Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

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

Wednesday, October 31, 2012, 4:07PM

Standard/Module: Proficiency with Measurement 2.MD.9 (Week 33, 4 Weeks)

Stage 1: Desired Results

Standards Focus

- Additional (10%) Connects to 2.MD.1-4 & 10

Standards

NYS: CCLS:Mathematics, NYS: 2nd Grade , Measurement & Data
2.MD Represent and interpret data.

- 9. 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.

Enduring Understandings	Essential Questions
Represent the length of several objects by making a line plot. This standard emphasizes representing data using a line plot. Students will use the measurement skills learned in earlier standards to measure objects. Line plots are first introduced in this grade level. A line plot can be thought of as plotting data on a number line.	What is a line plot used for? How is it helpful for analyzing data?

Critical Content

Measure objects and record the data on a line plot.

A line plot is a number line that has data plotted on it.

Skills	Vocabulary
I can measure the lengths of objects. I can record how many times I measure a particular length on a number line	Tier 2: measuring, lengths, repeated measurements Tier 3: line plot, number line, whole unit,

Stage 2: Assessment Evidence

Assessments

Making Line Plots
Formative: Performance: Skill Demonstration

Students are asked to measure the lengths of certain collection of objects and record their findings on a line plot. Students present their findings to the class.

Stage 3: Learning Plan

Learning Activities	Resources
Measure objects in your desk to the nearest inch, display data collected on a line plot. How many objects measured 2 inches? 3 inches? Which length had the most number of objects? How do you know? An interactive whiteboard may be used to create and/or model line plots as well as class line plots on chart paper. Line plots are useful tools for collecting data because they show the number of things along a numeric scale. The line plot is made by simply drawing a number line then placing an X above the corresponding value on the line that represents each piece of data. Line plots are essentially bar graphs with a potential bar for each value on the number line. Pose a question related to the lengths of several objects. Measure the objects to the nearest whole inch, foot, centimeter or meter. Create a line plot with whole-number units (0, 1, 2, ...) on the number line to represent the measurements. At first students should create real object or picture graphs (where the object is drawn rather than a number). On picture graphs record the number of countable parts. These graphs show items in a category and do not have a numerical scale. For	www.illuminations.nctm.org www.illustrativemathematics.org

example, a real object graph could show the students' shoes (one shoe per student) lined end to end in horizontal or vertical rows by their color. Students would simply count to find how many shoes are in each row or bar. The graphs should be limited to 2 to 4 rows or bars. Students would then move to making horizontal or vertical bar graphs with two to four categories and a single-unit scale. Use the information in the graphs to pose and solve simple put together, take-apart, and compare problems.	

Differentiation Opportunities

The attributes for the same kind of object can vary. This will cause equal values in an object graph to appear unequal. For example, when making an object graph using shoes for boys and girls, five adjacent boy shoes would likely appear longer than five adjacent girl shoes. To standardize the objects, place the objects on the same-sized construction paper or sticky-note, then make the object graph.

<< Previous Year

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