Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 3* / Grade 3 (Math Regional Curriculum)

Wednesday, September 26, 2012, 2:55PM

Standard/Module: Proficiency in measurement and data 3.MD.3 (Week 32, 3 Weeks)

Stage 1: Desired Results

Standards Focus

- Supporting (20%) connects to 3.MD.4, 3.NBT.1

Grade 3 Proficiency Maps.pdf

Standards

NYS: CCLS:Mathematics, NYS: 3rd Grade , Measurement & Data
3.MD Represent and interpret data.

- 3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.

Enduring Understandings	Essential Questions
1. Understand how data is used and represented in a picture or bar graph.	1. What is the connection between your data set and the corresponding graph?
2. Parts of a graph	2. How would you label a given graph?
3. Understand how to choose the proper scale for the data set	3. What is the proper scale for a given data set?

Critical Content

Scaled picture graphs

Scaled bar graphs

Data sets with several catagories

One and two-step "how many more" and "how many less" problems using scaled bar graphs

Skills	Vocabulary
Draw scaled picture graphs	Tier 2: scale, categories, represent
Draw scaled bar graphs	
Solve problems using scaled bar graphs	Tier 3: picture graph, bar graph, data set,

Stage 2: Assessment Evidence

Assessments

Make a bar graph
Formative: Performance: Authentic Task

Collect the students' group bar graphs from their data as evidence of proficiency with bar graphs. Because there are so many features to the bar graph, at grade 3, it may be more appropriate to first do a group assessment rather than an individual assessment, then later require that each student in the group creates a graph instead of the group creating one graph. If students present their graph and their findings to the rest of the class, it is very telling of how much they know and what misconceptions they have.

Stage 3: Learning Plan

Learning Activities	Resources
Start by showing students bar graphs and ask them what they notice. Make a list of the attributes of bar graphs.	www.illuminations.nctm.org www.illustrativemathematics.org
Model a survey that can be easily administered to the class (such as favorite ice cream flavors) and model how to put the data into a bar graph. Students then work in groups to create their own survey question, collect data and put their results into a bar graph. Teacher might want to suggest ideas of survey questions that would work with a bar graph, and limit the number of categories. Students answer "how many more"/"how many less" questions.	

Differentiation Opportunities

If students are struggling with a topic, give them limited choices for topics. Use graph paper with pre-made axes to help with making the bar graphs accurately. Create blank lines where lables and titles should be to remind students of the features of a bar graph. Use stickers to create a picture graph.

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