Chapter 4 - Two-Digit Addition

Content Area: **Mathematics**
Course(s): **Math 2**
Time Period: **December**
Length: **22 Days**
Status: **Published**

Unit Summary

In this unit students will learn how to break apart ones to add, use compensation, break apart addends as tens and ones, model regrouping for addition, model and record 2-digit addition, practice 2-digit addition, and use the strategy draw a diagram to solve 2-digit addition.

Standards

MA.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.
MA.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.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.
MA.2.NBT.B.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.
MA.2.NBT.B.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.
MA.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.
MA.2.NBT.B.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
TECH.8.1.2.A.CS1	Understand and use technology systems.
TECH.8.1.2.A.CS2	Select and use applications effectively and productively.

Student Learning Objectives

Students will learn to...

- Find a sum by breaking apart a 1-digit addend to make a 2-digit addend a multiple of 10.

- Use compensation to develop flexible thinking for 2-digit addition.
- Apply place-value concepts when using a break-apart strategy for 2-digit addition.
- Model 2-digit addition with regrouping.
- Draw quick pictures and record 2-digit addition using the standard algorithm.
- Record 2-digit addition using the standard algorithm.
- Practice 2-digit addition with and without regrouping.
- Rewrite horizontal addition problems vertically in the standard algorithm format.
- Solve problems involving 2-digit addition using the strategy draw a diagram.

Essential Questions

- How do you use place value to add 2-digit numbers, and what are some different ways to add 2-digit numbers?
- How does breaking apart a number make it easier to add?
- How can you make an addend a ten to help solve an addition problem?
- How do you break apart addends to add tens and then add ones?
- When do you regroup in addition?
- How do you record 2-digit addition?
- How do you record the steps when adding 2-digit numbers?
- How do you record the steps when adding 2-digit numbers?
- What are two different ways to write addition problems?
- How can drawing a diagram help when solving addition problems?

Enduring Understandings

Students will understand that...

- place value can be utilized to add 2-digit numbers, and some different ways to add 2-digit numbers.

Application

Students will be able to independently use their learning to...

- utilize place value to add 2-digit numbers, and some different ways to add 2-digit numbers.

Skills

Students will be skilled at...

- Breaking apart ones to add.
- Using compensation.

- Breaking apart addends as tens and ones.
- Modeling regrouping for addition.
- Modeling and record 2-digit addition.
- 2-digit addition.
- Practicing two digit addition.
- Rewriting 2 digit addition.
- Problem solving addition.
- Writing equations to represent addition.
- Finding sums of three addends.
- Finding sums for four addends.