PRACTICE TASK: RUMPLESTILTSKIN IS MY NAME

Approximately 2 days

STANDARDS FOR MATHEMATICAL CONTENT

MCC.K.MD.1 Describe measureable attributes of objects, such as length or weight. Describe several measureable attributes of a single object.

MCC.K.MD.2 Directly compare two objects with a measureable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter*.

STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

BACKGROUND KNOWLEDGE

It is important to keep several big ideas in mind when circulating throughout the room having math conversations with your students:

- It is important that the students clearly identify the attribute being measured.
- It is important that the students realize that BOTH objects must share the attribute before a comparison can be made.
- The lining up of the endpoints for an accurate measurement is important.

ESSENTIAL QUESTIONS

- How can we measure something?
- Does it matter how we measure?
- What qualities of an object can be measured?
- How can I compare 2 objects by their size?
- What does it mean to measure something?
- How can I measure something?
- What ways can I measure this object?
- How can I record my information?

MATERIALS

- Index cards
- Unifix cubes
- Chrysanthemum by Kevin Henkes or a similar book
- Chart paper

GROUPING

Small group task

TASK DESCRIPTION, DEVELOPMENT, AND DISCUSSION

Part I
At the meeting area, have students brainstorm a list of the longest words they know. After brainstorming long words, choose 2-3 words to write on the board. Lead a discussion on the length of the words. Have volunteers help create a "word rod" to represent the length of each word. For example, use Unifix cubes and have one block represent each letter in the word. Tell students "We've talked about some really long words. I have a story about a little girl who has a really long name. Listen for the different names as I read the story." Read Chrysanthemum by Kevin Henkes, or a similar book. Select one student to pick two of the names in the story. Write these two names on individual index cards. Talk about which is longer and shorter and how you know. Then, model how to represent the name length with cubes. Compare the two names to determine which name is shorter and which name is longer. Repeat this process with several more pairs of names from the story…**but compare ONLY 2 names at a time**.

Explain to the students that they will write their name on an index card and then count out the number of Unifix cubes to build a matching "name rod." Explain that they will be deciding whose names are shorter, longer, or the same length as their own name and recording this information in their Math Journals.

Put students into groups of 4 to 6 for this task. Students will compare "name rods" within their small group to determine whose name was longer, shorter and/or the same name as their own name. **Again, compare ONLY 2 names at a time.**

Bring the class back together to discuss various comparisons. The teacher will lead students in discussion about name towers comparing only two students at a time.

Part II
Re-read the story Chrysanthemum by Kevin Henkes to the students. Select a name from the story and compare the length of the name to a student in the class to determine which name is longer and which name is shorter. Repeat this process with several students, but ONLY compare 2 names at a time.

After students create "name rods" to represent their name, have them gather in a circle. Choose one student to come to the center of the circle as the student leader. Have the student in the center ask their classmates, "Who has a name longer than mine?" Students, who think their name is longer, will stand so the student can compare with each individual student tower. This can be repeated with the same student, but this time using the shorter than comparison. Game continues with various students taking the lead role in comparisons. The teacher should allow student leader to ask questions and verbalize their thinking.

Allow students time to share their comparisons. Record these findings on a class chart for later reference. This gives an opportunity to communicate their discoveries in mathematical language. Discuss with the whole group what steps were needed to measure.

Teacher reflection questions:

- Can students tell why it is important to be able to compare the length of 2 objects?
- Are students able to compare objects by their size and explain why this would be important?
- Are students able to use mathematical language to describe the measurement of attributes of items?
- Can students decide or offer ideas for how to organize/record information?
- Are students able to explain how to record results? Do they understand why this is important to do?
- Can students explain why we need to have common endpoints when comparing the height or length of two objects?

FORMATIVE ASSESSMENT QUESTIONS

- What attribute did you measure?
- Why did you decide to measure it this way?
- Which object is heavier (longer, taller, holds more, etc.)? How do you know?
- If I hold the objects like this (without the endpoints lined up), does your math statement change?

DIFFERENTIATION

Extension

- Write additional words on index cards. If there are labels in the room identifying objects, students may want to copy those words. Example: door, bookshelf, calendar, clock, cubbies, etc. Have students make towers with the same number of cubes as letters in the word to go with the words. Have students use their Math Journals to write the longer words, shorter words, or words that are the same as their name.

Intervention

- Allow students to work through the stages at a speed that is appropriate for their performance level. Some students may need additional experiences acting out problems, using manipulatives, or drawing pictures.
- If necessary, provide these students with Unifix cubes that have letter stickers on them that spell their name or allow students to write the letters on the Unifix cubes using a dry erase marker or wax pencil. They will use this to make the connection between their name and the blank Unifix cubes. Look for possible misconceptions and note correct usage of vocabulary terms.