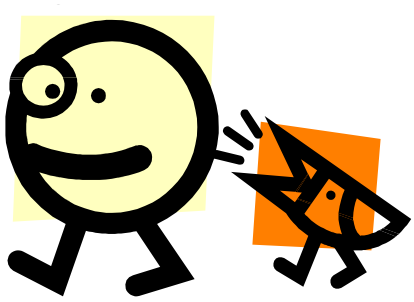


CONSTRUCTING TASK: More or Less

Approximately 1 day (Adapted from Van De Walle 2.1)

STANDARDS FOR MATHEMATICAL CONTENT

MCC.K.CC.1 Count to 100 by ones and by tens.

MCC.K.CC.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

MCC.K.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).

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

b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

c. Understand that each successive number name refers to a quantity that is one larger.

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

The concept of "*more*", "less" and the "*same*" are basic relationships contributing to the overall concept of number. Children begin to develop these ideas before they begin school. Children entering kindergarten can almost always choose the set that is *"more"* if presented with sets that are quite obviously different in number.

ESSENTIAL QUESTIONS

- What is the difference between "more" and "less"?
- What types of questions should I ask myself or my partner when playing a math game?

MATERIALS

Version 1 (Numbers 0-8)

- Recording Sheet and game board
- 20 red/yellow counters
- 6 sided dice (1-6)
- More/Less Spinner or Dice

Version 2 (Numbers 2-11)

- Recording Sheet and game board
- 20 red/yellow counters
- 6 sided dice (4-9) (use wooden block)
- More/Less Spinner or Dice

GROUPING

Whole group and partner task

TASK DESCRIPTION, DEVELOPMENT, AND DISCUSSION

Comment
There are 2 versions of this game. Each version can be played with more/less 1 OR more/less 2. The spinners provided can be used or dice/wooden blocks can be used to take place of the spinners. The following description is generic for both games.

Player 1 rolls the die (1-6) or (4-9) and spins the spinner (more/less or more/less 1&2). The player covers the number which represents the die and the spinner combined.

Part I (More/Less):
Example: if player 1 rolls a 5, then spins *less*, they can cover any number less than 5. (4,3,2,1, or 0) Watch the number the student covers as it relates to covering 3 in a row. Are they randomly picking a number to cover? Or are they choosing the number to cover based on their best chance to cover 3 in a row?

Part II (More/Less 1&2):
Example: if you roll a 5 and spin 2 more, you count forward 2 from 5 to end at seven.

As students play, they record the number they rolled on the recording sheet. Then they record what they spun (more/less, 1 more, 1 less, etc….). Students then record what they covered on the game board. They justify this in the *"because"* section by writing an equation or another justification for covering. (Example: A player could say she rolled one more than 8. That's 9, because one more is the next number, so in the space she wrote "it's next.") First player to get 3 counters in a row wins.

FORMATIVE ASSESSMENT QUESTIONS

- How do you know that you counted correctly?
- What does "more" mean? What does "less" mean?
- What numbers do you need to win?
- Why did you choose that number?
- If you spun "2 more" what number would you need to roll to win?

DIFFERENTIATION

Extension

- Have the students model their actions using a ten-frame or Rekenrek. This will also help students to record their actions.

Intervention

- Allow the students to model with a ten frame or through the use of a number line.

(0-8) More or Less -3 in a Row

Materials:	**Rules:** Player 1 rolls the dice and spins the spinner. Player 1 covers a number space that relates to the spinner. (Example: if player 1 rolls a 5 and spins *"less",* they can cover any number less than 5. (4, 3, 2, 1, 0). If player 1 spins "*2 less* " they would cover 3. Record what you did on the *More or Less* recording sheet. First player to get 3 counters in a row wins.
spinner dice counters	

7	8	6	0
4	5	4	2
3	3	6	5
1	0	2	4
5	7	1	8

(2-11) More or Less -3 in a Row

Materials: spinner, dice, counters	Rules: Player 1 rolls the dice and spins the spinner. Player 1 covers a number space that relates to the spinner. (Example: if player 1 rolls a 5 and spins *"less",* they can cover any number less than 5. (4, 3, 2, 1, 0). If player 1 spins "*2 less* " they would cover 3. First player to get 3 counters in a row wins.

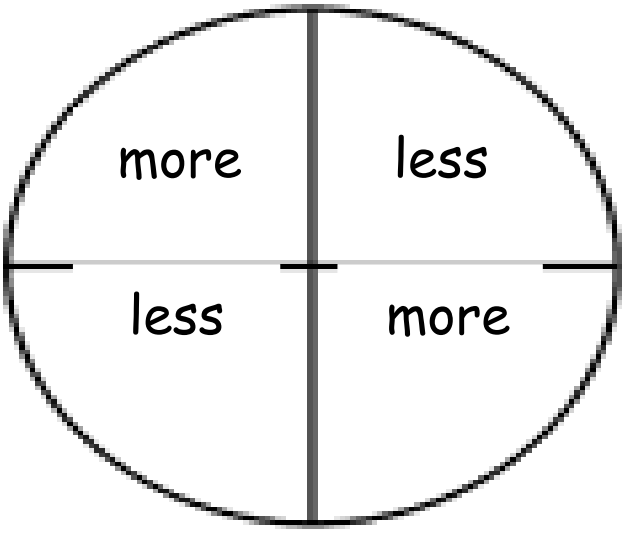
9	10	5	6
6	8	7	9
11	6	5	10
10	7	6	8
9	10	9	6

More or Less

	I rolled this number. . .	more or less	I covered. . .	Because. . .
1				
2				
3				
4				
5				

More or Less

	I rolled this number. . .	more or less	I covered. . .	Because. . .
6				
7				
8				
9				
10				



Place the end of a paper clip at the center of the spinner and hold in place with a pencil. Flick the paperclip with your finger.