

Math: Grade 1, Lesson 12, Count by 1's or 10's to 120

Lesson Focus: Count by 1's or 10's to 120.

Practice Focus: Students will develop their counting ability as they use a number chart to count by 1s or 10's to 120.

Objective: Students will learn how counting and place-value patterns can be seen on a number chart.

Key Vocabulary: 120 chart, ones digit, tens digit, row, column, horizontal, vertical

TN Standards: 1.NBT.A.1

Teacher Materials:

- 120 chart
- Paper
- Markers
- Document Camera
- Student Practice Packet

Student Materials:

- Paper
- Pencil

Teacher Do	Student Do
<p><u>Opening</u> (1 min)</p> <p>Hello! Welcome to Tennessee's At Home Learning Series for math! Today's lesson is for all our 1st graders out there, though all children are welcome to tune in. This lesson is the twelfth in our series.</p> <p>My name is ____ and I'm a ____ grade teacher in Tennessee schools! I'm so excited to be your teacher for this lesson! Welcome to my virtual classroom!</p> <p>If you didn't see our previous lesson, you can find it on the TN Department of Education's website at www.tn.gov/education. You can still tune in to today's lesson if you haven't seen any of our others. But, it might be more fun if you first go back and watch our other lessons since we'll be talking about things we learned previously.</p> <p>Today we will be learning about how to find a pattern using a 120 chart! Before we get started, to participate fully in our lesson today, you will need:</p> <ul style="list-style-type: none">● Paper● Pencil● The student packet for Math, Grade 1, Lesson 12 which can be found at www.tn.gov/education	<p>Students get materials ready for the lesson:</p> <p>Paper</p> <p>Pencil</p>
<p><u>Intro</u> (3 min)</p>	

<p>To get ready for our lesson today, let's get our workspace ready. I am going to lay out some paper and pencil on my writing surface. You lay out your paper and pencil too. [pause]</p> <p>We will also be using a tool today called a 120 chart. [Teacher shows image of 120 chart.] A 120 chart can be used to count. I can use my 120 chart to count by 1. [Teacher models counting starting at 1 and counts to 10.] 1-2-3-4-5-6-7-8-9-10 I can also <i>count on</i> from any number on the chart. [Teacher models counting 18 to 25.] 18-19-20...then I move to the next row to keep counting by 1...21-22-23-24-25. I can also count by 10s using a 120 chart. 10-20-30-40-50. You may notice a pattern in the way my finger moved as I counted by 10s. This is something we are going to learn today—how to count by 1's and 10's to find a pattern in a 120 chart. OK! Now, let's get started.</p> <p>You will use your paper and pencil to follow along with me as we use a 120 chart to find patterns when counting by 1s and 10s.</p>	<p>Students set up work space with needed items.</p> <p>Student observes</p>
<p><u>Teacher Model</u> (10 min.)</p> <p>Objective 1: Teacher will explicitly guide students to find patterns in a 120 chart when counting by 1s. Let's take a look at our 120 chart to find a pattern.</p>	<p>Objective #1: Students will be reviewing how to count by 1s using a 120 chart moving from top left to bottom right moving across rows.</p>

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

What is a pattern?

[Pause]

That's right. A pattern is something that repeats or changes in predictable ways.

What number patterns do you see on a 120 chart when you count by 1s?

[Pause]

Hmmmm....Let's take a deeper look. Now, I am going to look at the numbers 58, 59, 60, 61. You follow along with me.

[Teacher will point out - may choose to highlight - the numbers 56, 57, 58, 59 120 chart.]

What pattern do you see in the numbers 58 and 59?

[Pause]

Yes. The ones digit in the number 56 is 6. The ones digit in the number 57 is 7. And the ones digit from 56 to 57 goes up by 1.

Great job!

Notice the pattern of the ones digit going up by one continues for the numbers 57 to 58 and from 58 to 59. 7 - 8. 8 - 9.

[Teacher pointing to appropriate digit on 120 chart as she speaks.]

As I count using a 120 chart, did you notice my finger moving across the row?

[Pause]

Yes. Because when we count by 1s on a 120 chart, we move in a horizontal direction. That means we go across the row.

Objective #2:

Students will be building off of their work counting by 1s using a 120 chart to count by 10s in a 120 chart.

Objective #2 Teacher will explicitly guide students count by 10s in a 120 chart.

We just found a pattern in a 120 chart counting by 1s. Now we will practice counting in a 120 chart by 10s.

What patterns do you see in a 120 chart when you count by 10s?

[Pause]

Watch me as I count by 10s on our 120 chart.

[Teacher puts finger on the number 10 and counts by 10s pointing as he/she goes.]

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

Great job following along as I counted by 10s. Did you notice my finger moving down the number chart as I counted by 10s?

[Pause]

When I counted by 10s on my number chart, I moved down a column.

I can count my 10s from any number by moving down a column.

Count along with me as I count by 10s from the number 2.

[Teacher models by placing finger on the number 2, moving down the column as he/she counts.]

2-12-22-32-42-52-62-72-82-92-102-112

Great job using a 120 chart counting by 10s.

Now, let's see if we can find a pattern.

Objective 3: Teacher will explicitly guide students to find patterns in a 120 chart when counting by 10s.

When we counted by 10s in the 120 chart starting with the number 2, what patterns did you notice in the tens digit?

[Pause]

2-12-22-32-42-52-62-72-82-92-102-112. What happened to the number in the 10s place?

[Pause]

If you are thinking the number in the tens digit increased by 1, you are right!

[Teacher speaks accenting the tens digit...]

[TWENTY] two, [THIRTY] two, [FORTY] two, [FIFTY] two, [SIXTY] two, [SEVENTY] two...

Great job finding a pattern counting by 10s in a 120 chart!

Tying the learning together: Teacher will explicitly compare/contrast patterns when counting by 1s v. 10s in a 120 chart.

Objective #3:

Students will be building off of their work finding patterns and counting by 1s and counting by 10s in a 120 chart to find patterns when counting by 10s in a 120 chart.

Tying the learning together:

Students will listen to the teacher compare and contrast patterns when counting by 1s and 10s in a 120 chart.

So we have discovered some cool patterns today using a 120 chart. We learned that when you count by 10's the ones digit stays the same and when you count by ones, the ones digit changes. We also learned that when we count by 1s, the ones digit increases by 1.

Now we are ready to try some problems together.

Guided Practice (13 min.)

[I do - a think aloud where the student works alongside the teacher.]

Let's take a look at our first problem. Watch as I use a 120 chart to help me count.

[Teacher shows 120 chart and post problem as written.]

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

Directions: Write the numbers to continue each pattern.

1. 112, 113, 114, _____, _____, _____, _____, _____

I want to use a 120 chart to continue the pattern to the next five numbers.

First, I am going to find the number 112 on the 120 chart.

[Teacher finds the number 112 on the 120 chart and points to it.]

The next number in my problem is 113.

[Teacher points to 113 on chart.]

Students will listen to the teacher do a think aloud solving a problem from the start of the problem by finding the pattern by using the 120 chart.

Then the next number is 114.

[Teacher points to 114 on chart.]

Hmmm...I wonder if my pattern is counting by 1s or by 10s?

[Pause]

That's right, I am moving horizontally across my row and counting by 1s. That means the 1s digits are going up by one each time.

Can you help me use my counting by 1s pattern to find the next five numbers?

[Teacher models moving fingers continuing to count ...]

115 - 116 - 117 - 118 - 119.

Great job. Now I know the answer to my problem and I will fill in the pattern.

[Teacher writes 1. 112, 113, 114, 115, 116,
117, 118, 119]

[We do - intentional pauses for student to do work and then receive answers along the way.]

OK. Now let's look at our next problem. You will need your pencil and paper. You write number 2 on your paper as I write on mine.

[Teacher posts problem #2 as written.]

Directions: Write the number to continue each pattern.

2. 22, 32, 42, _____, _____, _____, _____, _____

Great. Number two says, 22 - 32 - 42 and then has five blanks for us. That means we will need to use our 120 chart to find the next five numbers in the pattern.

Since #2 starts with 22. Let's find the number 22 on the 120 chart.

[Teacher locates 22 on the 120 chart.]

The next number in my problem is 32.

[Teacher points to 32 on chart.]

Then the next number is 42.

[Teacher points to 42 on chart.]

Hmmm...I wonder if our pattern is counting by 1s or by 10s?

[Pause]

Did I hear you say counting by 10s?

That's right, we are moving vertically down a column and counting by 10s. That means my 10s digits are going up by one each time. Can you help me use my counting by 10s pattern to find the next five numbers?

[Teacher models moving fingers continuing to count ...]

Students will continue the pattern using a 120 chart. Students will write along with the teacher.

22 - 32 - 42 - 52 - 62 - 72 - 82 - 92.

I think we know our next five numbers....

[Teacher writes 22, 32, 42, 52, 62, 72, 82, 92.]

[You do - the student independently working and then the teacher showing their work and answer.]

We've been working on using a 120 chart to find patterns and count numbers. Now it is your turn.

[Teacher posts problem as written.]

Directions: Write the number to continue each pattern.

3. 90, 91, 92, , , , ,

I will read the problem aloud.

[Teacher reads directions and problem.]

Number 3 says, 90 - 91 - 92. Then there are five blanks. You will need to continue the pattern to find the next five numbers. Good Luck.

[Teacher allows time for students to complete pattern.]

Alright. Time to check our work.

Did you get the next five numbers in the pattern to be 93, 94, 95, 96, and 97?

Great Job finding a pattern of counting by 1s using a 120 chart!

[Teacher models filling in blanks.]

90, 91, 92, 93, 94, 95, 96, 97

Additional Problems as needed

4. 36, 46, 56, , , , ,

5. 109, 110, 111 , , , ,

Students will solve a problem independently from the start of the problem through finding the solution. Teacher will share the continued pattern.

Independent Practice (3 min.)

Great work! Today, we reviewed how to use patterns to count by 1s and 10s using a 120 chart. I hope you're seeing some connections to our *counting on* strategy that we used yesterday! You sure did a great job! After the video, you will have some problems practicing on your own.

I will show you the independent practice problems now, or you can find them in the student practice for this lesson posted on our website, www.tn.gov/education.

[Teacher shows student practice page under document camera or camera zooms in on student practice page.]

Good luck and do your best! To get you started, I will read the problems aloud with you.

[Teacher posts problems as written.]

Directions: Write the numbers to continue each pattern.

1. Count 10s 38, 48, _____, _____, _____, _____
2. Count by 1s 66, 67, _____, _____, _____, _____
3. Count by 10s 17, 27, _____, _____, _____, _____
4. Count by 1s 108, 109, _____, _____, _____, _____
5. Number Sense: Write the missing numbers on the number chart below.

	62	63	64	65
	72	73	74	75
81				85

PBS Lesson Series

<p><u>Closing</u> (1 min)</p> <p>I enjoyed reviewing how to count by 1's and 10's using a 120 chart! Thank you for inviting me into your home. I look forward to seeing you in our next lesson in Tennessee's At Home Learning Series!</p> <p>Bye!</p>	
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