

Unit 1: Add and Subtract within 100 and Understand Place Value to 1000

Content Area: **Mathematics**
Course(s):
Time Period: **Generic Time Period**
Length: **6 weeks**
Status: **Published**

Standards

MA.2.2.NBT.A	Understand place value.
LA.2.W.2.5	With guidance and support from adults and peers, focus on a topic and strengthen writing as needed through self-reflection, revising and editing.
MA.2.2.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:
MA.2.2.NBT.A.1a	100 can be thought of as a bundle of ten tens — called a “hundred.”
MA.2.2.OA.A.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
TECH.8.1.2.A.CS2	Select and use applications effectively and productively.
LA.2.RI.2.4	Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
MA.2.2.NBT.A.1b	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).
LA.2.RI.2.5	Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
MA.2.2.NBT.A.2	Count within 1000; skip-count by 5s, 10s, and 100s.
LA.2.L.2.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
MA.2.2.NBT.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
MA.2.2.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.
MA.2.2.OA.B.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
MA.2.2.NBT.B	Use place value understanding and properties of operations to add and subtract.
TECH.8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
CAEP.9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
MA.2.2.OA.C	Work with equal groups of objects to gain foundations for multiplication.
LA.2.RF.2.4	Read with sufficient accuracy and fluency to support comprehension.
MA.2.2.NBT.B.8	Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or

	100 from a given number 100–900.
LA.2.RF.2.3	Know and apply grade-level phonics and word analysis skills in decoding words.
LA.2.SL.2.1	Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
MA.2.2.OA.C.3	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
LA.2.RI.2.10	Read and comprehend informational texts, including history/social studies, science, and technical texts, at grade level text complexity proficiently with scaffolding as needed.
TECH.8.1.2.A.1	Identify the basic features of a digital device and explain its purpose.
TECH.8.1.2.A.CS1	Understand and use technology systems.

Essential Questions

Chapter 1 Essential Question: How do you use place value to find the values of numbers and describe numbers in different ways?

Lesson 1.1 Essential Question: How are even numbers and odd numbers different?

Lesson 1.2 Essential Question: Why can an even number be shown as the sum of two equal addends?

Lesson 1.3 Essential Question: How do you know the value of a digit?

Lesson 1.4 Essential Question: How do you describe a 2-digit number as tens and ones?

Lesson 1.5 Essential Question: What are different ways to write a 2-digit number?

Lesson 1.6 Essential Question: How can you show the value of a number in different ways?

Lesson 1.7 Essential Question: How does finding a pattern help you find all the ways to show a number with tens and ones?

Lesson 1.8 Essential Question: How do you count by 1s, 5s, and 10s with numbers less than 100?

Lesson 1.9 Essential Question: How do you count by 1s, 5s, and 10s with numbers less than 1000?

Chapter 2 Essential Question: How can you use place value to model, write, and compare 3-digit numbers?

Lesson 2.1 Essential Question: How do you group tens as hundreds?

Lesson 2.2 Essential Question: How do you write a 3-digit number for a group of tens?

Lesson 2.3 Essential Question: How do you show a 3-digit number using blocks?

Lesson 2.4 Essential Question: How do you write a 3-digit number that is shown by a set of blocks?

Lesson 2.5 Essential Question: How do you know the values of the digits in numbers?

Lesson 2.6 Essential Question: How do you write 3-digit numbers using words?

Lesson 2.7 Essential Question: What are 3 ways to write a 3-digit number?

Lesson 2.8 Essential Question: How can you use blocks or quick pictures to show the value of a number in different ways?

Lesson 2.9 Essential Question: How do you use place value to find 10 more, 10 less, 100 more, or 100 less than a 3-digit number?

Lesson 2.10 Essential Question: How does place value help you identify and extend counting patterns?

Lesson 2.11 Essential Question: How can you make a model to solve a problem about comparing numbers?

Lesson 2.12 Essential Question: How do you compare 3-digit numbers?

Student Learning Objectives

Unit Focus:

- Represent and solve problems involving addition and subtraction
- Add and subtract within 20
- Understand place value
- Use place value understanding and properties of operations to add and subtract

Critical Area: Extending understanding of base-ten notation

Chapter 1:

SWBAT classify numbers up to 20 as even or odd.

SWBAT write equations with equal addends to represent even numbers.

SWBAT use place value to describe the values of digits in 2-digit numbers.

SWBAT write 2-digit numbers in expanded form.

SWBAT write 2-digit numbers in word form, expanded form, and standard form.

SWBAT apply place value concepts to find equivalent representations of numbers.

SWBAT solve problems by finding different combinations of tens and ones to represent 2-digit numbers using the strategy find a pattern.

SWBAT extend counting sequences within 100, counting by 1s, 5s, and 10s.

SWBAT extend counting sequences within 100, counting by 1s, 5s, 10s, and 100s.

Chapter 2:

SWBAT understand that each group of 10 tens is equivalent to 1 hundred.

SWBAT write 3-digit numbers that are represented by groups of tens.

SWBAT use concrete and pictorial models to represent 3-digit numbers.

SWBAT apply place value concepts to write 3-digit numbers that are represented by pictorial models.

SWBAT use place value to describe the values of digits in numbers to 1,000.

SWBAT read and write 3-digit numbers in word form.

SWBAT write 3-digit numbers in expanded form and in standard form.

SWBAT apply place value concepts to find equivalent representations of numbers.

SWBAT identify 10 more, 10 less, 100 more, or 100 less than a given number.

SWBAT extend number patterns by counting on by tens or hundreds.

SWBAT solve problems involving number comparisons by using the strategy make a model.

SWBAT compare 3-digit numbers using the $>$, $<$, and $=$ symbols.

Materials

Print Resources:

- Student Edition Chapter 1
- Student Edition Chapter 2
- Chapter 1 Resources
- Chapter 2 Resources
- Grab and Go Center Kit
- Practice and Homework in Student Edition (Lesson Check and Spiral Review for each lesson)
- Reteach and Enrich in the Chapter Resources
- Connecting Cubes, Base-ten blocks, Counters, Vocabulary cards
- Math Boards

Technology:

- Interactive Student Edition
- Interactive Teacher Edition
- Personal Math Trainer
- Math on the Spot Videos
- HMH Mega Math
- Digital Management System
- Animated Math Models
- iTools
- Multimedia eGlossary
- Digital Assessments
- Professional Development Videos

Achieve the Core:

<http://achievethecore.org/page/2853/go-math-k-5-guidance-documents>

Activities

Number Sense and Place Value

Unit Project: By the Sea

Vocabulary Reader: Whales (Social Studies connection/questions about geography)

Chapter One: Number Concepts

Game: Three in a Row

Vocabulary Game: Going to the Farmers Market

Lesson 1: Hands-On: Even and Odd Numbers

Lesson 2: Represent Even Numbers

Lesson 3: Understand Place Value

Lesson 4: Expanded Form

Lesson 5: Different Ways to Write Numbers

Mid-Chapter Checkpoint

Lesson 6: Different Names for Numbers

Lesson 7: Tens and Ones

Lesson 8: Counting Patterns Within 100

Lesson 9: Counting Patterns Within 1,000

Chapter Two: Numbers to 1,000

Game: Fish for Digits

Vocabulary Game: Guess the Word

Lesson 1: Group Tens as Hundreds

Lesson 2: Explore 3-Digit Numbers

Lesson 3: Hands-On: Model 3-Digit Numbers

Lesson 4: Hundreds, Tens, and Ones

Lesson 5: Place Value to 1,000

Lesson 6: Number Names

Lesson 7: Different Forms of Numbers

Mid-Chapter Checkpoint

Lesson 8: Different Ways to Show Numbers

Lesson 9: Count On and Count Back by 10 and 100

Lesson 10: Number Patterns

Lesson 11: Compare Numbers

Lesson 12: Compare Numbers

Other Activities:

[2.OA.A.1 Pencil and a Sticker](#)

[2.OA.B.2 Building toward fluency](#)

[2.NBT.A.1 Making 124](#)

[2.NBT.A.1 Largest Number Game](#)

[2.NBT.A.3 Looking at Numbers Every Which Way](#)

[2.NBT.A.4 Ordering 3-digit numbers](#)

[2.NBT.B.8 Choral Counting](#)

Assessments

MAP Assessment

- Show What You Know
- Share and Show Activities
- On Your Own Activities
- ThinkSmarter
- Math Journals
- Response to Essential Questions
- Practice and Homework Activities (Lesson Check and Spiral Review for each lesson)
- Diagnostic Interview Task
- Digital Personal Math Trainer
- Lesson Quick Check
- Mid-Point Chapter Checkpoint
- Chapter Review
- Chapter Test
- Performance Assessment Task

Fact Fluency

GO Math! Resources for Fluency:

- Games (Student Edition)
- Fluency Standard Lessons (Student Edition)

- Fluency Builder (Teacher Edition)
- Strategies and Practice for Skills and Facts Fluency- Primary, GK-3
- Teacher Resource Book
- HMH Mega Math
- Personal Math Trainer: Standards Quizzes
- Animated Math Models

Other Resources for Fluency:

- Fastt Math
- Flash Cards

MA.2.2.OA.B.2

Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

MA.2.2.NBT.B.5

Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Accommodations and Modifications

Materials and Resources that provide opportunities to accommodate and modify include:

- Personal Math Trainer (adaptive and intervention system)
- Interactive Student Edition
- Leveled quizzes and tests
- Leveled performance tasks
- Grab & Go Differentiated Centers
- Intensive Intervention Resource
- Strategic Intervention Resource
- Reteach activities
- RTI tiered resources and activities
- Math on the Spot videos
- Fastt Math

