

Grade 2 Mathematics	Unit 5 – Addition to 200
Big Idea/Rationale:	<p>The goal for Unit 5 is to have children grasp the concept of a new ten or a new hundred in 2-digit addition. The concept of grouping ones into a new ten, or tens into a new hundred, can be readily demonstrated with physical objects and then with sticks and circles. Through the use of these tools, children are able to understand the concept behind what they are doing when they add and can develop their own solution methods before being given any instructions.</p> <ul style="list-style-type: none"> • Use Place Value • Add 2-Digit Numbers • Money, Sequences, and 100 Matrix
Enduring Understandings:	<p>Students will understand that:</p> <ul style="list-style-type: none"> • A numeration system is a system for naming numbers. • An understanding of place value allows children to compare numbers. • Children develop an understanding of our numeration system by repeated experiences counting objects. • There are many symbolic and pictorial ways to represent numbers. • Numbers can be used, classified, and represented in different ways. • Relationships can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways. • Breaking apart and adding by place value turns the complex calculation into a set of simpler calculations where all one needs to know is place value and basic facts. • Counting money is a form of mental math and is related to children’s understanding of place value and their ability to skip count. • The study of money provides many opportunities for creating equivalent expressions.
Essential Questions:	<ul style="list-style-type: none"> • How can you use ones to make tens? • In a two digit number, can you use manipulatives to show what the first and second digits tell us? • What happens if you change the places of the digits in a two-digit number? • How can you figure out which number is missing on a hundred chart? • How can you model and record adding a one-digit number to a two-digit number? • How can you use paper and pencil to add one-digit numbers to two-digit numbers? • How can you add a two-digit number to another two-digit number? • How can you find the value of a group of dimes, nickels, pennies? • How do you show \$1.00, which group of coins? • How can an organized list show the different ways to make the same

	amount of money?
Lesson Objectives:	<ul style="list-style-type: none"> • Represent numbers to 200. • Identify patterns among numbers in different place value positions. • Relate groups of ten to decade numbers and 100. • Represent ones, tens, and hundreds in different ways. • Write 2- and 3-digit numbers through 200. • Compare totals of ones and tens. • Represent 2-digit and 3-digit numbers • Write numbers up to 99 in word form. • Add a 1-digit number to a 2-digit number. • Practice exchanging pennies for dimes. • Identify and compare 100-partners and 10-partners • Solve problems with tens and some ones. • Add decade numbers over 100. • Add 1- and 2-digit numbers to 100. • Solve ten-based story problems. • Identify sets as odd or even. • Identify numbers as odd or even. • Estimate how many of an object is shown. • Estimate how many of an object will fit in a given space. • Invent a method of solving 2-digit addition problems. • Group ones to make a new ten; group tens to make a new hundred. • Apply addition concepts and strategies to a real-world situation. • Solve 2-digit addition problems using various methods. • Differentiate tens and ones in 2-digit addition. • Use a preferred method to solve 2-digit addition exercises. • Differentiate between ones, tens, and hundreds in 2-digit addition exercises. • Add 2-digit numbers with totals greater than 100. • Compare and contrast various solution methods for 2-digit addition. • Recognize, discuss, and correct common 2-digit addition errors. • Solve 2-digit addition problems. • Review the definition of perimeter. • Measure the perimeter of regular and irregular shapes. • Represent 2- and 3- digit money amounts using dollars, dimes, and pennies. • Apply addition concepts and strategies to real-world situations. • Add coins to amounts between \$1.00 and \$2.00. • Combine pennies, nickels, and dimes to make different money amounts. • Add money amounts to purchase two items between \$1.00 and \$2.00. • Skip count forward and backward.

	<ul style="list-style-type: none"> • Analyze relationships between numbers in sequences. • Discuss patterns in a horizontal hundred grid. • Find partners of 2-digit numbers and partners of 100. • Represent and analyze repeating patterns. • Extend object and number patterns. • Describe missing units in a pattern.
<p>Common Core State Standards:</p>	<p>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</p> <p>2.OA.B.1: Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.</p> <p>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 2's; write an equation to express an even number as a sum of two equal addends.</p> <p>2.NBT.A.1: Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and one; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:</p> <p>2.NBT.A.1.A: 100 can be thought of as a bundle of ten tens – called a “hundred.”</p> <p>2.NBT.A.1.B: 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).</p> <p>2.NBT.A.2: Count within 1000, skip-count by 5s, 10s, and 100s.</p> <p>2.NBT.A.3: Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</p> <p>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.</p> <p>2.NBT.B.6: Add up to four two-digit numbers using strategies based on place value and properties of operations.</p> <p>2.NBT.B.9: Explain why addition and subtraction strategies work, using place value and the properties of operations.</p> <p>2.MD.B.5: Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.</p> <p>2.MD.B.6: Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2 ... and represent whole-number sums and differences within 100 on a number line diagram.</p> <p>2.MD.C.8: Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and c symbols appropriately.</p>

	Mathematical Practices
Materials and Resources:	Grade 2 Math Expressions, Math Journals, manipulatives, IXL Mathematics