Marietta City Schools
District Unit Planner

Third Grade

Unit Name	*Unit* **4***:* Place Value, Addition & Subtraction up to 10,000	**Unit duration (Days)**	*5-6 weeks*

GA K-12 Standards

In this unit, students will extend their understanding of the base-ten system to include numbers to 10,000. Students will use their understanding of place value to compare four-digit numbers, round whole numbers up to 1,000 to the nearest 10 or 100, fluently add and subtract within 1,000 while expanding the application of part-whole strategies, properties of operations and place value to add and subtract within 10,000. Students will represent problems using equations with unknowns in all positions and assess the reasonableness of their answers.

3.NR.1 Use place value reasoning to represent, read, write, and compare numerical values up to 10,000 and round whole numbers up to 1,000
- **3.NR.1.1** Read and write multi-digit whole numbers up to 10,000 to the thousands using base-ten numerals and expanded form
- **3.NR.1.2** Use place value reasoning to compare multi-digit numbers up to 10,000, using >, =, and < symbols to record the results of comparisons.
- **3.NR.1.3** Use place value understanding to round whole numbers within up to 1,000 to the nearest 10 or 100

3.PAR.2 Use part-whole strategies to represent and solve real-life problems involving addition and subtraction with whole numbers up to 10,000.
- **3.PAR.2.1** Fluently add and subtract within 1000 to solve problems
- **3.PAR.2.2** Apply part-whole strategies, properties of operations and place value understanding, to solve problems involving addition and subtraction within 10,000. Represent these problems using equations with a letter standing for the unknown quantity. Justify solutions

3.MDR.5 Solve real-life, mathematical problems involving length, liquid volume, mass, and time and analyze graphical displays of data to answer relevant questions
- **3.MDR.5.1** Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life
- **3.MDR.5.5** Estimate and measure liquid volumes, lengths and masses of objects using customary units. Solve problems involving mass, length, and volume given in the same unit, and reason about the relative sizes of measurement units within the customary system.

3. MP: 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.
- **MP.1** Make sense of problems and persevere in solving them.
- **MP.2** Reason abstractly and quantitatively.
- **MP.3** Construct viable arguments and critique the reasoning of others.

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- **MP.4** Model with mathematics.
- **MP.5** Use appropriate tools strategically.
- **MP.6** Attend to precision.
- **MP.7** Look for and make use of structure.
- **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

- (3.NR.1) Why is place value important?
- (3.NR.1) How can we effectively estimate numbers?
- (3.NR.1) How does estimation help us see whether or not our answers are reasonable?
- (3.PAR.2) How are addition and subtraction related?
- (3.PAR.2) What strategies, properties of operation, and place value can be used to solve real world problems?
- (3.MDR.5) How can you use graphs to answer a question?
- (3.MDR.5) How can graphs be used to organize and compare data?

Tier II Vocabulary Words- High Frequency Multiple Meaning	Tier III Vocabulary Words- Subject/ Content Related Words
Add, mass, midpoint, compose, ounces, decompose, operation, difference, place value, equal, equation, regroup, estimate, round, expression, subtract, sum, greater than, unknown	addend, liquid volume, algorithm, benchmark number, minuend, pounds, expanded form [K-12 Mathematics Glossary](#)

Assessments

Formative Assessment(s):
- 3.NR.1 MCS Mini
- 3.NR.1 and 2.PAR.2 MCS Mini
- 3.NR.1.3 and 3.PAR.2 Savvas Topic 8 Performance Task, TE P. 331-332 (*1,000 only)
- 3.PAR.2 Savvas Topic 8 Assessment (*1,000 only)
- 3.PAR.2 Savvas Topic 9 Performance Task, TE pp. 375-376 (*1,000 only)
- 3.PAR.2 MIP Module 6, Formative Assessment, p.168 (Addition) (*extend numbers to 10,000)
- 3.PAR.2 MIP Module 7, Formative Assessment, p. 188 (Subtracting) (*extend numbers to 10,000)
- 3.MDR.5 GaDOE Task: Analyzing and Interpreting Data, Diagnostic 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

Objective or Content	Learning Experiences	Differentiation Considerations
3.NR.1 Use place value reasoning to represent, read, write, and compare numerical values up to 10,000 and round whole numbers up to 1,000.	**GA DOE Learning Plans** **Mathematical Modeling/Camping** *Also includes 3.PAR.2 and 3.MDR.5* *In this learning plan, students will focus on place value as well as addition and subtraction within 10,000. (Suggested Timeframe Integrated throughout the Whole Unit)* ● Teacher Guidance ● Student Reproducibles **Island Hop** *Also includes 3.MDR.5* *In this learning plan, students will be introduced to rounding to the nearest 10 within 100. (Suggested TImeframe 2-3 days)* ● Teacher Guidance ● Student Reproducibles **World Record Auditions** *In this learning plan, students will use authentic situations to estimate and round numbers to the nearest 100. (Suggested Timeframe 1-2 days)* ● Teacher Guidance ● Student Reproducibles **Shake, Rattle, and Roll** *In this learning plan, students will use a number line to round numbers up to 1,000 to the nearest 10 or 100.(Suggested Timeframe 2-3 days)* ● Teacher Guidance ● Student Reproducibles **Building 10,000** *In this learning plan, students will build models of numbers up to 10,000 (Suggested Timeframe 3-4 days)* ● Teacher Guidance ● Student Reproducibles	**MCS Curriculum Resources** **SAVVAS enVision Topic 8: Use Strategies and Properties to Add and Subtract** *Students use strategies based on place value and properties of operations to add and subtract within 1,000 and to multiply a one-digit number by a multiple of 10.* ● Lesson 8-5: Round Whole Numbers ● Lesson 8-5: Round Whole Number,s Additional Practice, TE p.101 **SAVVAS enVision Topic 17: Step Up to Fourth Grade** *Students begin selected skills to step up to Fourth Grade.* ● Lesson 17-1: Place Value Relationships **MIP Module 5: Rounding Numbers to the Nearest Ten or Hundred** *The key ideas focused on in this module include rounding whole numbers to the nearest hundred, rounding whole numbers to the nearest ten, understanding what rounding is and how it can be used to determine the reasonableness of answers.* ● Rounding to the Nearest Hundred with a Number Line, p. 138 (*extend to 1,000) ● Build and Round it, p. 140 (*extend to 1,000) ● Discovering the rule for Rounding to the nearest hundred, p. 141 ● Ready, Set, Round, p. 141 ● Building Number Lines, p. 143 ● Up the Hill or Down?, p. 144 ● Coyotes All Around, p. 149 ● Round Up Card Game, p. 150 ● Split the Hundred Chart, p. 146-147 ● More Rounding to the Nearest Ten, p. 147 ● Finding the Rule for Rounding to Nearer Ten, p. 148 ● Additional Ideas for Support and Practice, p. 149-150	Can You Guess to 1,000: Use place value understanding to round whole numbers up to 1000 to the nearest 10 or 100. Place Your Bet to 1,000: Use place value understanding to round whole numbers up to 1000 to the nearest 10 or 100. Round to 10, 100, or 1,000: Use place value understanding to round whole numbers up to 1000 to the nearest 10 or 100. Sensible Differences: Use place value understanding to round whole numbers up to 1000 to the nearest 10 or 100.

	Three Other Ways In this learning plan, students will use place value understanding to compose, and decompose four-digit numbers in multiple ways. (Suggested TImeframe 2-3 days) ● Teacher Guidance ● Student Reproducibles **Build and Compare** In this learning plan, students will build and compare numbers within 10,000. (Suggested TImeframe 2-3 days) ● Teacher Guidance ● Student Reproducibles		
3.PAR.2 Use part-whole strategies to represent and solve real-life problems involving addition and subtraction with whole numbers up to 10,000.	**Happy to Eat Healthy** In this learning plan, students will use the context of healthy eating to add and subtract within 10,000. (Suggested Timeframe 2-3 days) ● Teacher Guidance ● Student Reproducibles **Oh! The Places You Can Go!** In this learning plan, students solve addition and subtraction problems by calculating distance traveled.(Suggested TImeframe 2-3 days) ● Teacher Guidance ● Student Reproducibles **Beautiful Butterflies** In this learning plan, students will use solve one-step addition and subtraction word problems with unknowns in all positions. (Suggested Timeframe 2-3 days) ● Teacher Guidance ● Student Reproducibles	**SAVVAS enVision Topic 8: Use Strategies and Properties to Add and Subtract** Students use strategies based on place value and properties of operations to add and subtract within 1,000 and to multiply a one-digit number by a multiple of 10. ● Lesson 8-1: Addition Properties ● Lesson 8-6: Estimate Sums ● Lesson 8-6: Estimate Sums, Additional Practice, TE p.103 ● Lesson 8-7: Estimating Differences ● Lesson 8-7: Estimating Differences, Additional Practice, TE p. 107 ● Lesson 8-8:Problem-Solving Model with Math **SAVVAS enVision Topic 9: Fluently Add and Subtract within 1,000** Students use strategies based on place value and properties of operations to add and subtract within 1,000. ● Lesson 9-1: Use Partial Sums to Add ● Lesson 9-2: USe regrouping to Add ● Lesson 9-3: Add 3 or More Numbers ● Lesson 9-4: Use Partial Differences to Subtract ● Lesson 9-5: Use Regrouping to Subtract ● Lesson 9-6: Use Strategies to Add and Subtract **MIP Module 6 :Fluently Adding Within 1,000**	Adding Using Place Value: Solve addition and subtraction problems by using place value. Adding, Subtracting, and Place Value: Solve addition and subtraction problems by using place value. How Many Ten Dollar Notes?: Solve addition and subtraction problems by using place value.

		The key idea focused on in this module is using place value strategies to add 3-digit numbers. **(*Extend Numbers to 10,000)**	
		• Base-Ten Block Addition, p.157-158	
		• Addition Open Number Line, p.159-160	
		• Expanded Form Addition, p.160	
		• Addition with Partial Sums, p. 161-163	
		• Chunking Addition & Using Landmark Numbers, p.163-164	
		• Regrouping with Understanding, p.165-167	
		• Additional Ideas for Support and Practice, p. 169-170	
		MIP Module 7: Fluently Subtracting Within 1,000 *The key idea focused on in this module is using place value strategies to subtract 3-digit numbers.* **(*Extend Numbers to 10,000)**	
		• Base-Ten Block Subtraction, p. 177-178	
		• Using Drawings to Represent Subtraction, p. 178-179	
		• Decompose and Subtract, p. 180	
		• Subtraction with Open Number Lines, p. 181-183	
		• Subtraction Using Friendly Numbers, p. 183-184	
		• Renaming and Subtracting, p. 185	
		• Connecting to a Standard Algorithm, p. 186-188	
		• Additional Ideas for Support and Practice, p. 189-190	
		MIP Module 4: Solving One- and Two Step Problems with All Four Operations *The key ideas focused on in this module include recognizing problem situations that indicate when to add, subtract, multiply, or divide to solve math word problems and building appropriate equations to solve the problems. It also includes understanding problems through retelling, discussing, and constructing models to represent the problem and exploring strategies for solving two-step problems*	
		• Letters to Represent the Unknown, p. 120	
		• Review Addition and Subtraction with Bar Models and Equations, p. 121-123	

| **3.MDR.5** Solve real-life, mathematical problems involving length, liquid volume, mass, and time and analyze graphical displays of data to answer relevant questions | **Analyzing and Interpreting Data**
Also includes 3.PAR.2
In this learning plan, students will analyze data using bar graphs.(Suggested TImeframe 2-3 days)
  ● [Teacher Guidance](#)
  ● [Student Reproducibles](#) | **MIP Module 7: Fluently Subtracting Within 1,000**
The key idea focused on in this module is using place value strategies to subtract 3-digit numbers. ***(*Extend Numbers to 10,000)***
  ● Focus on the Question, p 191 | |

Content Resources

GA DOE Links:
- [GA DOE Grade 3 Unit 4: Place Value and Addition & Subtraction up to 10,000](#)
- [GA DOE Grade Comprehensive Grade Level Overview](#)
- [GA DOE Grade Level Guide for Effective Mathematics Instruction](#)
- [K-5 Georgia Mathematics Strategies Toolkit](#)
- [Mathematics to Support English Language Learners](#)
- [Georgia Numeracy Project](#)
- [K-12 Mathematical Modeling Framework](#)
- [K-12 Statistical Reasoning Framework](#)
- [K-12 Mathematical Practices](#)

Additional Resources:
- [Toy theater](#) (Virtual manipulatives)

Possible Number Sense and Strategy-Development Routine
- [Estimation 180](#)
- [Which one Doesn't belong](#)
- [Splat](#) - Instant multiple splats,
- [Same or Different](#) (multiplication & division)
- [Same or Different](#) (area)

ESOL Math Talk Starters

Sentence Stems