

Name: Nicki Reeder

Mathematics: The Language of STEM

“Measurement Mayhem”, Day 1

CONTENT AND TASK DECISIONS

Grade Level(s): 1st

Description of the Task: Students will explore ways to measure an object using nonstandard and standard tools. Students will understand that the length measurement of an object is the number of same length units it spans without overlapping or gaps.

Indiana Mathematics Content Standards: 1.M.1 (Measurement) Students will use nonstandard units to measure length or height.

Indiana Mathematics Process Standards: (PS.3) Students will construct viable arguments and critique the reasoning of others.

Mathematics Content Goals: Students will measure objects using nonstandard units of measurement.

Language Objectives: Students will verbally explain how they measured objects and came to their measurement in units.

Materials: paper clips, counting cubes and rods, snap cubes, unsharpened pencils, other units of nonstandard measurement

THE LESSON

Before:

- **Student Actions**

Students will listen to instructions on what they are to do, preparing to explore.

- **Teacher Actions**

Activate prior knowledge by asking, “How do we know how big something (an object) is? How would you tell someone else how “big” an object is?”

With an object in hand ask, “How big is this?”

Send students back to their tables groups where an object and a toolbox with nonstandard items will be. Charge students with the task of discovering and detailing how “big” the object is.

During:

- **Student Actions**

Students will work in groups of four, exploring various units for measuring.

- **Teacher Actions**

Walk around, noticing students thinking and interactions.

Ask questions to extend thinking and support, as well as take note of students that you would like to share and in what order their sharing should take place.

After:

- **Student Actions**

Students will return to the carpet for Math Congress. Students (chosen as you walked around

and noticed learning and discoveries) will explain to the class what they used to measure the object and how they determined “how big” it was.

Students not sharing will show respect by looking at the person talking and listen quietly as their peers verbalize their thinking and process.

- **Teacher Actions**

Encourage respect and listening as peers present their thinking and learning.

Ask questions to extend thinking and promote discussion.

Summarize thinking/main ideas/connections.

ASSESSMENT

Observe: As I circulate around the room, I will be watching and listening to the process(es) students go through to find the measurement of an object..

Ask: I will ask students to explain the process they used to measure a given object. For example, “Tell me what you did to find out how big/tall your object was? Explain your thinking.”