Adopted: September 2017 Math 2 of 5

# SAU 50 Grade 1 Mathematics Numbers and Operations in Base 10

Numbers in Base 10: counting and working with numbers up to 120; reading and writing numerals.

<u>Operations</u> in Base 10: understanding <u>place value</u> and <u>properties of operations</u> to add and subtract.

## **SAU 50 District Competency:**

Students will independently use their learning to count, group, compare, order, estimate and represent amounts.

# **Essential Questions**

- What is a number and what does it mean?
- How does the position of a digit affect its value?
- How do ones become a "ten" and tens become a "100"?

# **Acquisition**

Students will demonstrate the following to meet the standards.

- I can count to 120, starting at any number less than 120.
- I can read and write numerals and represent a number of objects with a written numeral up to 120.
- I can demonstrate how many tens and ones are in a number up to 120.
- I can compose and decompose teen numbers into tens and ones.
- I can compare two 2-digit numbers to determine if a number is equal using tens and ones.
- I can use the symbols >, <, = to compare two 2-digit numbers.
- I can add a 2-digit and a 1-digit number.
- I can add a 2-digit number and a multiple of ten.
- I can add two 2-digit numbers with/without regrouping.
- I can explain the steps, or the strategy to solve my problem.
- I can find 10 more and 10 less than a number without having to count.
- I can explain how to find 10 more and 10 less than a number.
- I can subtract a multiple of 10 from another multiple of 10 with numbers from 10-90.

#### **Standards**

### **NH College and Career Ready Standards**

#### Key to Standard Notation:

**1.NBT.1: 1** (grade level) **NBT** (domain: Numbers and Operations in Base Ten) **1** (number of the standard)

# Numbers and Operations in Base Ten Extend the counting sequence.

**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.

#### **Understand place value.**

- **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:
- **1.NBT.2.a**: 10 can be thought of as a bundle of ten ones—called a "ten".
- **1.NBT.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.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.3:** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.

# Use place value understanding and properties of operations to add and subtract.

- **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.
- **1.NBT.6:** Subtract multiples of 10 in a 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.

New Hampshire College and Career Ready Standards

#### References:

National Governors Association Center for Best Practices, Council of Chief State School Officers. (2010). *Common Core Standards for Mathematics* (United States, National Governors Association Center for Best Practices, Council of Chief State School Officers). Retrieved August 10, 2016, from <a href="http://www.corestandards.org/assets/CCSSI\_Math%20Standards.pdf">http://www.corestandards.org/assets/CCSSI\_Math%20Standards.pdf</a>

Math is fun/definitions. (n.d.). Retrieved April 17, 2017, from http://www.mathisfun.com/definitions

SAU 50

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