

Grouping and Counting—Part 2

Strand:	Number and Number Sense
Topic:	Counting and skip counting
Primary SOL:	1.1 The student will d) count forward orally by ones, twos, fives and tens to determine the total number of objects up to 110.
Related SOL:	1.1a, 1.1b, 1.5a

Materials

- 4–6 bags, each containing 63 small objects
- Multiple collections of manipulatives (e.g., shells, beans, buttons, jewels, beads, marbles, small erasers, plastic linking cubes) small enough to fit on the counting mats
- Teacher Center Recording Sheet (attached)
- Grouping Collections task cards for student center (attached)
- Grouping Collections Recording Sheet (attached)
- Counting mats, with and without numbers (attached)

Vocabulary

count, fives, forward, group, skip count, tens, total, twos

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

Note: You may want to teach this lesson over two days, so you have time to meet with each student in a small group to assess their understanding. Divide your class into four groups so that you can meet with two groups each day. While you are working with each small group, other students will be working on the task cards. Before beginning this activity, prepare the bags to be used at the teacher center. You will need 4–6 bags for your teacher center depending on how many students you have in your groups. Each bag should contain 63 objects.

1. Remind students about what they learned in the previous lesson. Ask, “How did we use skip counting to help us count a large collection of objects?” Engage students to skip count along with the teacher by twos, fives, and tens.
2. Show students the Group Collections task cards and model how to use them at the student center. Task cards should be placed in a shared basket, and each student should have their own Group Collections Recording Sheet. Collections of manipulatives should be available for student use. Model how to select one card from the basket and choose a set of manipulatives. Model counting out the number of objects by ones, and then grouping and counting according to the directions on the task card. Show how to use the attached counting mats, if needed. Students can place their objects into groups onto the counting mat to help organize their material. The counting mats with the numbers can provide support for students who are not totally comfortable with the rote counting sequence. Finally, model how to fill in the recording sheet. Show how to take the task card back to the basket and choose a different one that has not already been

completed. Explain that students will complete as many task cards as they can during your rotation time.

3. Inform students that a small group will work at the teacher's table. All students will eventually have a chance to work at the teacher's table. Plan to work with two groups on the first day and two groups on the second day.
4. Assign students not working at the teacher's table to work on the task cards and record their answers on the recording sheet. The teacher may choose to have several sets of the task cards placed around the room for groups of students to share.
5. At the teacher's table, give each student a brown bag filled with 63 manipulatives. Ask the students to empty the bag on the table and assign some students to group and count their objects by twos, some to group and count by fives, and some to group and count by tens. Allow students to use the counting mats to help organize their groups. Instruct students to count their groups and record their answers on the Teacher Center Recording Sheet. This is an opportunity for formative assessment. Take note of the students who are having trouble keeping track of counting each group. Note who has trouble with the rote counting sequence. Note who has trouble with counting the leftovers. If time allows, let students group and count a different way.
6. Engage the students at the teacher's group in a small-group discussion about how many were counted, the groups that were counted by, and the number of groups that were made. Be sure to discuss that even though different groupings were used, the total number of objects stayed the same. Especially discuss the leftovers and how they were counted.
7. Inform students that if they did not get a chance to work with the teacher today, they will work with the teacher the next day. Bring students back together for a class discussion. Ask: *"When you were skip counting, did all of your groups come out without any leftovers? What should we do with the leftovers when we are skip counting by twos, fives, or tens?"*

Assessment

- **Questions**
 - Why do I have more groups when I count by twos than when I count by tens?
 - What do you notice about the numbers when we count by ...
 - Twos? (It is every other number)
 - Fives? (Ends in a zero or a 5)
 - Tens (Ends in a zero)"
- **Journal/writing prompts**
 - Given a collection of 50 objects, how many groups of twos, fives, and tens would I have? Show your work.
 - How are counting by fives and tens alike and different. Is it faster to count by fives or tens? Why?"
- **Other Assessments**

- Give students a collection of 110 objects and ask them to count them in a way that would be the fastest.
- Using a blank 110 chart, ask students to fill in only the spots for the twos. Have students erase and repeat for fives and tens.

Extensions and Connections (for all students)

- Show students how to skip count on a calculator. To skip count by twos, clear the calculator and then enter $+ 2 =$ and continue pressing $=$. Students can color the numbers shown on the calculator display on a 110 chart.
- Place the count-by-two numbers on cards. Mix up the cards and have students put them in order.
- Play “Catch the Mistake.” Count out a collection of objects by twos, fives, or tens but make a mistake. Students raise their hands as soon as they hear your mistake and explain the mistake that was made. Include mistakes such as counting by twos but only touching or moving one object at a time.
- Involve students in whole-class counting exercises, where each student says a number in turn. Begin with zero and ask students to count by twos, fives, or tens.

Strategies for Differentiation

- Use the counting mats with the numbers to provide support for students who are not totally comfortable with the rote counting sequence.
- Level task cards based on students’ instructional levels.
- Provide students with sentence starters to use during small-group discussions with the teacher (e.g., “I noticed ...,” “We counted this way ...,” “My strategy was similar to yours because ...”).

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

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Grouping Collections Task Cards

<p>1.)</p> <p>Count 50 Objects by Tens</p>	<p>2.)</p> <p>Count 36 Objects by Fives</p>
<p>3.)</p> <p>Count 42 Objects by Twos</p>	<p>4.)</p> <p>Count 30 Objects by Tens</p>

<p>5.)</p> <p>Count 50 Objects by Twos</p>	<p>6.)</p> <p>Count 25 Objects by Fives</p>
<p>7.)</p> <p>Count 100 Objects by Tens</p>	<p>8.)</p> <p>Count 74 Objects by Fives</p>

<p>9.)</p> <p>Count 24 Objects by Twos</p>	<p>10.)</p> <p>Count 60 Objects by Fives</p>
<p>11.)</p> <p>Count 16 Objects by Twos</p>	<p>12.)</p> <p>Count 40 Objects by Tens</p>

<p>13.)</p> <p>Count 25 Objects by Fives</p>	<p>14.)</p> <p>Count 78 Objects by Twos</p>
<p>15.)</p> <p>Count 60 Objects by Tens</p>	<p>16.)</p> <p>Count 50 Objects by Fives</p>

Name: _____

Grouping Collections Recording Sheet

<p>1.)</p> <p>I counted _____ groups of 10 in 50.</p> <p>Were there any leftovers? _____</p>	<p>2.)</p> <p>I counted _____ groups of 5 in 36.</p> <p>Were there any leftovers? _____</p>
<p>3.)</p> <p>I counted _____ groups of 2 in 42.</p> <p>Were there any leftovers? _____</p>	<p>4.)</p> <p>I counted _____ groups of 10 in 30.</p> <p>Were there any leftovers? _____</p>
<p>5.)</p> <p>I counted _____ groups of 2 in 50.</p> <p>Were there any leftovers? _____</p>	<p>6.)</p> <p>I counted _____ groups of 5 in 25.</p> <p>Were there any leftovers? _____</p>
<p>7.)</p> <p>I counted _____ groups of 10 in 100.</p> <p>Were there any leftovers? _____</p>	<p>8.)</p> <p>I counted _____ groups of 5 in 74.</p> <p>Were there any leftovers? _____</p>

<p>9.)</p> <p>I counted _____ groups of 2 in 24.</p> <p>Were there any leftovers? _____</p>	<p>10.)</p> <p>I counted _____ groups of 5 in 60.</p> <p>Were there any leftovers? _____</p>
<p>11.)</p> <p>I counted _____ groups of 2 in 16.</p> <p>Were there any leftovers? _____</p>	<p>12.)</p> <p>I counted _____ groups of 10 in 40.</p> <p>Were there any leftovers? _____</p>
<p>13.)</p> <p>I counted _____ groups of 5 in 25.</p> <p>Were there any leftovers? _____</p>	<p>14.)</p> <p>I counted _____ groups of 2 in 78.</p> <p>Were there any leftovers? _____</p>
<p>15.)</p> <p>I counted _____ groups of 10 in 60.</p> <p>Were there any leftovers? _____</p>	<p>16.)</p> <p>I counted _____ groups of 5 in 50.</p> <p>Were there any leftovers? _____</p>

Count by Ones Counting Mat

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
51	52	53	54	55	56	57	58	59	60
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
111	112	113	114	115	116	117	118	119	120

Count by Twos Counting Mat

Count by Twos Counting Mat

2	4	6	8	10	12	14	16	18	20
22	24	26	28	30	32	34	36	38	40
42	44	46	48	50	52	54	56	58	60
62	64	66	68	70	72	74	76	78	80
82	84	86	88	90	92	94	96	98	100
102	104	106	108	110	112	114	116	118	120

Count by Fives Counting Mat

Count by Fives Counting Mat

5	10	15	20	25	30
35	40	45	50	55	60
65	70	75	80	85	90
95	100	105	110	115	120

Count by Tens Counting Mat

Count by Tens Counting Mat

10	20
30	40
50	60
70	80
90	100
110	120

Name: _____

Teacher Center Recording Sheet

How many did you count?	How many groups did you have?
I counted by twos and got _____.	I had _____ groups of 2.
I counted by fives and got _____.	I had _____ groups of 5.
I counted by tens and got _____.	I had _____ groups of 10.

Did everyone have the same number of objects? _____

Did your grouping change the total number of objects? _____

Explain your answer
