

General Information

Lesson Parts & Duration

Total Duration: 1 hour

- Missing Number: Before, Between, and After

Subject(s)

- Missing number, Number Order, Before, Between, After, Counting, Reading and Writing Numbers, Using a Number Grid (1.NBT.1)

Objective

- Students will use a number grid to fill in missing numbers in a grid.
- Students will use a number line to fill in missing numbers from least to greatest.
- Students will practice using the words before, between and after when putting numbers in order.
- Students will read and write numbers ranging from 1-120.

Materials

- **Required:** printable “Constellation Star Strips” (pages 10-11) (1 copy for the class) cut out strips and tape them on either desks or around the room
- blank paper
- pencil & crayons/colored pencils
- document camera or whiteboard
- **Optional:** printable “Number Grid” (page 6)
- **Optional:** printable “Number Line” (page 7) –or– write number line on the board
- **Optional:** printable “Missing Numbers Grid” (page 8)
- **Optional:** printable “Missing Number Puzzles” (page 9)
- **Optional:** printable “Break Up Your Day” brain/movement break ideas (page 12)

Throughout this lesson, you will find:

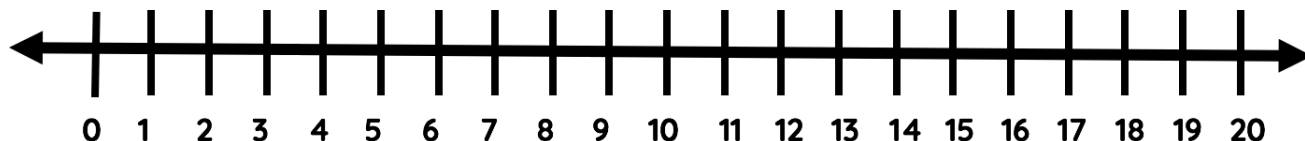
- ☀ **Scripted Text** indicates things that need to be said directly. Bullets starting with a “T” followed by *italicized* type indicate scripted text
- ☀ **Clarifiers** within scripted text are in orange
- ☀ **Teacher Directions** indicate things you should be doing
- ☀ **Side notes** provide helpful hints, ELL strategies, differentiation and information
- ☀ **Break Up Your Day** (Brain/Movement Breaks) are in green boxes (at the end)

Remember!

Quality over quantity. All components do not have to be accomplished; lessons may be ended at any time and resumed later.

Instructional Plan: 60 minutes

Have students seated on the floor or at their desks to see the document camera. Show them a number line from 1-20.



Introduction

- T** Today we are going to use the words before, after, and between to find numbers on a number line and a number grid.
- T** When I say before, it means I'm looking for the number that is smaller or one less than my number.
- T** For example, what is before 15? **Point to 15 on the number line.**
- T** One less than 15 is 14. Or I can move back one spot on my number line. **Point to 14 on the number line.**
- T** 14 is before 15.
- T** What is after 15? **Point to 15 on the number line.**
- T** After means the number greater than 15 or one more than 15. **Point to 16.**
- T** 16 is after 15.
- T** Which number is between 11 and 13?
- T** Between means in the middle. **Point to 11 and 13.**
- T** Like a window, which number is in the middle of the two numbers? **Point to 12.**
- T** 12 is in between 11 and 13.
- T** Let's have some friends show me how they can use the words before, after and in between.
- T** What is after 8? **Point to 8. Call on a student to come show the answer. Answer: 9.**
- T** Please say 9 is after 8. **Continue to have students show the class more examples using the number line to show and say before, after and in between.**

ELL:

Have a visual for students to show the meaning of: before, after, and in between. For example, pair the word with an arrow.

Whole Group

- T** Today we are going to look at a number grid. **Show number grid on the document camera.**
- T** I want you to look at the number grid for a couple minutes and tell me any patterns you might see on the grid. **Wait for students to think.**
- T** What do you notice about the grid or the numbers. **Call on students to share what they noticed.**

As students make suggestions, discuss and explain what they see. If they do not mention some of the answers, guide them to see some of the patterns in the grid.

Possible Answers:

- There are ten boxes in each row.
- The numbers go in order from left to right.
- All the numbers in the columns going down end in the same number.
- All the numbers in the last column have a zero.
- Smaller numbers are on the top of the grid.
- Larger numbers are on the bottom of the grid.

Number Grid

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

- When you look at a column, the first number in each box goes up by one number.
- If you go forward on the number grid, the numbers get bigger.
- If you go backwards on the number grid, the numbers get smaller.

T A number grid helps us count, it helps us find numbers, and it helps us see patterns in numbers.

T Today we are going to use the number grid as a tool to put numbers in order.

T If I know the patterns on a number grid, I can find a number on the number grid quickly.

T Let me show you how I can use the number grid to find a number.

T Let's say I was looking for the number 58. I know that I can count by tens down the last column to find the 50s. 10, 20, 30, 40, 50. **Point to the last column boxes as you count out-loud.**

T Then I can count on from 50 to find 58.

T Where should I go from 50?

T Should I go down? **Point to the box below 50. Wait for students to answer. Answer: No**

T Should I go up? **Point to the box above 50. Wait for students to answer. Answer: No**

T Should I go to the next row? **Point to 51. Wait for students to answer. Answer: Yes.**

T I need to go to the next row to 51.

T Just like if I were counting on. 50, 51.

T Then keep counting on in the same row to find 58.

T 52, 53, 54, 55, 56, 57, 58. **Point to boxes as you count out-loud.**

T There is 58!

T Can someone show me another way I can find 58 quickly on the number grid? **Call on students to answer. Possible answers: Find the column with numbers ending in 8. That's the ones place. Then I can go down by tens to find the 50s and find 58. I know 58 is close to 60. I can find 60 and then go backwards to find 58.**

T There are many ways you can find a number on a grid quickly.

T You can choose the way you like best.

Number Grid

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

Pass out the "Missing Numbers" grid sheet to each student or project one for the whole class to use together.

Name: **ANSWER KEY**

Missing Numbers Grid

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

T This number grid has lots of missing numbers.

T Your job is to fill in the empty boxes with the missing number.

T You can either count on, or ask yourself, what comes before, after, or is in between these numbers.

T You can also use a number grid to help you.

T I'll do the first one.

T This empty box is after the number 56.

T I can count on from 56.

T Or I can find 56 on my number grid and find the box that comes after 56.

T Let me look at my number grid.

T I'm going to find the number 50 in the last column where the tens are.

T Then I'm going to count on to the next row and find 56.

T 51, 52, 53, 54, 55, 56. **Point to the boxes as you count out-loud.**

T Now what number comes after 56? 57! **Point to 57. Write it in the box.**

T Now you try and fill in the missing numbers.

T If you finish early, I have another sheet for you to try that's a little harder. **Show them the "Missing Number Puzzles" sheet.**

T These are puzzle pieces from the big number grid. They only show you a part of the number grid.

T See if you can challenge yourselves to find the missing numbers.

T Use your number grid to help you.

T I will give you this sheet when you finish the Missing Numbers grid.

T It's okay if you don't get to the Missing Numbers Puzzle sheet.

Name: **ANSWER KEY**

Missing Numbers Grid

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
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Name: **ANSWER KEY**

Missing Number Puzzles

27	28	29	68	69	70	8	9	10
37	38	39	78	79	80	18	19	20
47	48	49	88	89	90	28	29	30
53	54	55	71	72	73	85	86	87
63	64	65	81	82	83	95	96	97
73	74	75	91	92	93	105	106	107
42	43	44	11	12	13	64	65	66
52	53	54	21	22	23	74	75	76
62	63	64	31	32	33	84	85	86

Differentiation:

Pull a small group of student to the side to work together -or- partner students up. If they struggle, you do not need to give them the "Missing Number Puzzle" sheets.

Challenge "Missing Number Puzzles"

If students finish their "Missing Number Grid" correctly they can try to solve these "Missing Number Puzzles."



Make sure to "Break Up Your Day!"



Now is a great time to take a break and get students re-energized.

See our list of engaging movement and brain break ideas to get your students moving and ready to refocus! (see page 12)

Number Order "Constellation Hop"

Place the "Constellation Strips" on desks, tables, or around the room. Give each student a "Constellation Number Hop" sheet or have them make an answer sheet on blank paper to record their answers on. Students will also need to bring their "Number Grid" around with them for help.

- T** At each desk, there is a card with 3 stars.
- T** There is missing number on the card.
- T** You are going to hop from one constellation to another constellation and write down the 3 numbers, including the missing number or numbers on your recording sheet.
- T** If I start at this desk, I see that the card says the letter C.
- T** That means I will write my answer on the line that says the letter C on my recording sheet.
- T** Bring your number grid with you if you need help.
- T** When you're done, you can hop to another constellation until you have filled up your recording sheet.

Students start at one card. They move onto another card when done. Walk around the room to help students who are struggling.

- T** Once you are done hopping to all 6 constellations please bring me your recoding sheet.
- T** I will leave it for your teacher to see what excellent work you did today!

Collect all papers that the students worked on to leave for the teacher.






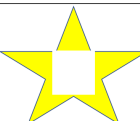








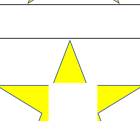

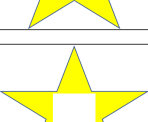
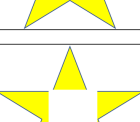
Name: **ANSWER KEY**

Constellation Number Hop

A. 25, 26, 27	D. 32, 33, 34
B. 12, 13, 14	E. 39, 40, 41
C. 87, 88, 89	F. 79, 80, 81

Constellation Number Hop Strips

Cut out and tape on desks or around the room.

A			
B			
C			
D			
E			
F			



Make sure to "Break Up Your Day!"



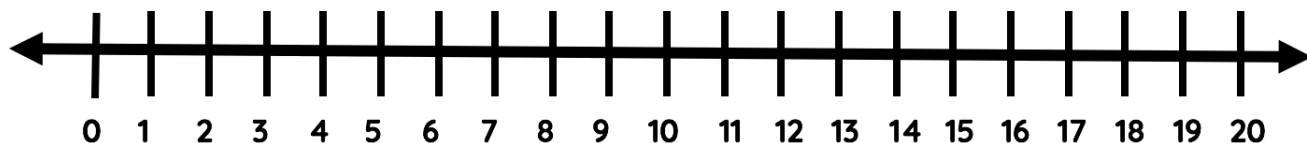
Now is a great time to take a break and get students re-energized.
See our list of engaging movement and brain break ideas to get your students moving and ready to refocus! (see page 12)

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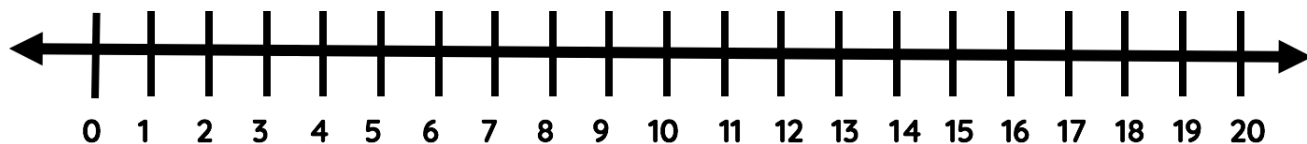
Number Grid

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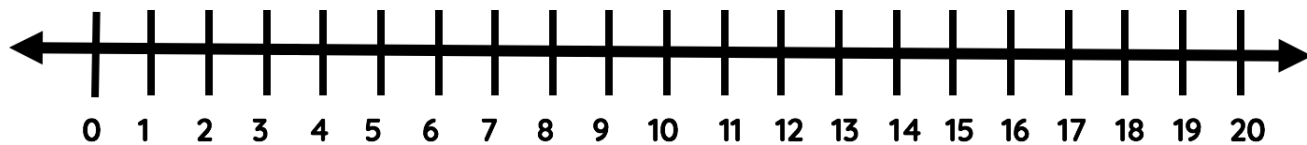
NUMBER LINE



NUMBER LINE



NUMBER LINE



Name: _____

Missing Numbers Grid

1	2		4	5	6	7		9	10
	12	13	14	15		17	18		20
21	22	23	24			27	28	29	
			34	35		37	38		40
41	42			45	46	47		49	50
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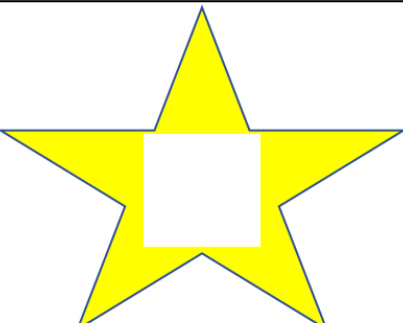

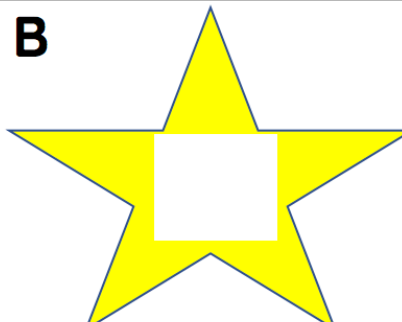

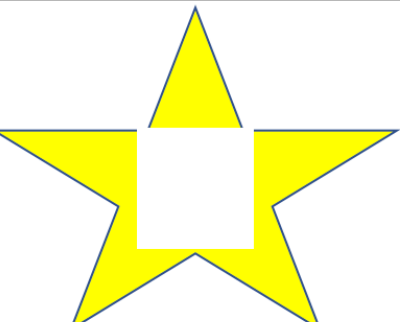

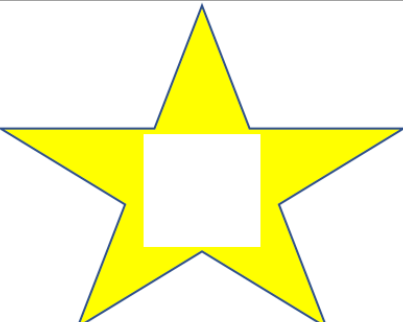
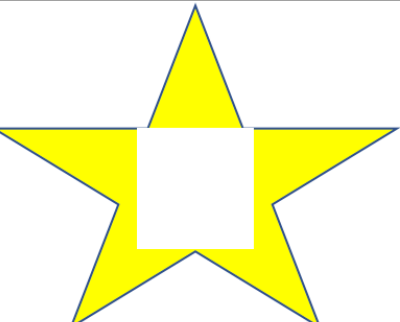
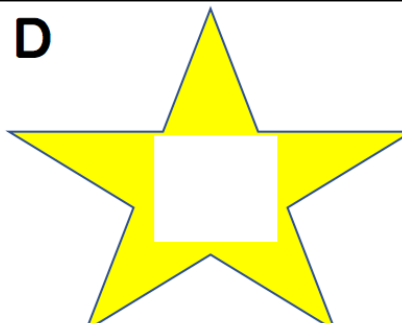
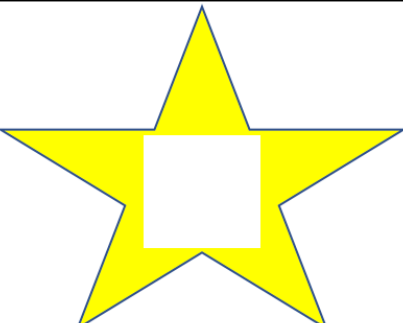

Name: _____

Missing Number Puzzles


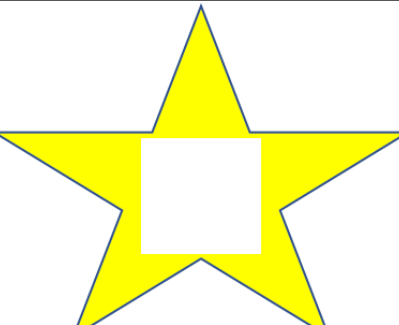
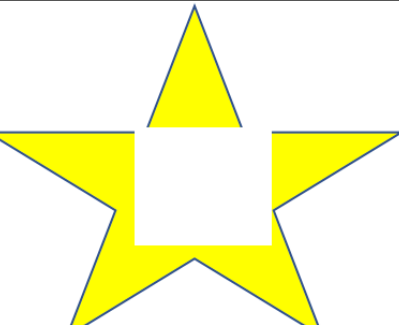
27				69		8		10
	38	39	78		80		19	
47	48			89		28		30
53	54				73	85		87
63			81		83	95		97
73	74		91		93	105		
	43			12		64		66
52	53	54		22			75	
	63			32		84		86

Constellation Number Hop Strips

Cut out and tape on desks or around the room.

A 		
B 		
C 		
D 		

E 		
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F 		
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Make sure to “Break Up Your Day!”

These can be used in the middle of a lesson or at the end of your lesson.

Here are a few engaging movement and brain break ideas to get your students moving and ready to refocus.



Break Up Your Day: Ball Toss Counting!



- Have students stand in a circle.
- You need a ball or small object to toss like a stuffed animal.
- Teacher stands in the middle of the circle.
- Students count by 1s starting from 1 to 120.
- As everyone counts together, the teacher tosses the ball to a student and the student tosses the ball back to the teacher.
- The teacher will only toss the ball to students who are actively counting and engaged. This will help students stay on task and count out-loud.
- To make it harder, the teacher can say “Stop!” at any number.
- Say a new number and the students have to count on from that number.
- If you stopped at 45, the teacher can say a new number like 54 and students have to pick up from there and say 55.



Break Up Your Day: Body Stretches!



10 minutes

FORMATION: Standing at desks

- Have students begin the day with a series of simple activities lasting 30 seconds or more: jumping jacks, knee lifts, flap arms like a bird, hopping, scissors (feet apart then cross in front, feet apart then cross in back)...
 - Follow each activity with a basic stretching movement:
 - Reach for the sky runner’s stretch
 - Butterfly stretch (sit with bottom of feet together)
 - Knee to chest, rotate ankles, scratch your back
- Hold stretches for 10 - 30 seconds. Repeat a different simple activity followed by a new basic stretch as many times as desired.



Break Up Your Day: Thumbs Up!



- Student is called on to state their favorite number from 1 to 20, use name cards or equity cards if available.
- Other students signify whether they see that number somewhere in the classroom. Tally their responses.
- The number with the most votes or Thumbs Up is the winner for the activity!