Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

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

Wednesday, October 31, 2012, 4:08PM

Standard/Module: Proficiency with Measurement 2.MD.10 (Week 33, 4 Weeks)

Stage 1: Desired Results

Standards Focus

- Additional (10%) Connects to 2.MD.9

Standards

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

- 10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Enduring Understandings	Essential Questions
A picture graph or bar graph provides a visual representation of a data set and I can interpret information I see including drawing comparisons.	What kind of information can I derive from a picture graph or bar graph? How can I compare categories in a picture graph or bar graph? What do the numbers on the sides (axes) of the graph tell me? How can I solve put-together, take-apart, and compare problems with what I see in the graph?

Critical Content

Students work with categorical data by organizing, representing and interpreting data.

Students have experiences posing a question with 4 possible responses and then

work with the data that they collect.

Skills	Vocabulary
I can pose a question and collect responses from my peers. I can analyze and make sense of the responses I collect. I can display the data in ways that make sense.	Tier 2: categories, put-together, take-apart, compare Tier 3: picture graph, bar graph, single-unit scale, data

I can build a picture graph or bar graph. I can read a picture graph or bar graph. I can solve problems by looking at/reading the graph.	

Stage 2: Assessment Evidence

Assessments

Graphing Our Data
Formative: Performance: Skill Demonstration

Students collect data and organize it into a pictograph or bar graph. Students present their data to the class and explain what the graph is showing.

Stage 3: Learning Plan

Learning Activities	Resources
Students pose a question and the 4 possible responses. Which is your favorite flavor of ice cream? Chocolate, vanilla, strawberry, or cherry? Students collect their data by using tallies or another way of keeping track. Students organize their data by totaling each category in a chart or table. Picture and bar graphs are introduced in Second Grade. - **Example:** *Flavor & Number of People Who Voted For It:* Chocolate 12 Vanilla 5 Strawberry 6 Cherry 9	www.illuminations.nctm.org www.illustrativemathematics.org

Students display their data using a picture graph or bar graph using a single unit scale. Students answer simple problems related to addition and subtraction that ask them to put together, take apart, and compare numbers. Students should draw both picture and bar graphs representing data that can be sorted up to four categories using single unit scales (e.g., scales should count by ones). The data should be used to solve put together, take-apart, and compare problems. In second grade, picture graphs (pictographs) include symbols that represent single units. Pictographs should include a title, categories, category label, key, and data. Second graders should draw both horizontal and vertical bar graphs. Bar graphs include a title, scale, scale label, categories, category label, and data.	

Differentiation Opportunities

Students often get the labels of the graphs confused. Put the titles for the axes and for the whole graph on different "Post-It" notes and let students move them around to determine what makes the most sense (*Does "ice cream flavors" make sense on the y-axis where we see numbers? Do these numbers tell us ice cream flavors?)* Eventually, ask them to determine the titles for themselves based on what each part of the graph is "telling." Relate the graph to telling a story and ask students what story the graph is telling.

Practice reading graphs from the bottom up instead of the top down because it gives more information earlier on about the story that is being told by the graph.

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