Grade: 3 **Subject:** Mathematics	**Unit 1: Place Value and Multi-Digit Addition and Subtraction**
Big Idea/Rationale	• This unit encourages students to develop multi-digit addition and subtraction methods that are meaningful and easily used by students. Place-value activities build understanding of the base-ten numeration system and provide the foundation to understand grouping. Students will use drawing to show grouping and ungrouping, and then will describe and discuss the process.
Enduring Understanding (Mastery Objective)	Students will understand that: • Place value can help you order and compare numbers. • One representation may sometimes be more helpful than another; and, used together, multiple representations give a fuller understanding of a problem. • Some real-world problems involving joining, separating, part-part-whole, part-whole-part, or comparison can be solved using addition or subtraction. • Two or more numbers can be added in any order; and the sum of any number and 0 is that number. • The standard subtraction algorithm for 2- and 3- digit numbers breaks the calculation into simpler calculations using place value, starting with the ones, then the tens, and then the hundreds. Sometimes it is necessary to rename 1 hundred as 10 tens or 1 ten as 10 ones. • Place-value relationships can help simplify subtracting across zeros. • Information in a problem can often be shown using a picture or diagram and used to understand and solve the problem.
Essential Questions (Instructional Objective)	• How can you read and write numbers in the hundreds? Thousands? Greater numbers? • How can place value help you compare whole numbers? • How can you order numbers? • How can you use addition to solve problems? • How can you solve a problem by drawing a picture? • How can you subtract? • How can you use models to subtract 2-digit and/or 3 digit numbers with regrouping? • How can you add and subtract money?
Content (Subject Matter)	• Make and interpret place value drawings. • Recognize that 1,000 is 10 hundred. • Identify the value of a digit. • Make drawings to represent money amounts. • Group and ungroup multi-digit numbers. • Solve word problems that require understanding of place value. • Identify numbers from scrambled place value names. • Solve place value word problems.

	• Discuss and apply multi-digit addition methods. • Make proof drawing to show that addition methods are correct. • Apply and discuss multi-digit addition methods. • Discuss why it is necessary to align places before adding. • Add money amounts. • Decide when and how to group in multi-digit addition. • Practice adding money amounts. • Practice adding money amounts. • Identify and explain errors in addition problems. • Explore methods for subtracting multi-digit numbers. • Discuss a common subtraction error. • Subtract with zeros in the top number. • Solve subtraction problems involving money. • Subtract using two different methods. • Explain when and how to ungroup when subtracting multi-digit numbers. • Relate grouping in addition and ungrouping in subtraction. • Practice and discuss subtraction methods. • Practice and discuss addition and subtraction methods. • Solve a variety of problems using mathematical concepts and skills. • Use the mathematical processes of problem solving, connections, reasoning and proof, communication, and representation.
Skills/ Benchmarks (CCSS Standards)	• **3.NBT.A.1:** Use place value understanding to round whole numbers to the nearest 10 or 100. • **3.NBT.A.2:** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. • **Mathematical Practices**
Materials and Resources	• Math Expressions, Student Journals, Manipulatives, Math themed literature, BrainPop, IXL Mathematics