

3, 2, 1, Blast Off!

Strand: Number and Number Sense

Topic: Counting backward

Primary SOL: 1.1 The student will
c) count backward orally by ones when given any number between 1 and 30.

Related SOL: 1.1a, 1.1b

Materials

- Chart paper
- Projector
- 10 Frame (attached)
- Counters
- Number Cards (10-30) – one set per pair of students (attached)
- 110 Chart – one per pair of students (attached)
- 3, 2, 1, Blast Off! worksheet (attached)

Vocabulary

backward, count, one less, take away

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

Note: This lesson may be spread out over several days to help students internalize the backward counting sequence by first focusing on counting back from 10 and then moving to 20 before finally moving to 30.

1. Get students ready to blast off! Tell students, *“I am in charge of blasting rockets into outer space, however I was told I can’t count forward like I normally do because the rocket will take off when I say one. That will not be enough time to have the rockets ready.”* Ask students, *“Who knows how I can count?”* Students should say backwards.
2. Ask students, *“What number should I start with?”* Guide students to start with the number ten. On a piece of chart paper, write down the number 10. Project a blank ten-frame for students to see. Place ten counters on the ten-frame, one counter in each spot. Inform students that as one counter is taken away, we will record how many counters are left on the chart paper.
3. Say to students, *“If I start with ten counters and I take one counter away, how many counters will I have?”* Once students have justified the answer, say, *“One less than 10 is 9.”* Record the number 9 on the chart paper. Inform students that as one counter is taken away the students will respond with *“one less is ____.”* Write this sentence starter at the top of the chart paper for students to use.
4. Remove one counter and ask the students how many are left? Start the students by saying, *“one less is ____.”* Write this number on the chart paper. Continue until you get to one. Get the students excited because they have made it to one and the rocket will

launch at one. Tell students, *“After we say one, we can say blast off!”* (If the teacher has a horn or bell it could be rung during the blast off.)

5. Have students focus on the chart with the numbers written in descending order. Ask students to use the chart to count backwards from ten. The teacher should point to the numbers as they count. Have fun blasting off! After the launch, refer back to the ten-frame on the projector. Ask students, *“What happens when I take one away?”* Explain to students that when we count backwards, we are counting until we have nothing left. Refer back to the chart paper and have students count backwards from ten again and end it with *“and then we have none.”* (e.g. 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, -students may want to blast off here - *and then we have none.*) Ask students what number is used to represent none. Add “0” to the chart.
6. Pose the following scenario: *“What if more time was needed to make the final preparations for the rockets. What number could we start with that would give them a little more time?”* Guide students toward starting at 20. Write this number above the 10-1 countdown on the chart paper, so that the number 20 is lined up with number 10. (Leave enough space for 30-21.) Provide two filled ten-frames and repeat the process of taking one away, saying *“one less is ___”*, and recording each number. Allow students to use a 110 number chart if needed. Once you get to 11, continue taking an object away, but simply point to the numbers 10, 9, 8, etc. Ask the students, *“What do you notice about the numbers as we count backwards? Do you notice any patterns?”* As a class, chorally count backwards from 20.
7. Repeat this process starting from 30, using three filled ten frames, and write the backwards counting numbers 30 to 21 on the chart paper. Practice counting backwards together from 30 as a class. Ask students, *“When you were counting did you notice a pattern?”* Guide students to notice that counting backwards from 30 isn’t much different from counting backwards from 10. Discuss the pattern of the numbers 9-0 in each set of ten and how they can use what they know about counting backwards from 10 to help them count backwards from 30.
8. Distribute a bag of number cards 10 - 30 and 110 Charts, one for each pair. Model the following activity. Students should work with a partner and take turns drawing a number. This student will count backwards using the number drawn as their starting number. Their partner will find this number on the 110 Chart and will follow along backwards with their finger, checking their partner’s work and helping them get to zero. Allow students to use ten-frames as needed. Once the student gets to zero, they will switch and the other student will select a new number from the bag, while the partner follows along using the 110 Chart. As students work, make the following observations: *Who has trouble with the backward counting sequence? Who can count backward with ease? Do any students need to work just on counting back within 10 before moving to counting back within 20 or 30? Do any students have trouble moving backward on the 110-chart? Which students would benefit from using the ten frames? If students are using the ten-frames for support, can they model the starting number correctly? How are they determining the next number in the backward counting sequence – are they*

subitizing using the ten-frames, do they just know one less, or must they count to see how many counters are there?

9. Have students work independently on the 3, 2, 1 Blast Off! worksheet using manipulatives as needed (see attached).

Assessment

- **Questions**

- What was the hardest part about counting backward from 30? What helped you? What was the easiest part? Why?
- What is one less than 24? How do you know?
- How can counting backward from 10 to 1 help you with counting backward starting at 30?

- **Journal/writing prompts**

- In your journal, write the number 28 and then write the numbers counting backwards until you get to 8.
- Write three different counting backward sequences on the board and have students fill in the next three numbers. E.g. 18, __, __, __ ; 30, __, __, __ ; 25, __, __, __
- When counting backward, should you think about one more or one less? Why?
- Johnny wants to count backward from 25. What are some numbers that Johnny will say as he counts backwards? What is a number Johnny will not say? Why?

- **Other Assessments**

- Place number cards in backward order from 30-0.
- Give each student a number. Ask the students to line up in backwards order using number cards or student numbers if the teacher is already using a numbering system.
- Go around the class, giving each student a starting number. In turn, ask each student to tell you the next two numbers if they were counting backward starting at that number. (If I give you 12, you say 11, 10.)

Extensions and Connections (for all students)

- Allow students to work on a story problem that allows the student to count backward to subtract. “Sally has 10 books from the library. She took three books back. Now how many books does Sally have?”
- Play ‘Countdown’. Have students sit in a circle. Choose one student to start. Give that student a starting number. Students go around the circle each saying one number in the counting backward sequence. The student who says zero scoots to the middle of the circle and is out of the game. Give the next student a new starting number and continue as long as time allows or until only one student remains.

Mathematics Instructional Plan – Grade 1

- Count Back Hop - Create a path in the hallway or around the room using large cards with the numbers 0 – 30. Students start at 30 and hop their way to 0 saying the numbers as they hop.

Strategies for Differentiation

- Include ten frames on the chart paper when counting back to provide a visual for students to see the sequence of counting backward
- Allow students to use a number path, 110 chart, or ten-frames to count backwards during partner and independent activities

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

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Ten-Frames

110 Chart

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

Number Cards 10-30

10	11
12	13
14	15

16	17
18	19
20	21

22

23

24

25

26

27

28	29
30	

3, 2, 1 Blast Off! Worksheet

Count backward from the first number and record.

25							
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30							
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18							
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11							
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21							
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