CONSTRUCTING TASK: Finding Neighbors

Approximately 1 day (Adapted from VDW Activity 5.11)

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.

MCC1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

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 hundreds chart is an important tool that can help in the development of place value concepts. Here students are exploring patterns in the hundreds chart and are developing the structure of the written numbers in our place-value system when they fill in the missing numbers on the chart. (Van De Walle, p. 137)

ESSENTIAL QUESTIONS

- How can we find the missing numbers on the 0-99 chart?
- What patterns can be found on the 0-99 chart?
- How can patterns help us understand number?

MATERIALS

- 0-99 chart
- Base ten blocks
- Finding neighbors recording sheet

GROUPING

Large Group/partners

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Before gathering the students together, create a 0-99 chart with missing numerals similar to the student's recording sheet. During the whole group session, review how to create numbers using base ten blocks and how to use the spinners. A spinner board can be made with a paper clip and a pencil. Then, have students work in pairs to complete the Finding Neighbors task.

To play: Each pair of students should have two *Finding Neighbors Recording Sheets* and one spinner board. While holding the paper clip in place with the pencil, player 1 spins the spinner on each spin board to determine the amount of tens and ones required to build the number. The first number spun represents the amount of tens in the number, while the second number spun represents the amount of ones in the number. The student then builds the number using base ten blocks and locates it on the recording sheet. Player 1 then records the numbers that are neighbors to the number created. (Example: if the student spun 3 tens and 4 ones they would build 34 with the base-ten blocks and identify/ record the numeral on the 0-99 chart. Player one must then fill the squares for the numbers that are 1 more, 1 less, 10 more and 10 less. Subsequently, the numbers 33, 35, 44 and 24 must be filled in.)

If a number has already been filled in, the square is left alone.
After each player has had ten plays, the player with the greatest amount of numbers on their chart wins.

FORMATIVE ASSESSMENT QUESTIONS

- What numerals did you spin to build your number?
- How did you represent your number with the base ten blocks?
- What did you notice about the neighbor numbers when you filled them in?
- Did you notice any patterns in the 0-99 chart? Which ones?
- (As the board is filled) What numerals do you need to spin to help complete your chart?

DIFFERENTIATION

Extension

- Have the students complete the 0-99 chart by using the strategies and patterns they have discovered while playing the game.

Intervention

- Allow the students to complete the activity in a small group.
- Allow students access to a completed 0-99 chart to use as a referen their task.

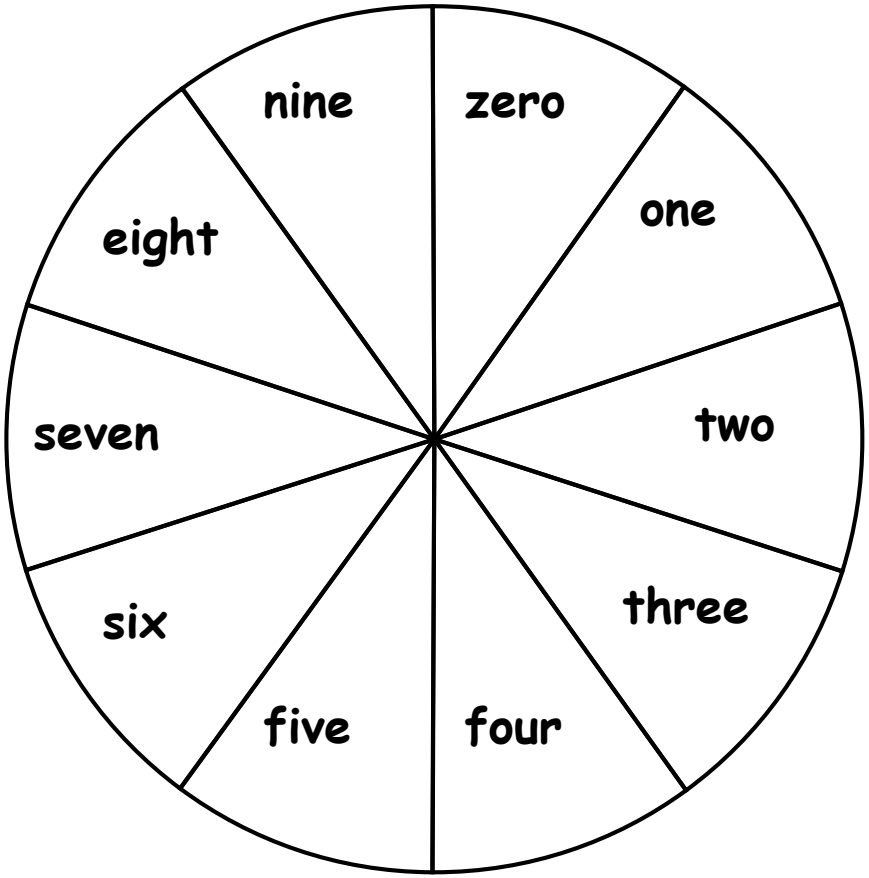
Finding Neighbors

0									
							17		
			33						
					55				
	61							68	
								98	

0-9 Spinners

Provide a paper clip or transparent spinner to use with the templates below. Place a pencil point inside one end of the paper clip and hold with one hand. Use the other hand to flick the paperclip and it will spin. Students will need to have practice with this prior to this activity.

Number of Tens



Number of Ones