

Unit 3: Understanding Measurement, Length, and Time

Georgia Math

Grade 2

Overview

In this unit, students will:

- ❖ Know U.S. units of length including inch, foot, and yard as well as metric lengths, including centimeter and meter
- ❖ Choose and use the right measurement tool depending on the problem (ruler, yardstick, etc.)
- ❖ Compare relationships of one unit of measurement to another (ex. Inch to centimeter)
- ❖ Tell time to nearest 5 minutes
- ❖ Understand estimations
- ❖ Know relationship between hours and days

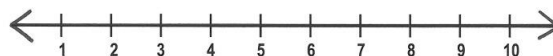
Key Common Core Standards

- Estimate and measure the length of objects and be able to compare them.
- Solve word problems involving length
- Represent lengths on a number line
- Tell and write time to the nearest 5 minutes on a digital and analog clock
- Draw picture and bar graphs to represent data

Vocabulary

Students will be using the following words in this unit:

- **Estimate:** a number close to the exact amount
- **Number Line:** a line marked with numbers spaced evenly apart



- **Customary Unit:** the measurement units that we use here in the United States (inch, foot, yard, mile)
- **Metric Unit:** the measurement units used by the rest of the world, based on Base-10 numbers
- **Line Plot:** a graph of data along a number line using X's or dots to display the information
- **Analog Clock:** a clock that uses hour and minute hands to show time



- **Non-Standard Unit:** using objects such as paper clips or cubes to measure an item

It All Ties Together

As students learn to use rulers and meter sticks and number lines, they will be connecting addition and subtraction to their measuring. In most of the lessons, students will be taking the data (measurements) and being asked to make comparisons to other measurements.

For example, rather than just measuring two objects, students will be asked to compare them: Which object is longer? By how much? How can you prove that?

This brings students to a deeper level of understanding measuring, but also how addition and subtraction help solve real-world problems.

Here's an example:

In gym class, Kate jumped 14 inches. Mary jumped 23 inches. How much farther did Mary jump than Kate? Write an equation and then solve the problem.

Student: My equation is $14 + \underline{\quad} = 23$ since I am trying to find out the difference between Kate and Mary's jumps. I used place value blocks and counted out 14. Then I added blocks until I got to 23. I needed to add 9 blocks. Mary jumped 9 more inches than Kate.



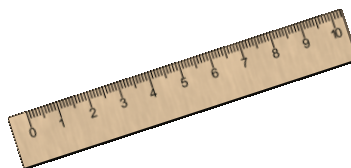
Kids will be expected to “prove” their answers with pictures and explanations like the example above.

How You Can Help At Home

Many people think that since we have so many “digital clocks” around, kids don’t need to tell time on analog clocks. But most buildings (schools, offices, town offices, etc) still have clocks on the wall. Practicing telling time is still so important!

Here are some ways you can help:

- Put tape over your digital clocks – the microwave, stove, DVR – and just have an analog clock nearby to tell time.
- Practice skip counting by 5’s – this helps with counting minutes.
- Use the words “quarter of” and “quarter past” as often as you can, and explain how the clock can be divided into 4 parts...each part being a “quarter” of the clock. This helps them visualize time in “quarters”.



Websites for Practice

Measuring:

http://www.childu.com/sample_act/math1_2/01MADB03a-fish_tails_v5.swf

<http://harcourtschool.com/activity/elab2004/gr3/22.swf>

LOTS of websites for telling time at all levels (hour, half-hour, minutes):

<http://interactivesites.weebly.com/timeclocks.html>