

Vertical Progression:

<p>Kindergarten</p>	<p>K.CC.1.A Know number names and the count sequence.</p> <ul style="list-style-type: none"> ○ K.CC.A.1 Count to 100 by ones and tens. ○ K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1). ○ K.CC.A.3 Write numbers from 0-20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). <p>K.NBT.A Work with numbers 11-19 to gain foundations for place value.</p> <ul style="list-style-type: none"> ○ K.NBT.A.1 Compose and decompose numbers from 11-19 into tens and some further ones. e.g. by using objects or drawings and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
<p>1st Grade</p>	<p>1.NBT.A Extend the counting sequence.</p> <ul style="list-style-type: none"> ○ 1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. <p>1.NBT.B Understand place value.</p> <ul style="list-style-type: none"> ○ 1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: ○ 1.NBT.B.2.a 10 can be thought of as a bundle of ten ones — called a “ten.” ○ 1.NBT.B.2.b The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. ○ 1.NBT.B.2.c The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). ○ 1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.
<p>2nd Grade</p>	<p>2.NBT.A Understand place value.</p> <ul style="list-style-type: none"> ○ 2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: ○ 2.NBT.A.1.a 100 can be thought of as a bundle of ten tens — called a “hundred.” ○ 2.NBT.A.1.b The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). ○ 2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s. ○ 2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. ○ 2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.
<p>3rd Grade</p>	<p>3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <ul style="list-style-type: none"> ○ 3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100. ○ 3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. ○ 3.NBT.A.3 Multiply one digit whole numbers by multiples of 10 in the range 10-90 using strategies based on place value and properties of operations.

Students will demonstrate command of the ELG by:

- Labeling a three-digit number with ones, tens, and hundreds.
- Identifying the value of each digit in a three-digit number.
- Representing a three-digit number using blocks or a picture.
- Regrouping quantities into groups of ten to write the number in digit form. (e.g., 53 tens is regrouped as 5 hundreds and 3 tens and written as “530”, 24 ones is regrouped as 2 tens and 4 ones and written as “24”)
- Applying a variety of models to represent groups of 5s, 10s and 100s.
- Using skip-counting to efficiently count by 5s, 10s, and 100s starting from any number less than 1,000 and describing the patterns created by skip-counting.
- Reading and writing numerals to 1000.
- Reading and writing number names in words to 1000.
- Constructing expanded form for numbers up to 1000.
- Matching numerals with the number names and expanded form.
- Comparing two three-digit numbers and record the results using symbols $>$, $<$ and $=$.

Vocabulary:

- base-ten numeral
- counting on
- digit
- equal to ($=$)
- expanded form
- fives
- hundreds
- number form (standard form)
- number name (word form)
- numeral
- ones
- place value
- regroup
- skip count
- tens
- value

Sample Instructional/Assessment Tasks:

1) Standard: 2.NBT.1a

Source: Illustrative Mathematics

<https://www.illustrativemathematics.org/content-standards/2/NBT/A/1/tasks/157>

Task: Party Favors

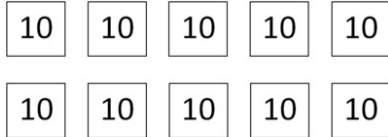
Pia was having a party. She put 10 stickers in each party bag.

- A.** On the first day she made 10 bags. How many stickers were in her 10 bags all together?
- B.** On the second day she made 3 more bags with ten stickers in each one. How many stickers total were in her 10 bags plus 3 more bags?
- C.** On the third day she made 7 more bags with ten stickers in each one. How many stickers total are in her 20 bags of ten?
- D.** On the fourth day, she made another 10 bags with ten stickers in each one. How many stickers are in her 30 bags of ten?

E. After one week, she had made a total of 50 bags with ten stickers in each one. How many stickers total are in her 50 bags of ten?

Solution:

A. With the help of a picture such as the following:



One can count by tens to see that ten groups of ten prizes is one-hundred prizes.

B. There are two main possible approaches. One can either add three bags to the picture above and continue to count, or one can notice that the three new bags constitute 30 prizes, and since there were already 100 that would make 130 prizes.

C. Since we counted that ten boxes of ten is one hundred, twice that would be two hundreds, or 200.

D. Ten boxes of ten is 100 more. Since we had 200 – or two hundreds – adding one more hundred will give three hundreds, or 300.

E. Fifty boxes of ten can be broken up into five collections of ten boxes of ten. Since ten boxes of ten is 100, five of those is five hundreds, or 500.

2) Standard: 2.NBT.1b

Source: <https://www.grade2commoncoremath.wikispaces.hcpss.org/Assessing+2NBT.1>

Task: Value of Digits

Materials: Index cards with a different three digit number written on each

Directions:

1. Have students select an index card and read the number
2. Students should identify how many hundreds, tens, and ones there are in the number on the index card
3. Repeat with another index card

Extensions: Ask students to identify the value of each digit out of order (i.e., ones, hundreds, tens); have students compare the numbers and identify the largest/smallest number; have students build models of the numbers using base ten blocks and/or digi-blocks

Considerations:

- Observe what strategies students use to solve the problem
- Does the student need to identify value of the digit in the ones first?
- If the student is struggling with three-digit numbers, can he/she correctly identify the tens and ones place?

3) Standard: 2.NBT.2

Source: <https://www.grade2commoncoremath.wikispaces.hcpss.org/Assessing+2NBT.2>

Task: Pattern

Materials and Directions:

1. Have base ten blocks or digi-blocks available.
2. Place the following problems on the board or make a paper copy.
3. Observe how the student models and solves the problem. Ask why they placed a number in the blank spot.

Complete the pattern:

- 1) 460, 470, 480, _____, _____, _____
- 2) _____, 562, 662, 762, _____, _____

Considerations: Can they explain that they are adding 10 and 100? Pay close attention to the ones place in both patterns. Students should notice that the digit in the ones place does not alter when we are adding 10 or 100.

4) Standard: 2.NBT.3

Source: (<https://www.grade2commoncoremath.wikispaces.hcpss.org/Assessing+2NBT.3>)

Task: Pattern

Materials and Directions:

1. Gather whole number place value dice to the hundreds place (3 dice) and index cards.
2. Tell students they will roll and read the number on the dice.
3. Have the student roll the dice. (The number will be in expanded form).
4. Ask the student to read the number on the index card (The number can be read from the dice and then written on the card. The order doesn't matter).
5. Observe how the student reads and writes the number.

Considerations: Does the student need to rearrange the dice in order to write or read the number? How does a student interpret/represent a 0 in a certain place value?