Second Grade

Unit Name	Unit 5 - Representing Sums and Differences within 1,000.	Unit duration (Days)	6 weeks

GA K-12 Standards

In this unit, students will create, locate numbers, and represent whole number sums and differences within a standard unit of measurement on a number line diagram. Students will use these diagrams to illustrate part-while strategies. Students will continue to develop their understanding of the value of numbers to 1,000 by representing, ordering, and comparing. Students will demonstrate an understanding of counting sequences. Students will apply the understanding of addition to 100 to solve real world problems involving addition and subtraction within 1,000.

2.NR.1: Using the place value structure, explore the count sequences to represent, read, write, and compare numerical values to 1000 and describe basic place-value relationships and structures.
- **2.NR.1.1** Explain the value of a three-digit number using hundreds, tens, and ones in a variety of ways.
- **2.NR.1.2** Count forward and backward by ones from any number within 1000. Count forward by fives from multiples of 5 within 1000. Count forward and backward by 10s and 100s from any number within 1000. Count forward by 25s from
- **2.NR.1.3** Represent, compare, and order whole numbers to 1000 with an emphasis on place value and equality. Use >, =, and < symbols to record the results of comparisons.

2.NR.2: Apply multiple part-whole strategies, properties of operations and place value understanding to solve real-life, mathematical problems involving addition and subtraction within 1,000. (within 100 for this unit). ==****Teacher Note: 2nd grade should only being adding and subtracting tens and hundreds to 3 digit numbers and not any 3 digit with any 3 digit**==
- **2.NR.2.1** Fluently add and subtract within 20 using a variety of mental, part whole strategies.
- **2.NR.2.2** Find 10 more or 10 less than a given three-digit number and find 100 more or 100 less than a given three-digit number.
- **2.NR.2.3** Solve problems involving the addition and subtraction of two-digit numbers using part-whole strategies.
- **2.NR.2.4** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

2.PAR.4: Identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns.
- **2.PAR.4.1** Identify, describe, and create a numerical pattern resulting from repeating an operation such as addition and subtraction.
- **2.PAR.4.2** Identify, describe, and create growing patterns and shrinking patterns involving addition and subtraction up to 20.

2.MDR.5: Estimate and measure the lengths of objects and distance to solve problems found in real-life using standard units of measurement, including inches, feet, and yards.
- **2.MDR.5.4** Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.
- **2.MDR.5.5** Represent whole-number sums and differences within a standard unit of measurement on a number line diagram.

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2.MP.1-8: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.

- **2.MP.1** Make sense of problems and persevere in solving them.
- **2.MP.2** Reason abstractly and quantitatively.
- **2.MP.3** Construct viable arguments and critique the reasoning of others.
- **2.MP.4** Model with mathematics.
- **2.MP.5** Use appropriate tools strategically.
- **2.MP.6** Attend to precision.
- **2.MP.7** Look for and make use of structure.
- **2.MP.8** Look for and express regularity in repeated reasoning.

The [Framework for Statistical Reasoning](#) and the [Mathematical Modeling Framework](#) should be taught throughout the units. The [K-12 Mathematical Practices](#) should be evidenced at some point throughout each unit depending on the tasks that are explored. It is important to note that MPs 1, 3 and 6 should support the learning in every lesson.

Essential Questions/ I CAN Statements

- I can select an appropriate strategy to solve equations and justify my answer.
- I can use mental math to solve addition and subtraction problems.
- I can solve problems with unknowns in all positions.
- I can recognize patterns when adding and subtracting.
- I can solve multi-step word problems.
- I can apply place value understanding and the properties of operations when adding and subtracting within 1000.

Tier II Vocabulary Words- High Frequency Multiple Meaning	**Tier III Vocabulary Words-** Subject/ Content Related Words
Vocabulary: comparing, compose, decompose, equal, join, model	Ones, tens, hundreds, place value, greater than, comparing [K-12 Mathematics Glossary](#)

Assessments

Formative Assessment(s):
- MCS K-5 Activity & Assessment Collection
- Unit 5 Assessment

It is the responsibility of each schools' grade level PLC to identify appropriate instructional lessons and resources, based on data and student needs, using the suggested pacing duration. The following learning tasks have been vetted to align to the standards included in this unit. The GA Dept. of Education strongly recommends that any additional tasks, resources, and/or assessments used for instruction should be vetted using the [Quality Assurance Rubric](#), to ensure alignment to the state standards.

Objective or Content	Learning Experiences		Differentiation Considerations

2.NR.1 Using the place value structure, explore the count sequences to represent, read, write, and compare numerical values to 1000 and describe basic place-value relationships and structures.
 	
2.NR.2 Apply multiple part-whole strategies, properties of operations and place value understanding to solve real-life, mathematical problems involving addition and subtraction within 1,000. (within 100 for this unit).
	GA DOE Learning Plans
	
	Addition Strategies (2-5 Days)
	 In this learning plan, students will be introduced to various addition strategies.
	   ● Teacher Guidance
	   ● Student Materials
	
	Subtraction Strategies (2-5 Days)
	 In this learning plan, students will be introduced to various subtraction strategies.
	   ● Teacher Guidance
	   ● Student Materials
	
	CGI Problem Types
	In this learning plan, students will solve a variety of addition and subtraction problems within 1,000 with unknowns in all positions.
	   ● Teacher Guidance
	   ● Student Reproducibles
	
	A Day at the Arcade (1-2 Days)
	In this learning plan, students will use their understanding of place value and patterns to add and subtract multiples of 10 to any number within 1,000.
	   ● Teacher Guidance
	   ● Student Reproducibles
	
	Time to Exercise (2-3 Days)
	In this learning plan, students will use a variety of strategies such as compensation, known facts, and friendly numbers to add up to four 2-digit numbers within 1,000.
	   ● Teacher Guidance
	   ● Student Reproducibles
		MCS Curriculum Resources
		
		MIP Module 8: Extending Understanding of Multi Digit Addition
		The key idea focused on in this module is adding 3-digit numbers, using an understanding of place value.
		   ● Decomposing by Place Value p.185-168
		   ● Open Number Lines p. 186
		   ● Compensation p. 187
		   ● Adding within 1,000 Using Base-Ten Blocks or Number Disks p.187-191
		   ● Adding Using Partial Sums p.192-194
		   ● Adding Partial Sums with Regrouping p. 194-197
		   ● Using Open Number Lines to Add 3-Digit Numbers p.197-199
		   ● Using Compensation to Add 3-Digit Numbers p. 199-200
		
		MIP Module 9: Extending Understanding of Multi Digit Subtraction
		The key ideas focused on in this module include: applying varied place value strategies to subtract 3-digit numbers and explaining strategies to show understanding of the subtraction process.
		   ● Decomposition p. 205-206
		   ● Subtracting Across Zeros p. 206-207
		   ● Open Number Lines p.207-208
		   ● Using Place Value Models to Subtract 3-Digit Numbers p. 209-210
		   ● Subtracting Across Zeros p. 211-213
		   ● Subtracting 3-Digit Numbers Using Compensation p.214-216
		   ● Subtracting 3-Digit Numbers Using Open Number Lines p.216-217
			Outdoor Counting 0-100 - Forwards and Backwards Count forwards and backwards number word sequence in the range 0 −100, starting and ending with any number
			
			Tape Measure Counting Count forwards and backwards using numbers to 100
			
			Walk the Bridge Count forwards and backwards number word sequence in the range 0 −100, starting and ending with any number

	Pet Shop (2-3 Days) *In this learning plan, students will use place value understanding and the properties of operations to solve addition problems with up to four addends.* ● Teacher Guidance ● Student Reproducibles ● **How Many Hats? (1-2 Days)** *In this learning plan, students will use bar graphs as a tool for representing, analyzing and interpreting data.* ● Teacher Guidance ● Student Materials **Menu Math (3-4 Days)** *In this learning plan, students will use base-ten strategies and the properties of operations to add up to four addends and subtract within 100.* ● Teacher Guidance ● Student Materials **Two-Step Tales (3-4 Days)** *In this learning plan, students will solve two-step addition and subtraction problems with unknowns in all positions.* ● Teacher Guidance ● Student Reproducibles **Candy Bowl** *In this learning plan, students will solve one and two-step word problems involving addition and subtraction with unknowns in all positions.* ● Teacher Guidance ● Student Reproducibles	**SAVVAS enVision Topic 10: Add Within 1,000 Using Models and Strategies** ● Lesson 10-1: Add 10 and 100 ● Lesson 10-2: Add on an Open Number LIne ● Lesson 10-3: Add Using Models ● Lesson 10-4: Continue to Add Using Models and Place Value ● Lesson 10-5: Add Using Place Value and Partial Sums ● Lesson 10-6: Explain Addition Strategies ● Lesson 10-7: Problem Solving Repeated Reasoning **SAVVAS enVision Topic 11: Subtract Within 1,000 Using Models and Strategies** ● Lesson 11-1: Subtract 10 and 100 ● Lesson 11-2: Subtract on an Open Number Line ● Lesson 11-3: Subtract Using Models ● Lesson 11-4: Subtract Using Models and Place Value ● Lesson 11-5: Explain Subtraction Strategies	
2.PAR.4: Identify, describe, extend, and create repeating patterns, growing patterns, and shrinking patterns.	**Comparing Numbers (2-3 Days)** *In this learning plan, students will reinforce place value understanding as well as strategies for comparing 3-digit numbers with arrow cards and number lines.* ● Teacher Guidance ● Student Materials	**MIP Module 5: Comparing Two 3-Digit Numbers** *The key ideas focused on in this module includes comparing 3-digit numbers using a variety of strategies like number lines, base-ten models, or benchmarks, discovering a rule to compare 3-digit numbers based on the value of the digits and comparing more than two numbers (ordering numbers).*	

		● Comparing 3-Digit Numbers Using a Number Line p.117-120 **SAVVAS enVision Topic 9: Numbers to 1,000** ● Lesson 9-9: Compare Numbers on the Number Line	

Content Resources	
MCS Links: ● [MCS 2nd Grade Math Curriculum Map](#) ● [MCS Math Instructional Framework](#) **GA DOE Links:** *Access all GADOE Curriculum Resources at the following site: [GaDOE Inspire](#).*	**Additional Resources:** ● Base Ten Blocks ● Number Lines