Counting and Writing Beyond 100

Strand: Number and Number Sense

Topic: Counting and writing numerals from 0 to 110

Primary SOL: 1.1   The student will

a) count forward orally to 110, starting at any number between 1-110; and

b) write the numerals 0 to 110 in sequence and out of sequence.

Related SOL: 1.1c, 1.1d, 1.5a

Materials

- Counting story book
- Objects for counting
- Brown paper lunch bags
- Five frames (see attached)
- 10 frames (see attached)
- Rubber bands
- Sorting cups/bowls
- Resealable bags (Sandwich size)
- 110 small objects or manipulatives in a jar (e.g., rocks for a classroom rock jar)
- Classroom 110 number chart (blank, created on paper)
- Student 110 number chart (blank, attached)
- Projector

Vocabulary

count, counting on, number chart, represent, total

Student/Teacher Actions: What should students be doing? What should teachers be doing?

1. Read a counting story book, count together, and discuss any patterns students may see or could use.

2. *To review the rote counting sequence, ask: "Who can count to 100? Who can count to 110?"* Challenge students to count together to 110. As you get to 100, pause, and for each number between 100 and 110, ask: *"What comes next?" "How do you know?"* When finished, ask, *"What patterns did you notice in the numbers between 100 and 110?"*

3. Give each student a brown bag filled with up to 110 objects. Instruct students that they are going to count the objects in the bag on their own using any method they choose. Offer students five frames (see attached), 10 frames (see attached), rubber bands, sorting cups/bowls, and plastic sandwich bags to use, and allow students to spread out throughout the room. This gives students a chance to explore and count objects on their own and the teacher time to observe the way the students would approach the problem and the strategies students are currently using. Look for students that are counting each item. Stop and ask the student, *"Is there another way we could group the objects to*

make counting easier?" Look for students who are counting by groups of two and ask these students, *"Can we make larger groups to count by? What other ways can we group our objects?"* Allow about five to seven minutes, and give students an index card to record the answers they came up with and write their name. During this time, note any students struggling or any students that are unable to come up with a final answer.

4. Ask students to clean up their materials and return back to their seats. Ask students to share what they noticed about counting the items in the bags. *"What did you find challenging? What did you like or dislike? What strategies or tools did you use? How did those strategies or tools help you?"* Be sure that your discussion recognizes the idea that it is easy to get off track and lose count when you are counting large groups of objects.

5. Show the class a jar filled with 110 manipulatives. Say to the class, *"We need to know how many items are in this jar, so we can label it. We are going to count these items together and write the corresponding numbers on this number chart along the way."* Pass out a blank 110 chart to each student and ask the students to get out a pencil.

6. Distribute the objects from the jar so that each student gets a small amount of items. Ask students to place their objects at the top of their desks until it is that student's turn. Project a blank 110 chart, so students can place one item in a square as each one is counted, to help organize the items as they are being counted. Students should place the items in the chart by filling the first row left to right before moving to the second row. Display a blank 110 chart on a piece of chart paper on which the corresponding numerals will be written. It will be important throughout the activity for the teacher to frequently ask, *"How do you write 24?"* and carefully model the number formation for students to copy.

7. Ask the first student to place his or her objects on the projected blank 110-chart and count them as they are placed. Have students count together as the teacher writes those numbers on the large 110 chart. Each time an item is placed, use the phrase *"and one more is _____"* (inviting children to say the number) before you write the next number. Have students copy the first set of numbers on their 110 charts. This is a great time to walk around and observe each student's pencil grip and numeral formation to determine who will need extra practice.

8. Ask the second student to place his or her objects on the blank 110 chart beginning in the empty space next to the objects already there. Ask students, *"How are we going to know how many objects student No. 1 and student No. 2 have?"* Have the student start at the first item and invite the class to count aloud as the student points to each item. Point to the numbers already written on the chart and write the new numerals in the number chart until you get to the numeral that represents the total number of objects so far. Ask, *"What does this numeral that I have just written represent?"* (The total number of objects so far.) Have students write the new numerals on their number charts. Repeat this process a couple of times, until a student suggests counting on from the previous total or guide students to consider using counting on as a time-saving measure. Have students look at their 110 charts and name the last number counted to, then focus on *"one more is _____,"* until each new object is accounted for. Repeat this process for the remaining students until you have reached 110.

9. Ask students to discuss with a partner: *"How did we you use the blank number chart to help count this large amount of items? Did you notice any patterns on the 110 number chart?"* Ask a few students to share what their partner said. Be sure the students discuss the number of numerals (or objects) in each row, the patterns in the columns, and the patterns in the rows.

Assessment

- **Questions**
  - o Start at the number 25 and count to 50.
  - o Start at the number 14 and count to 110.
  - o What number comes after 79? How do you know?
  - o What do you notice about the numbers 17 and 71?
    - ▪ How are they alike?
    - ▪ How are they different?
  - o What do you notice about the numbers after 100?
    - ▪ How is counting 100-110 alike or different from counting from 1 to 10?

- **Journal/writing prompts**
  - o In your journal, draw a picture to represent the number of items you have and write the corresponding number.
  - o Orally give students numbers to write (e.g., 27, 53, 89, 104).
  - o Have students copy different number sequences from the board and fill in the missing number (e.g., 12, 13, ___, 15, 16)

- **Other Assessments**
  - o Individual assessment – 110 Chart – Missing Number (attached). Can be used as an exit ticket.
  - o For whole-group formative assessment, project or display a 110 chart and give each student a dry-erase marker and board. Cover up one number and ask students to write down the number that is missing. Once students have written a number, instruct students to flip over their dry-erase board. Ask the students to show their boards to quickly determine who is correct and what misconceptions about numbers may exist. Ask students how they decided on the missing number.
  - o Give students a blank 100 chart (attached) and ask students to fill in one row and one column.

Extensions and Connections (for all students)

- Involve students in whole-class counting exercises, where each student says a number in turn. Choose a different starting number each time the activity is done to provide rote counting practice from various starting numbers.
- Use the bags prepared for step 3 in the lesson for partner practice. One student can count the objects by placing them one by one in a blank number chart, while the other writes the numbers in a second number chart.

Strategies for Differentiation

- Limit/increase the number of objects being counted, as needed.
- Provide a completed 110 chart for students that have difficulty writing numbers.

Note: The following pages are intended for classroom use for students as a visual aid to learning.

Virginia Department of Education ©2018

110 Chart

110 Chart–Missing Numbers

1	2	3	4	5	6	7	8	9	
11	12	13	14	15	16	17		19	20
21	22	23	24		26	27	28	29	30
31	32		34	35	36	37	38	39	40
41	42	43		45	46	47	48	49	50
51	52	53	54	55	56		58	59	60
	62	63	64	65	66	67	68	69	70
71	72	73	74	75		77	78	79	80
81	82		84	85	86	87	88	89	90
91	92	93	94	95	96	97	98		100
	102	103	104	105	106	107	108	109	110

110 Chart - Missing Numbers

1	2	3	4	5	6	7	8	9	
11	12	13	14	15	16	17	18	19	
21	22	23	24	25	26	27	28	29	
31	32	33	34	35	36	37	38	39	
41	42	43	44	45	46	47	48	49	
51	52	53	54	55	56	57	58	59	
61	62	63	64	65	66	67	68	69	
71	72	73	74	75	76	77	78	79	
81	82	83	84	85	86	87	88	89	
91	92	93	94	95	96	97	98	99	
101	102	103	104	105	106	107	108	109	

110 Chart–Missing Numbers

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110

Five Frame

10 Frame