Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 6* / Grade 6 (Math Regional Curriculum)

Wednesday, October 31, 2012, 12:13PM

Standard/Module: Proficiency with Statistical Reasoning 6.SP.1 (Week 32, 8 Weeks)

Stage 1: Desired Results

Standards Focus

- Additional (10%)

6th Grade CCS Map.pdf

Standards

NYS: CCLS:Mathematics, NYS: 6th Grade , Statistics & Probability

6.SP Develop understanding of statistical variability.

- 1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.

Enduring Understandings	Essential Questions
1. Students need to know that statistical questions anticipate varied answers.	1. When would more than one answer be more useful than one answer? 2. Why do answers to statistical questions vary?

Critical Content

1. Statistical questions- formulate questions and accounts for the answers

2. Variability

Skills	Vocabulary
1. Discern the difference between a statement and a question. 2. Recognize a statistical question as one that	Tier 2: data expectation

generates various answers. Example: “How old am I?” vs. “How old are the students in this school?” 3. Write simple statistical questions that generate various answers.	statistics variability Tier 3:

Stage 2: Assessment Evidence

Assessments

Pre-Test
Formative: Project: Personal

Have students sort questions if they are statistical or not.

Post-Test
Formative: Test: Written

Have students sort questions if they are statistical or not, and if they include varied answers.

Stage 3: Learning Plan

Learning Activities	Resources
Give students a list of questions and have the students decide if the questions are statistical questions or not.	http://engageny.org/common-core/
Have students create their own statistical questions.	http://illustrativemathematics.org/
Students differentiate between statistical questions and those that are not. A statistical question is one that collects information that addresses differences in a population. The question is framed so that the responses will allow for the differences. For example, thequestion, “How tall am I?” is not a statistical	www.livebinders.com/play/play/52180 http://illuminations.nctm.org/

question because there is only one response; however, the question, “How tall are the students in my class?” is a statistical question since the responses anticipates variability by providing a variety of possible anticipated responses that have numerical answers. Questions can result in a narrow or wide range of numerical values. Students might want to know about the fitness of the students at their school. Specifically, they want to know about the exercise habits of the students. So rather than asking "Do you exercise?" they should ask about the amount of exercise the students at their school get per week. A statistical question for this study could be: “How many hours per week on average do students at Jefferson Middle School exercise?” To collect this information, students might design a survey question that anticipates variability by providing a variety of possible anticipated responses that have numerical answers, such as: 3 hours per week, 4 hours per week, and so on. Be sure that students ask questions that have specific numerical answers.	http://www.mathsisfun.com/geometry/polyhedron.html http://www.korthalsaltes.com/

Differentiation Opportunities

Grade 6 is the introduction to the formal study of statistics for students. Students need multiple opportunities to look at data to determine and word statistical questions. Data should be analyzed from many sources, such as organized lists, box-plots, bar graphs and stem-and-leaf plots. This will help students begin to understand that responses to a statistical question will vary, and that this variability is described in terms of spread and overall shape.

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