Unit 1 - Chapter 1: Place Value, Addition, and Subtraction with Whole Numbers

Content Area: **Mathematics**
Course(s): **Math 4**
Time Period: **September**
Length: **3 weeks**
Status: **Published**

Unit Summary

Students will develop understanding and fluency with multi-digit additon and subtraction. Students will read and write numbers using place value, and use place value to round multi-digit numbers to any place. Students will also make reasonable estimates when adding and subtracting up to any place. We will use real world examples for comparison problems with addition and subtraction.

Standards

MA.4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
MA.4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
MA.4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.
MA.4.NBT.B.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.
TECH.8.1.5	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.5.A.CS1	Understand and use technology systems

Student Learning Objectives

Students will learn to...

- model the 10-to-1 relationship among place-value positions in the base-ten number system.
- read and write whole numbers in standard form, word form, and expanded form.
- compare and order whole numbers based on the values of the digits in each number.
- round a whole number to any place.
- rename whole numbers by regrouping.
- add whole numbers and determine whether solutions to addition problems are reasonable.
- subtract whole numbers and determine whether solutions to subtraction problems are reasonable.

Essential Questions

How can you describe the value of a digit?

How can you read and write numbers through hundred thousands?

How can you compare and order numbers?

How can you round numbers?

How can you rename a whole number?

How can you add whole numbers?

How can you subtract whole numbers?

How can you use the strategy draw a diagram to solve comparison problems with addition and subtraction?

Enduring Understandings

Students will understand that:

- digits have different values based on their position in a number.
- drawing a diagram can aid in solving problems.
- estimating a sum or difference will help determine whether the answer is reasonable.

Application

Students will be able to independently use their learning to:

- read and write whole numbers in standard form, word form, and expanded form.
- compare and order whole numbers based on the values of the digits in each number.
- round a whole number to any place value.
- rename whole numbers by regrouping.
- add whole numbers and determine whether solutions to addition problems are reasonable.
- subtract whole numbers and determine whether solutions to subtraction problems are reasonable.

Skills

Students will be skilled at:

- reading and writing numbers in various forms.
- comparing and ordering numbers.
- rounding to a whole number.
- renaming whole numbers by regrouping.
- adding whole numbers.
- subtracting whole numbers.
- determining whether solutions to addition and subtraction problems are reasonable.