

Math: Grade 1, Lesson 13, Count on an Open Number Line

Lesson Focus: Count on an open number line

Practice Focus: Students will develop their counting ability as they use an open number line to count by 1s.

Objective: Students will label an open number line to count by 1s or 10s to 120.

Key Vocabulary: open number line

TN Standards: 1.NBT.A.1

Teacher Materials:

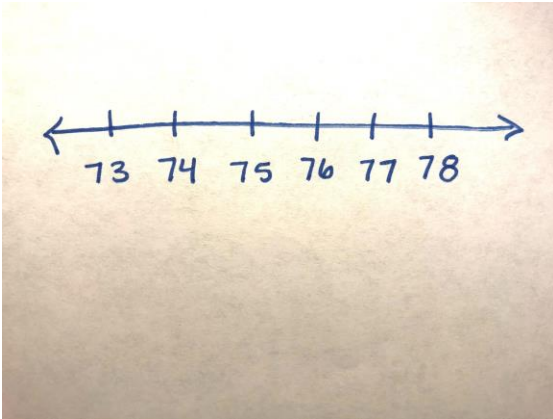
- 120 chart
- Open number lines
- One pre drawn number line (from 73 to 78)
- Paper
- Markers
- Document Camera
- Student Practice Packet

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 thirteenth 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 count on an open number line! 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 13 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>Ok, let's begin!</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 an open number line. [Teacher shows image of an open number line.]</p> <div data-bbox="224 634 863 1117" data-label="Image"> </div> <p>Can you say open number line? [Pause.]</p> <p>Why do you think it is called an open number line? What makes it open? [Pause.]</p> <p>That's right. The number line is called an open number line because there are no numbers on the line yet.</p> <p>Now, take a look at a number line that I have filled in. This number line helps me count by 1s from the number 73 to the number 78. [Teacher displays number pre-drawn number line.]</p>	<p>Students set up work space with needed items.</p> <p>Students observe.</p> <p>There are no numbers on the line yet.</p>



73 - 74 - 75 - 76 - 77 - 78.

How is using the number line like using the 120 chart?

[Pause]

[Teacher places 120 chart and number line side-by-side to allow students time to view similarities.]

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

That's right. We can count from 73 to 78 on our 120 chart too.

[Teacher model counting from 73 to 78 on the 120 chart.]

73 - 74 - 75 - 76 - 77 - 78.

You will use your paper and pencil to follow along with me as we use open number lines to count by 1s and 10s.

Teacher Model (10 min.)

Objective 1: Teacher will explicitly guide students to label and use an open number line to count by 1's to 120.

First, watch as I label and use an open number line to count by 1s.

[Teacher draws an open number line.]



I think I will start with the number 78.

To write the number 78 on my open number line, I will draw a small line at the beginning of my open number line. These are called counting marks

[Teacher models drawing a small counting mark at the beginning of the open number line.]

Next, I will label the small line I drew with the number 78. I will write the number 78 under my number line.

[Teacher models labeling the open number line with the number 78 under the counting mark.]



Watch as I use my open number line to count by 1s. I will start counting by 1s starting with the number 78.

[Teacher thinks out loud.]

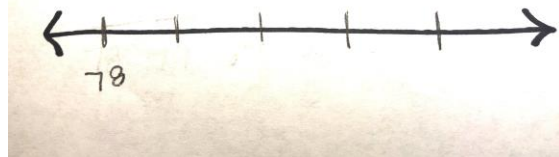
Hmmm....What number comes after 78?

How can I show all the next numbers so that my counting marks look alike?

I know. I will use my finger to make my counting marks alike.

[Teacher models placing finger beside 78 on the open number line.

Teacher then models making a new tic marks until there are 4 or so additional counting marks.]

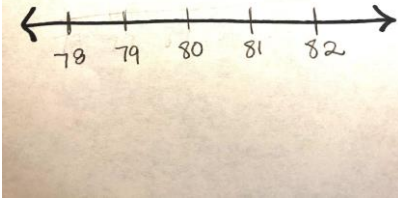


It's time to label my open number line. I know that 79 comes after 78. I will label the counting marks on my open number line with the numbers that come after 78.

Objective #1:

Students will be observing how to label and use an open number line to count by 1's to 120.

[Teacher counts aloud from 78 - 82 and labels the open number line appropriately.]



78-79-80-81-82.

Great. Let's use our open number line to count. I will draw hops as I count by 1s.

[Teacher models drawing each hop, starting with 78, and counts one hop at a time.]

78-79-80-81-82. Wonderful. We just used an open number line to count by 1s.

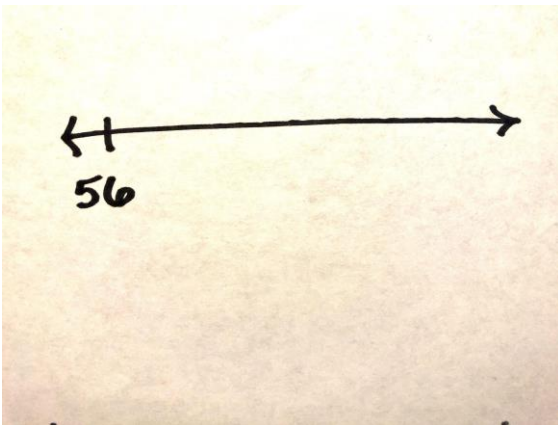
Objective #2 Teacher will explicitly guide students to label and use an open number line to count by 10's to 120.

I can also use an open number line to count by 10s.

Let's take a look at our next problem.

[Teacher posted problem as written. Note - you will need to draw your number line large enough to count by 10s from 56 to 116.]

Directions: Count on by 10s from 56 to 116.



Notice our open number line starts with the number 56. Our problem is asking us to count by 10s this time.

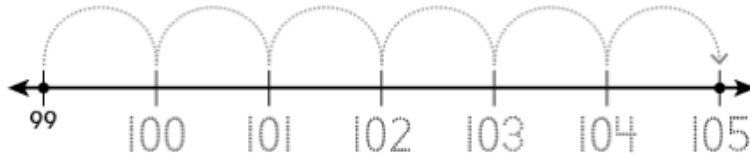
[Teacher models think aloud.]

I think I will make the spaces between my counting marks bigger this time since I am counting by 10s instead of counting by 1s.

Objective #2:

Students will be building off of their work counting by 10s using a 120 chart and counting by 1s on an open number line to count by 10s on an open number line.

<p>[Teacher models placing finger after 56 and drawing counting marks spaced larger than one finger space to draw 6 additional counting marks.]</p> <p>Watch as I use my open number line to count by 10s. I will start counting by 10s starting with the number 56. [Teacher thinks out loud.] 56-66-76-86-96-106-116.</p> <p>I will label my counting marks on my open number line with the numbers I just counted aloud. [Teacher labels the open number line appropriately.]</p> <p>Great. Let's use our open number line to count. I will draw hops as I count by 10s. You count aloud with me. [Teacher models drawing each hop, starting with 56, and counts by 10s to 116.] 56-66-76-86-96-106-116. Wonderful. We just used an open number line to count by 10s.</p> <p>[Tying the learning together: Teacher will explicitly compare/contrast patterns when counting by 1s v. 10s in a 120 chart.]</p> <p>So we have learned how to label and count by 1s and 10s using an open number line.</p> <p>Now we are ready to try some problems together.</p>	<p>Tying the learning together: Students will listen to the teacher summarize.</p>
<p><u>Guided Practice</u> (13 min.)</p> <p>I Do</p> <p>Let's take a look at our first problem. [Teacher posts problem.]</p> <p>Directions: On an open number line, start at 99 and count by 1s to 105 The problem says, on an open number line start at 99 and count by 1s to 105. [Teacher models drawing an open number line and labeling just the start at 99.] Watch as I use a number line to help me count by 1s from 99 to 105.</p>	<p>Students will listen to the teacher do a think aloud solving a problem from the start of the problem by counting by 1s on a open number line.</p>



What should we do first?

[Pause]

Yes. First, I will draw my counting marks.

[Teacher models using finger to draw counting marks.]

What comes next?

[Pause]

Yes. I will label the numbers I know that come after 99.

100 - 101 -102 -103 -104 105.

[Teacher labels counting marks with numbers 100, 101, 102, 103, 104, 105.]

Last, let's draw our hops as we count.

[Teacher models drawing hops and counts aloud.]

100 - 101 -102 -103 -104 105.

Great! We just used an open number line to count from 99 to 105 by 1s.

We Do

For our next problem, work with me as we count on an open number line by 10s.

[Teacher will post problem. Directions: On an open number line, start at 12 and count by 10s to 62.]

The problem says, on an open number line start at 12 and count by 10s to 62. You use your pencil and paper to draw an open number line along with me.

[Teacher models drawing an open number line and labeling just the start at 12.]



What should we do first?

[Pause]

Yes. First, I will draw my counting marks.

Hmmmm....before we draw our counting marks....How big should they be if we are counting by 10s?

[Pause]

That's right, let's space our counting marks larger than the size of our fingers. You draw your counting marks along with me.

Students will write along with the teacher to use an open number line to count by 10s.

Students will solve a problem independently from the start of

[Teacher models using space larger than finger width to draw counting marks. You will need to draw 5 additional counting marks.]

Great job! Your number lines are looking fantastic!

What comes next?

[Pause]

Yes. We will label the numbers we know that comes after 12 when we count by 10s. 12 - 22 - 32 - 42 - 52 - 62. You label your number line too.

[Teacher models labeling counting marks with numbers 12, 22, 32, 42, 52, 62.]

Great job counting by 10s and label your number line.

Last, let's draw our hops as we count by 10s.

[Teacher models drawing hops and counts aloud.]

12 - 22 - 32 - 42 - 52 - 62.

Great! We just used an open number line to count from 12 to 62 by 10s.

You Do

Now it is your turn.

[Teacher posts problem and a pre "started" number line with the 41 already labeled.]

Directions: On an open number line, start at 41 and count by 1s to 49.



I will read the problem aloud to help you get started.

[Teacher reads directions and problem.]

On an open number line, start at 41 and count by 1s to 49. You will need to complete your open number line to count by 1s from 41 to 49. Good Luck.

[Teacher allows time for students to complete pattern.]

Alright. Time to check our work.

Did you get the next eight numbers on your number line to be 42, 43, 44, 45, 46, 47, 48, 49?

[Pause]

Great Job using an open number line to count by 1s!

[Teacher posts a filled in answer key image of a number line already completed.]

the problem through finding the solution. Teacher will share the continued pattern.

Additional Problems as needed

1. On an open number line, start at 38 and count by 1s to 44.

[Teacher can help students get started by reading the problem and drawing the start of the open number line at 44 for them if needed.]

2. On an open number line, start at 41 and count by 10s to 81.

[Teacher can help students get started by reading the problem and drawing the start of the open number line at 41 for them if needed.]

Independent Practice (3 min.)

Great work! Today, we reviewed how to use an open number line to count by 1s and 10s. 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.

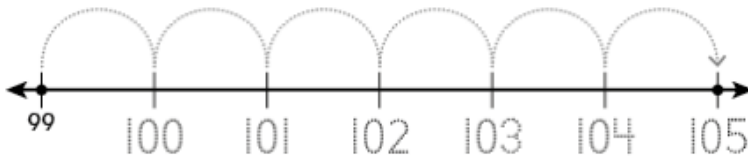
[Teacher shows student practice page under document camera or camera zooms in on student practice page.]

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

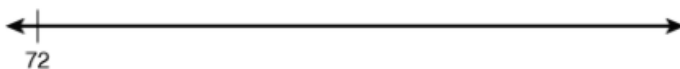
[Teacher posts problems as written.]

Directions: Show your counting on an open number line.



1. Start at 99. Count on by 1's to 105.



2. Start at 72. Count on by 10's to 112.



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<p>3. Start at 89. Count on by 10's to 119.</p>  <p>4. Start at 111. Count on by 1's to 118.</p> 	
<p><u>Closing</u> (1 min)</p> <p>I enjoyed learning how to count by 1's and 10's using an open number line! 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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