PRACTICE TASK: Mystery Number!

Approximately 1 day Adapted from Van de Walle activity 5.17

STANDARDS FOR MATHEMATICAL CONTENT

MCC1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

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

This task is centered on number relations and counting. Students need to expand their basic ideas of place value understanding which include, base-ten grouping, oral names and written names to relative magnitude. Students should refer one number to the size relationship of another number much larger, much smaller, close or about the same. Using number lines allows students to see how one number is related to another. (Van de Walle, p. 142)

ESSENTIAL QUESTIONS

- What are math tools and how can they help me make sense of numbers and counting?
- How do we know where a number lies on a number line?
- What strategies can be used to find a missing number?

MATERIALS

- 0-99 chart
- Student dry erase boards or paper and pencil

GROUPING

Large Group/Partner

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I
Draw a number line labeled with only a 0 and 100 on the board. The number line should be labeled 0 at one end and 100 at the other.
Gather students together to have a class discussion about the number line provided on the board. Draw an arrow to a spot on the number line and have students guess the mystery number. With each student's guess, have the students identify why they chose that particular number and what their strategy was. Write that number on the number line as it relates to the mystery number. As students guess the mystery number have a volunteer also identify that number on the 0-99 chart, so students can make the connection between the number line and 0-99 chart. Continue to record the student guess until the mystery number has been revealed. Be sure that students explain why they are choosing a particular number.

Part II
Have the students play the mystery number game with a partner using dry erase boards or paper and pencil. Let each student have a chance creating a mystery number, as well as guessing a mystery number.

FORMATIVE ASSESSMENT QUESTIONS

- What was the mystery number?
- How many guesses did you need to find the mystery number?
- What strategy did you use to correctly identify the mystery number?
- What was the hardest number to guess? Why?

DIFFERENTIATION

Extension
- Have the students extend their number lines to try 200, 300 or 400.

Intervention
- Have students complete the task in a small group to closely monitor the student's work. Students can also hold a 0-99 chart in their hand to help suggest what the mystery number could be.