

# Number and Operations in Base Ten: Grade 1

## Stage 1 Desired Results

### ESTABLISHED GOALS:

#### Competencies:

- **Students will demonstrate the ability to solve arithmetic problems by utilizing effective strategies and applying properties of operations to whole numbers.**
- **Students will demonstrate the ability to model operations by utilizing objects, drawings, and equations.**
- **Students will demonstrate the ability to apply number sense by comparing whole numbers.**

#### Content Standards:

- 1.NBT.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.
- 1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
  - 10 can be thought of as a bundle of ten ones — called a “ten.”
  - The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
  - 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.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$ .
- 1.NBT.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
- 1.NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

### *Transfer*

*Students will be able to independently use their learning to answer everyday questions using numbers and operations.*

### *Meaning*

#### ENDURING UNDERSTANDINGS

*Students will understand that...*

- place value leads to number sense and efficient computing with numbers.

#### ESSENTIAL QUESTIONS

- ***How big can a number be?***

### *Acquisition*

*Students will know...*

- that counting follows a sequence.
- that numbers represent objects (1:1 correspondence).
- that quantities can be expressed in pictures, objects and numerals.
- the value of tens and ones.
- that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
- a variety of strategies for problem solving.

#### vocabulary:

base ten, tens, ones, less than, greater than, equal to, multiple of 10, place value, add, subtract, value, compare, digit, number model, equation, equal sign, flats, longs, cubes, hundreds, place value chart, regroup, count up, count back, expanded notation, addend, sum, compose, decompose, difference, more than

*Students will be skilled at...*

- identifying the value of a whole number to 120.
- counting forward from any number less than 120.
- recognizing and creating visual representations of numbers (0-120).
- reading, writing, and sequencing whole numbers to 120.
- skip counting by 5s, 10s, and 100s..
- representing ten ones as a bundle called “ten”.
- identifying the digit (and its value) in the tens and one places in a given two digit number.
- comparing and ordering whole numbers (0-120).
- recording the comparison of two two-digit numbers using symbols  $>$ ,  $=$ , and  $<$ .
- using concrete models/drawings and strategies
- add within 100, including adding a two-digit number and a one digit number ( $23+7=30$ )
- adding a two digit number and a multiple of 10 ( $23+20=43$ ).
- mentally finding 10 more and 10 less than a given two-digit number, without having to count.
- adding and subtracting multiples of 10 in the range of 10-90 from multiples of 10 in the range 10-90.
- explaining their reasoning for selecting a problem-solving strategy.

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| <ul style="list-style-type: none"> <li>1.NBT.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</li> <li>MP2 Reason abstractly and quantitatively.</li> <li>MP3 Construct viable arguments and critique the reasoning of others.</li> <li>MP6 Attend to precision.</li> <li>MP7 Look for and make use of structure.</li> </ul> |  |                                                                                                                                  |
| <b>Content Area Literacy Standards</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | <b>21<sup>st</sup> Century Skills</b>                                                                                            |
| not applicabl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | <ul style="list-style-type: none"> <li>solve problems</li> <li>communicate clearly</li> <li>be self-directed learners</li> </ul> |

## Stage 2 - Evidence

| <b>Evaluative Criteria</b> | <b>Assessment Evidence</b> |
|----------------------------|----------------------------|
|                            | PERFORMANCE TASK(S):       |
|                            | OTHER EVIDENCE:            |

## Stage 3 – Learning Plan

*Summary of Key Learning Events and Instruction*

| <b>Language Arts Integration</b>                             | <b>Mathematics Integration</b> |
|--------------------------------------------------------------|--------------------------------|
| <ul style="list-style-type: none"> <li>1.OA.1 Use</li> </ul> | not applicable                 |
| <b>Technology Integration</b>                                | <b>District Materials</b>      |
| <ul style="list-style-type: none"> <li>1.OA.1 Use</li> </ul> |                                |

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