

Number and Operations in Base Ten: Grade 2

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:

- 2.NBT.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:
 - o 100 can be thought of as a bundle of ten tens — called a “hundred.”
 - o 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.2 Count within 1000; skip-count by 5s, 10s, and 100s.
- 2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- 2.NBT.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.
- 2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.
- 2.NBT.7 Add and subtract within 1000, 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. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
- 2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

Transfer

Students will be able to independently use their learning to solve arithmetic problems, with fluency.

Meaning

ENDURING UNDERSTANDINGS

Students will understand that...

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

ESSENTIAL QUESTIONS

- ***Which is better: being first or being last?***
- ***How do you solve a problem?***

Acquisition

Students will know...

- the relationship between addition and subtraction.
- the power of zero.
- that numbers may be written in expanded form.
- that skip counting will lead to the understanding of time and money.
- that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.

Students will be skilled at...

- adding and subtracting fluently within 100.
- adding and subtracting within 1000 using a variety of strategies and relating the strategies to a written method.
- composing or decomposing three-digit numbers when adding and subtracting.
- mentally adding and subtracting 10 or 100 to a given number between 100 and 900, both forward and backward.
- reading numbers to 1000 using base ten numerals, number names, and expanded form.
- writing numbers to 1000 using base ten numerals, number names, and expanded form.
- skip counting within 1000 (by 5s, 10s, 100s) forwards and backwards.
- comparing two three-digit numbers (up to 999) and recording their comparisons using the symbols $>$, $=$, and $<$.
- adding up to four 2-digit numbers.
- explaining why addition and subtraction strategies work.

vocabulary:

base ten, expanded form, ones, tens, hundreds, place value, compare, greater than, less than, equal, commutative property, associative property, identify property, compose, decompose, regroup, mental math, add, subtract, digit

• 2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. • MP2 Reason abstractly and quantitatively. • MP3 Construct viable arguments and critique the reasoning of others. • MP4 Model with mathematics. • MP6 Attend to precision. • MP7 Look for and make use of structure. • MP8 Look for and express regularity in repeated reasoning.		
Content Area Literacy Standards		21st Century Skills
not applicable		• <i>solve problems</i> • <i>make judgments and decisions</i> • <i>reason effectively</i>

Stage 2 - Evidence

Evaluative Criteria	Assessment Evidence
	PERFORMANCE TASK(S):
	OTHER EVIDENCE:

Stage 3 – Learning Plan

Summary of Key Learning Events and Instruction

Language Arts Integration	Mathematics Integration
• <u>1.OA.1</u> Use	not applicable
Technology Integration	District Materials
• <u>1.OA.1</u> Use	

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