CONSTRUCTING TASK: Ten and Some More
Approximately 1 day (Adapted from Stuart J. Murphy's 1, 2, 3 Sassafras activity)

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

Two digit numbers must also be connected with the grouping-by-tens concept. This counting method provides a connection between the numeral and the set. Therefore students begin to understand that 19 is one ten and nine. (Van de Walle, p. 126)

ESSENTIAL QUESTIONS

- What do the numerals represent in a two or three digit number?
- How can patterns help us understand number?
- What are math tools and how can they help me make sense of numbers and counting?

MATERIALS

- *1, 2, 3 Sassafras,* by Stuart J. Murphy, or similar text
- 0-99 Chart
- Base Ten Blocks
- Number Cards(1 set per person)
- Recording Sheet

GROUPING

Large Group/Partner
TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I
Gather the students together to read *1, 2, 3 Sassafras,* by Stuart J. Murphy or similar text. Have a class discussion about the different ways the family could be arranged in the picture. Discuss the different ways numbers could be arranged. For example: 19 could be rearranged 91. Discuss how different these numbers are when built with base ten blocks. Reinforce that the positions of digits in numbers determine what they represent (which size group they count.) This is a major principle of place-value numeration (Van de Walle, page 122).

Part II
In partners, students should take turns picking up two numbers from their pile. The players then build the largest number possible. The student records both numbers made on the recording sheet. The students then build their number using base ten blocks. The player with the largest number takes all four cards. Play continues until all cards have been played. The student with the largest amount of cards wins. Students then must place the numbers created in order from least to greatest on their recording sheet.

Part III
Students identify the largest number made during the game and must build that number using a various combinations of base ten blocks. (Example: 91 can be decomposed as 9 tens and 1 one, 8 tens and 11 ones, 7 tens and 21 ones, etc.)

<u>**FORMATIVE ASSESSMENT QUESTIONS**</u>

- What strategy did you use to arrange your numbers?
- What was the highest number made?
- What was the lowest number made?
- What are the differences between the numbers you made?
- When building your number with base ten blocks, did you notice any patterns?

<u>**DIFFERENTIATION**</u>

Extension
- Have the students use three cards instead of two, when building three digit numbers.
- Have students record all ten numbers from greatest to smallest.

Intervention
- Allow students to work with a student copy of the 0-99 chart, having the students circle the numbers being made.
- Reduce the amount of cards to 0-5.

Number Cards

0	1
2	3
4	5
6	7
8	9

Ten and Some More

	Player 1 Name:_____	Player 2 Name :_____
	Greatest Number	**Greater Number**
1st		
2nd		
3rd		
4th		
5th		

Choose the winning players numbers and place them in order from least to greatest.

_____   _____   _____   _____   _____

How many ways could you build your largest number using base ten blocks?