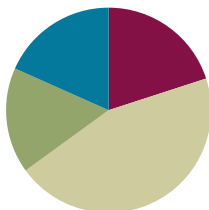


## Lesson 3

**Objective:** Count up and down between 90 and 1,000 using ones, tens, and hundreds.

### Suggested Lesson Structure

■ Fluency Practice	(12 minutes)
■ Concept Development	(27 minutes)
■ Application Problem	(10 minutes)
■ Student Debrief	(11 minutes)
<b>Total Time</b>	<b>(60 minutes)</b>



### Fluency Practice (12 minutes)

- Sprint: Differences to 10 with Teen Numbers **2.OA.2** (8 minutes)
- Counting with Ones, Tens, and Hundreds from 0 to 1,000 **2.NBT.8** (4 minutes)

### Sprint: Differences to 10 with Teen Numbers (8 minutes)

Materials: (S) Differences to 10 with Teen Numbers Sprint

### Counting with Ones, Tens, and Hundreds from 0 to 1,000 (4 minutes)

Materials: (T) Bundle of 1 hundred, 1 ten, and a single straw from Lesson 1

For this second round, you may want to change the partner share to have students rapidly count up and down a larger sequence of numbers. Students often need additional practice with crossing a hundred, as well as with the first 30 numbers that begin a new hundred (e.g., 100–130, 600–630, etc.).



#### NOTES ON LESSON STRUCTURE:

Application Problems can follow Concept Development so that students connect and apply their learning to real world situations. They can also serve as a lead-in to a concept, allowing students to discover through problem solving the logic and usefulness of a strategy before that strategy is formally taught. This gives students a framework on which to hang their developing understanding.

## Concept Development (27 minutes)

Materials: (T) 9 units of 1 hundred, 10 units of ten, 10 ones (for Parts A, B, C, and D)

### Part A

Part A Sequence
Count from
90 to 300
170 to 500
350 to 600
780 to 1,000

T: Today, let's use units of ten and a hundred to count from 90 to 300. (Place 9 units of ten on the carpet.)

T: I'll model. You count. (Place bundles as they count.)

S: 90, 100, 200, 300.

T: Now, let's count down from 300 to 90.

S: 300, 200, 100, 90. (Remove bundles as they count.)

T: Talk to your partner about how we counted up and down.

S: First, put 1 ten to get to a benchmark number, 100. Then, keep counting by hundreds. 200, 300.

Quickly do further examples from the Part A Sequence chart. The students will get very excited about the larger numbers.

T: Is it faster to count using tens or hundreds?

S: Hundreds.

T: Why?

S: They are bigger so you get there faster. → It's like you don't have to say as many numbers. → If you don't know how to count by hundreds it might be faster to count by tens.

If necessary, have the students practice using their own bundles with small amounts such as 90 to 200, 80 to 200, and 60 to 300.

### Part B

Part B Sequence
Count from
300 to 480
500 to 830
600 to 710
800 to 990

Next, count between pairs of numbers starting with multiples of 100 and ending with numbers that have both hundreds and tens, such as 300 to 480, as shown in the Part B Sequence chart.



### NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Students above grade level may combine sets A and B, then C and D. Challenge students to count from 90 to 300 to 480.

For struggling students, adjust the task such that they only complete sets A and B. The rest can be practiced during fluency time throughout the year. To ease students into counting without physical units, model with the straws and then hide them under a sheet of paper. Prompt students to visualize as they count.

## Parts C and D

Part C Sequence	Part D Sequence
Count from 100 to 361	Count from 361 to 400
200 to 432	432 to 600
600 to 725	725 to 900
700 to 874	874 to 1,000

Advance to using 3 units while counting up and down between pairs of numbers.

## Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students should solve these problems using the RDW approach used for Application Problems.

T: Draw, label, and box the following numbers.  
(Demonstrate to the least extent possible).

- 90
- 300
- 428
- 600

T: Draw pictures of the units you use to count up to the target number. Use hundreds whenever you can, or you won't have room on your paper.

- 90 to 300
- 300 to 428
- 428 to 600
- 600 to 1,000

## Application Problem (10 minutes)

Kinnear decided that he would bike 100 miles this year. If he has biked 64 miles so far, how much farther does he have to bike?

NYS COMMON CORE MATHEMATICS CURRICULUM Lesson 3 Problem Set 2•3

Name Eli Date \_\_\_\_\_

1. Draw, label, and box 90. Draw pictures of the units you use to count from 90 to 300.

300

90 100 200 300

2. Draw, label, and box 300. Draw pictures of the units you use to count from 300 to 428.

300 400 410 420 421 422 423

424 425 426 427 428

3. Draw, label, and box 428. Draw pictures of the units you use to count from 428 to 600.

428 430 440 450 460 470 480 490 500

600

4. Draw, label, and box 600. Draw pictures of the units you use to count from 600 to 1,000.

600 700 800 900 1000

COMMON CORE Lesson 3: Count up and down between 90 and 1,000 using ones, tens, and hundreds. 5/11/14 engage<sup>ny</sup> 3.B.22

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### NOTES ON MULTIPLE MEANS OF REPRESENTATION:

Even the simplest illustration brings a story to life, especially for English language learners. Draw a bicycle and a road. Add a sign post. Replace an unfamiliar name like Kinnear with a name from the class. Allow students to use a set of bundles if they choose. Then, have them return to their seats and draw.

As often as possible, invite students to show their work while talking about it. Have them point to the places they are referring to in their counting sequence. This visual input is perfect for English language learners and students performing below grade level because it keeps them focused on sense-making.

- T: Let's read the problem.
- T: Talk with your partner: Do we know the parts, or do we know the whole and one part?
- S: We know the whole and one part.
- T: Which means we're looking for...?
- S: The missing part!
- T: Tell your partner the subtraction problem that goes with this story. Raise your hand when you know the answer.
- S:  $100 - 64 = \text{blank}$ .
- T: Talk with your partner: What is a related addition fact?
- S:  $64 + \text{blank} = 100$ .
- T: Draw a picture to show how you can use units of one and ten to find the answer. You have two minutes.
- S: 70 was my benchmark number. I drew 6 ones to get to 70. Then I drew 3 tens to make 1 hundred.
- T: Let's count using Jorge's model.
- S: 65, 66, 67, 68, 69, 70, 80, 90, 100.
- T: Did anyone use a different counting strategy?
- S: I counted by tens from 64 to 94 and that was 3 tens, then I added 6 ones to make 100.
- T: So, if we count Jorge's way we add 6 ones and 3 tens, which equals...?
- S: 36.
- T: And, if we add Delilah's way we add 3 tens and 6 ones, which equals...?
- S: 36.
- T: Are both counting strategies correct?
- S: Yes!
- T: So, how much farther does Kinnear have to bike?
- S: Kinnear has to bike 36 more miles.
- T: Add that sentence to your paper.

6 ones 3 tens  
Kinnear has to bike 36 more miles.

## Student Debrief (11 minutes)

**Lesson Objective:** Count up and down between 90 and 1,000 using ones, tens, and hundreds.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Students bring their Problem Set and Application Problem solutions.

## MP.7

- T: Let's look at the first count you did from 90 to 300.
- T: What was your first benchmark number?
- S: 100.
- T: How many tens did we count to get there?
- S: 1 ten.
- T: How many hundreds did we count to get from 100 to 300?
- S: 2 hundreds.
- T: So, in all how much did we count to get from 90 to 300?
- S: 1 ten and 2 hundreds.
- T: How much is that in all?
- S: 210.
- T: Where is 210 on your Problem Set?
- S: It's the part that isn't boxed right here.
- T: So, how many straws are in this part?
- S: 90 straws.
- T: How many straws are in this part?
- S: 210 straws.
- T: When you put them together, let's count what we get. (Touch as students count.)
- S: 90, 100, 200, 300. 300 straws!
- T: Talk to your partner: Can your counting help you to solve the problem about Kinnear?
- S: I thought that every straw was 1 mile. → It was like counting up. → I started at 64 and added ones to get to 70. → 65, 66, 67, 68, 69, 70. That is, 1, 2, 3, 4, 5, 6 ones. → 80, 90, 100. That is 1, 2, 3 tens. → 6 ones and 3 tens is 36.
- T: So, what does 36 mean to Kinnear?
- S: That's how many miles he has to go.
- T: Look at Problem 4. Suppose Kinnear has gone 600 miles. How many miles does he have to go to bike 1,000 miles?
- S: 400 miles!
- T: What if Kinnear had only gone 90 miles? How far would he still have to go to bike 1,000 miles? Talk to your partner. (Model only the units necessary for the count.)
- S: 100, 200, 300, ...900, 1,000!
- T: Work with your partner. How many straws do you see we counted? (Be sure they are easy to see.)
- S: 910!
- T: What units did you use?
- S: A ten and 9 hundreds.
- T: That is the part we needed to get from 90 to 1,000.
- T: Tell me which unit or units to use: ones, tens, or hundreds? (Pause after each of the following questions.)

MP.7

- T: To count from 36 to 40?  
S: Ones!  
T: To count from 36 to 100?  
S: Ones and tens!  
T: To count from 100 to 800?  
S: Hundreds!  
T: To count from 70 to 100?  
S: Tens.  
T: To get from 67 to 600?  
S: Ones, tens, and hundreds!

**Exit Ticket (3 minutes)**

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.

**A**

# Correct \_\_\_\_\_

Subtract.

1	$3 - 1 =$		23	$7 - 4 =$	
2	$13 - 1 =$		24	$17 - 4 =$	
3	$5 - 1 =$		25	$7 - 5 =$	
4	$15 - 1 =$		26	$17 - 5 =$	
5	$7 - 1 =$		27	$9 - 5 =$	
6	$17 - 1 =$		28	$19 - 5 =$	
7	$4 - 2 =$		29	$7 - 6 =$	
8	$14 - 2 =$		30	$17 - 6 =$	
9	$6 - 2 =$		31	$9 - 6 =$	
10	$16 - 2 =$		32	$19 - 6 =$	
11	$8 - 2 =$		33	$8 - 7 =$	
12	$18 - 2 =$		34	$18 - 7 =$	
13	$4 - 3 =$		35	$9 - 8 =$	
14	$14 - 3 =$		36	$19 - 8 =$	
15	$6 - 3 =$		37	$7 - 3 =$	
16	$16 - 3 =$		38	$17 - 3 =$	
17	$8 - 3 =$		39	$5 - 4 =$	
18	$18 - 3 =$		40	$15 - 4 =$	
19	$6 - 4 =$		41	$8 - 5 =$	
20	$16 - 4 =$		42	$18 - 5 =$	
21	$8 - 4 =$		43	$8 - 6 =$	
22	$18 - 4 =$		44	$18 - 6 =$	

**B**

Improvement \_\_\_\_\_ # Correct \_\_\_\_\_

Subtract.

1	$2 - 1 =$		23	$9 - 4 =$	
2	$12 - 1 =$		24	$19 - 4 =$	
3	$4 - 1 =$		25	$6 - 5 =$	
4	$14 - 1 =$		26	$16 - 5 =$	
5	$6 - 1 =$		27	$8 - 5 =$	
6	$16 - 1 =$		28	$18 - 5 =$	
7	$3 - 2 =$		29	$8 - 6 =$	
8	$13 - 2 =$		30	$18 - 6 =$	
9	$5 - 2 =$		31	$9 - 6 =$	
10	$15 - 2 =$		32	$19 - 6 =$	
11	$7 - 2 =$		33	$9 - 7 =$	
12	$17 - 2 =$		34	$19 - 7 =$	
13	$5 - 3 =$		35	$9 - 8 =$	
14	$15 - 3 =$		36	$19 - 8 =$	
15	$7 - 3 =$		37	$8 - 3 =$	
16	$17 - 3 =$		38	$18 - 3 =$	
17	$9 - 3 =$		39	$6 - 4 =$	
18	$19 - 3 =$		40	$16 - 4 =$	
19	$5 - 4 =$		41	$9 - 5 =$	
20	$15 - 4 =$		42	$19 - 5 =$	
21	$7 - 4 =$		43	$7 - 6 =$	
22	$17 - 4 =$		44	$17 - 6 =$	



Name \_\_\_\_\_ Date \_\_\_\_\_

1. Draw, label, and box 90. Draw pictures of the units you use to count from 90 to 300.
  
  
  
  
  
  
  
  
  
  
2. Draw, label, and box 300. Draw pictures of the units you use to count from 300 to 428.
  
  
  
  
  
  
  
  
  
  
3. Draw, label, and box 428. Draw pictures of the units you use to count from 428 to 600.
  
  
  
  
  
  
  
  
  
  
4. Draw, label, and box 600. Draw pictures of the units you use to count from 600 to 1,000.

Name \_\_\_\_\_ Date \_\_\_\_\_

1. Draw a line to match the numbers with the units you might use to count them.

300 to 900

ones, tens, and hundreds

97 to 300

ones and tens

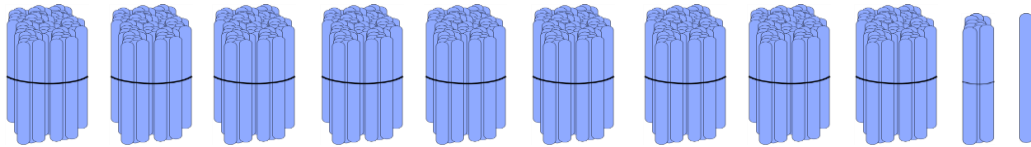
484 to 1,000

ones and hundreds

743 to 800

hundreds

2. These are bundles of hundreds, tens, and ones. Draw to show how you would count to 1,000.



Name \_\_\_\_\_

Date \_\_\_\_\_

1. Fill in the blanks to reach the benchmark numbers.

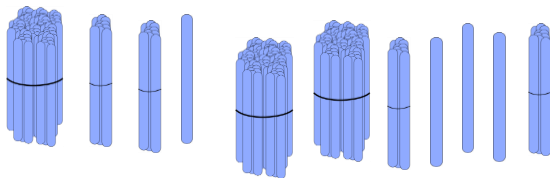
a. 14, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 20, \_\_\_\_\_, \_\_\_\_\_, 50

b. 73, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 80, \_\_\_\_\_, 100, \_\_\_\_\_, 300, \_\_\_\_\_, 320

c. 65, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 70, \_\_\_\_\_, \_\_\_\_\_, 100

d. 30, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 100, \_\_\_\_\_, \_\_\_\_\_, 400

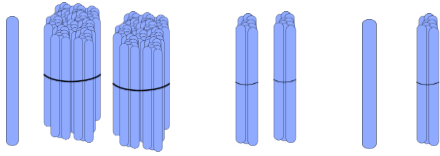
2. These are ones, tens, and hundreds. How many sticks are there in all?



There are \_\_\_\_\_ sticks in all.

3. Show a way to count from 668 to 900 using ones, tens, and hundreds.

4. Sally bundled her sticks in hundreds, tens, and ones.



- a. How many sticks does Sally have? \_\_\_\_\_
- b. Draw 3 more hundreds and 3 more tens. Count and write how many sticks Sally has now.