Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 2* / Grade 2 (Math Regional Curriculum)

Monday, October 15, 2012, 2:04PM

Standard/Module: Proficiency with Measurement 2.MD.1 (Week 3, 34 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) Connects to 2.MD.2-4, and 2.MD.9

Standards

NYS: CCLS:Mathematics, NYS: 2nd Grade , Measurement & Data

2.MD Measure and estimate lengths in standard units.

- 1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Enduring Understandings	Essential Questions
-Length can be measured with specific tools meant for measuring length. -Some tools are rigid such as rulers, yardsticks, and meter sticks whereas some tools are flexible, like measuring tapes. -Some tools are more appropriate than others for measuring certain items	What tool would I select to measure something that is relatively short? What tool would I select to measure something that is relatively long? What tool would I use if I want to measure in the straightest possible line? When would I use a tool that requires more flexibility to measure the length of something?

Critical Content

I can use tools and the markings shown on tools to measure in length units.

I can choose the correct length measurement tool based on what I am measuring and what tool will be more efficient.

Skills	Vocabulary
This standard calls for students to measure the length of objects in both customary (inches and feet) and metric (centimeters and meters). Students should have ample experiences choosing objects, identifying the appropriate tool and unit, and then measuring the object. The teacher should allow students to determine which tools and units to use.	Tier 2: appropriate, selecting Tier 3: measure, ruler, yardstick, meterstick, measuring tape, length

- Understand that larger units can be subdivided into equivalent units (partition). -Understand that the same unit can be repeated to determine the measure (iteration). -Understand the relationship between the size of a unit and the number of units needed (compensatory principal). -Understand the measuring of two-dimensional space (area) using non-standard units.	

Stage 2: Assessment Evidence

Assessments

Measure Around the Room
Formative: Performance: Skill Demonstration

Students are assigned items around the classroom to measure. Items should be various lengths. Students will have to choose the most appropriate tool for the item, record the name of the tool and the measurement of the item. This allows you to assess whether they can choose the best tool as well as whether they can use the tool to accurately measure.

Stage 3: Learning Plan

Learning Activities	Resources
Second graders are transitioning from measuring lengths with informal or nonstandard units to measuring with these standard units: inches, feet, centimeters, and meters. The measure of length is a count of how many units are needed to match the length of the object or distance being measured. Students have to understand what a length unit is and how it is used to find a measurement. They need many experiences measuring lengths with appropriate tools so they can become very familiar with the standard units and estimate lengths. Use language that reflects the approximate nature of measurement, such as the length of the room is about 26 feet. Have students measure the same length with different-sized units then discuss what they noticed.	www.illustrativemathematics.org www.illuminations.nctm.org

Ask questions to guide the discussion so students will see the relationship between the size of the units and measurement, i.e. the measurement made with the smaller unit is more than the measurement made with the larger unit and vice versa. Insist that students always estimate lengths before they measure. Estimation helps them focus on the attribute to be measured, the length units, and the process. After they find measurements, have students discuss the estimates, their procedures for finding the measurements and the differences between their estimates and the measurements.	

Differentiation Opportunities

When some students see standard rulers with numbers on the markings, they believe that the numbers are counting the marks instead of the units or spaces between the marks. Have students use informal or standard length units to make their own rulers by marking each whole unit with a number in the middle. They will see that the ruler is a representation of a row of units and focus on the spaces.

Some students might think that they can only measure lengths with a ruler starting at the left edge. Provide situations where the ruler does not start at zero. For example, a ruler is broken and the first inch number that can be seen is 2. If a pencil is measured and it is 9 inches on this ruler, the students must subtract 2 inches from the 9 inches to adjust for where the measurement started.

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