure
Data	Meter
Digital clock	Minutes
Foot	Number Line
Height	Scale
Hour	Standard Unit
Inch	Width
Length	Yard

## WAYS PARENTS CAN HELP

- **When measuring items, have your child help. If possible let them help with the selection of which measurement tool to use (ruler, yardstick, measuring tape...).** Try to use measurement vocabulary.
- **Give your child a ruler. Help them to measure the item twice, once in inches and once in centimeters. Talk about how the difference in the total number of units is different because centimeters are smaller than inches so it takes more of them to cover the given length.**
- **Help your child to find the difference in length between two objects by having them measure both and then finding the difference.**
- **Help your child to estimate various lengths. Have them measure the actual length to see how close they were with their estimate.**
- **Practice reading the time, to the nearest five minutes, on an analog clock.**

## BACKGROUND INFORMATION AND EXAMPLES FOR PARENTS

### **line plot using measurement data:**

<http://video.carrollk12.org/view/HEIMINTERPRETINGLINEPLOTS>