PERFORMANCE TASK: TEN AND SOME MORE

Approximately one day (Adapted from Van de Walle's Ten and Some More activity 2.26)

STANDARDS FOR MATHEMATICAL CONTENT

MCCK.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

MCCK.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

MCCK.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality.

a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

MCCK.CC.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

MCCK.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

MCCK.CC.7 Compare two numbers between 1 and 10 presented as written numerals.

MCCK.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

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 focuses on the set of ten and leftovers. Students begin to understand that numbers 11 to 19 are composed of ten ones and one, two, three, four, five, six, seven, eight or nine ones. Kindergarteners need to understand the idea of a ten so they can develop the strategy of adding onto 10 to add within 20 in Grade 1. Manipulatives should be used to model and connect numbers between 11 and 19 to ten ones and some "left over". Such as, thirteen is 10 ones and 3 more. When children are working on counting objects, they should explore different relationships within the number that would make the number easier to count.

ESSENTIAL QUESTIONS

- Why do I need to be able to count objects?
- How do I use numbers every day?
- Why would I need to be able to read number words?

MATERIALS

- *Ten and Some More* Task sheet
- Bags
- Small items to place in each bag

GROUPING

Small Group, partner, individual

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Comments

Prepare and label bags (A-E) with 11-19 objects. Because this is a performance task and students will work independently when possible, have 3 bags of each letter (each bag lettered "A" should have the same type and amount of counters). You can put any small object in the bags (e.g. beans, counting cubes, small centimeter blocks, paper clips, crayons, pencils etc…) Because this is a performance task it could be extremely beneficial to document students responses to the formative assessment questions as the can be recognized as summative at this time.

Task Directions

Place each bag as a station or in at central location in classroom where students can exchange bags. When modeling to students what is expected be sure the model bag DOES NOT HAVE the same amount of items as one of the bags lettered A-E. (For example: the model number is 14 and none of the bags lettered A-E contain 14 items.

Bag	Estimate (make a guess)	How many groups of 10 can you make?	How many singles are left over?	Number of items in the bag	How far away was your estimation?	Closer to 10, 15, or 20? How far away?
Sample	16	1	4	14	2 away	**10 15 20** 1

As students work through this task they complete the follow list of tasks and record their finding on the task sheet:

1. Empty the contents of the bag into 1 pile. Estimate how many items are in the bag and record
2. How many groups of 10 can you make? Record the result?
3. How many items are left over after making a group of 10? Record the result.
4. Record the total number of items in the bag
5. Was your estimate close? How do you know? Record the result. (focus on counting sequence and not the difference as subtraction has not yet been introduced)
6. Is the number of items closer to 10, 15 or 20. How far away is the number from the nearest benchmark?

FORMATIVE ASSESSMENT QUESTIONS

- Did either of the bags have the same amount?
- How many groups of 10 are in the number _____?
- How many items were in the bag?
- How many would you need to remove to have 10?
- If you had 1 more in your bag, how many would you have? If you had 1 less?
- Is the number closer to 10 or 20? How do you know?
- What does the "*some more"* part mean?
- What would happen if I removed 10 items?
- Which bag contained the least amount of objects?
- Which bag had an amount closest to 10? Closest to 20?
- Which bag had the most? Least?

DIFFERENTIATION

Extension

- Give the students a larger quantity of objects in their bags with which to complete the assignment.
- Have the students dump the contents of two bags onto the table, then have them discuss how many were in each bag and compare the amounts. Have students estimate which bag has the

most and least before counting and determining how many more objects are needed for the contents to be equal.
- On the back of their recording sheet, have the students arrange the quantity they recorded in numeric order from least to greatest.

Intervention

- Give students a 10-frame and have them place objects within each square to count out 10 ones and then describe how many are left over.
- Provide a cookie sheet with scrambled teen numbers. Ask student to unscramble the numbers and place them in the correct order. Once this is completed, ask student to point to each card and say the number. Check student's number recognition by pointing to random cards out of sequence.

Ten and Some More

Name:_____

Bag	Estimate (make a guess)	How many groups of 10 can you make?	How many singles are left over?	Total in the bag	How far away was your estimation?	Closer to 10, 15, or 20? How far away?
A						10 15 20 _____
B						10 15 20 _____
C						10 15 20 _____
D						10 15 20 _____
E						10 15 20 _____