	Marietta City Schools **District Unit Planner**		

Grade Level 3

Unit Name	**Unit 5**: *Two-Step Word Problems and Time*	**Unit duration (Days)**	*3-4 weeks*

In this unit, students will solve and represent authentic problems using all four operations. Students recognize problem situations that indicate when to add, subtract, multiply, or divide and build appropriate equations to solve the problems.

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 1,000 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.

3.PAR.3 Use part-whole strategies to solve real-life, mathematical problems involving multiplication and division with whole numbers within 100.
- **3.PAR.3.4** Use the meaning of the equal sign to determine whether expressions involving addition, subtraction, and multiplication are equivalent.
- **3.PAR.3.6** Solve practical, relevant problems involving multiplication and division within 100 using part-whole strategies, visual representations, and/or concrete models.
- **3.PAR.3.7** Use multiplication and division to solve problems involving whole numbers to 100. 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.5.2** Tell and write time to the nearest minute and estimate time to the nearest fifteen minutes (quarter hour) from the analysis of an analog clock.
- **3.MDR.5.3** Solve meaningful problems involving elapsed time, including intervals of time to the hour, half hour, and quarter hour where the times presented are only on the hour, half hour, or quarter hour within a.m. or p.m. only.

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.
- **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.PAR.2 and 3.PAR.3) How can we solve and represent real world problems using all four operations?
- (3.PAR.2 and 3.PAR.3) How can you build appropriate equations to solve problems?
- (3.MDR.5) How can we interpret graphs to analyze data to solve 2-step problems?
- (3.MDR.5.2) What strategies can I use to help me tell and write time to the nearest minute and measure time intervals in minutes?
- (3.MDR.5.3) How can I use what I know about number lines to help me figure out how much time has passed between two events?

Tier II Vocabulary Words- High Frequency Multiple Meaning	Tier III Vocabulary Words- Subject/ Content Related Words
addend, expression, add, expanded form, factor, A.M., compose, operation, decompose, difference, P.M., product, regroup, equal, subtract, equation, sum, estimate, unknown, question	algorithm, minuend, analog clock, minute, place value, digital clock, dividend, divisor quotient elapsed time, second, quarter hour, interval, analog [K-12 Mathematics Glossary](#)

Assessments

Formative Assessment(s):	Summative Assessments:
3.PAR.2 and 3.PAR.3 MIP Module 4, Formative Assessment, p. 132 3.PAR.2 and 3.PAR.3 Savvas Topic 11 Performance Task, TE P. 431-432 3.PAR.2 and 3.PAR.3 Savvas Topic 11 Topic Assessment 3.MDR.5.1 GaDOE Learning Plan: Mathematical Modeling/The Dining Experience, Diagnostic Assessment 3.MDR.5.2 MIP Module 11, Formative Assessment, p.246 (nearest minute) 3.MDR.5.2 and 5.3 Savvas Topic 14 Topic Assessment 3.MDR.5.3 MIP Module 11, Formative Assessment, p. 253	- Unit 5 Grade 3 Common Formative Assessment- Two-Step Word Problems - Unit 5 Grade 3 Common Formative Assessment- Time

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

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.

GA DOE Learning Plans

Mathematical Modeling/The Dining Experience:
Also includes 3.PAR.3 and 3.MDR.5
In this learning plan, students will engage in an interdisciplinary mathematical modeling task that focuses on solving two-step problems with all four operations and the concepts of time. (Suggested TImeframe: Integrated throughout the entire unit)
- Teacher Guidance
- Student Reproducibles

Math Stories:
Also includes 3.PAR.3 and 3.PAR.3.7
In this learning plan, students will write first-then-next math stories that begin with equal groups and incur a change. (Suggested Timeframe 2-3 days)
- Teacher Guidance
- Student Reproducibles

Classroom Supplies:
Also includes 3.PAR.3
In this learning plan, students will decide how to spend a specified budget to purchase supplies for the classroom. (Suggested Timeframe 2-3 days)
- Teacher Guidance
- Student Reproducibles

The Recycling Project:
In this learning plan, students will solve two-step addition and subtraction problems with unknowns in all positions through the context of recycling. (Suggested Timeframe 2 days)
- Teacher Guidance
- Student Reproducibles

MCS Curriculum Resources

SAVVAS enVision Topic 11: Use Operations with Whole Numbers to Solve Problems
In Topic 11, students learn strategies to solve two-step word problems involving the four operations. They draw diagrams and write equations to represent relationships in a problem.
- Lesson 11-1: Solve 2-Step Word Problems: Addition and Subtraction
- Lesson 11-3: Solve 2-Step Word Problems: All Operations
- Lesson 11-3: Act Math: Cash Bucket
- Lesson 11-4: Problem Solving: Critique Reasoning

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. 120-121
- Review Addition and Subtraction with Bar Models and Equations, p. 121-123
- Identifying Steps in a 2-Step Problem, p. 126-129
- Explore 2-Step Problems, p. 130-131
- Additional Ideas for Support and Practice, p. 133-134

| 3.PAR.3 Use part-whole strategies to solve real-life, mathematical problems involving multiplication and division with whole numbers within 100. | **Animal Stories:** *Also includes 3.PAR.2* *In this learning plan, students will solve and create two-step word problems involving all four operations with the context of animals native. (Suggested Timeframe 3 days).*
 ● [Teacher Guidance](#)
 ● [Student Reproducibles](#) | **SAVVAS enVision Topic 11: Use Operations with Whole Numbers to Solve Problems** *In Topic 11, students learn strategies to solve two-step word problems involving the four operations. They draw diagrams and write equations to represent relationships in a problem.*
 ● Lesson 11-2: Solve 2-Step Word Problems: Multiplication and Division
 ● Lesson 11-3: Solve 2-Step Word Problems: All Operations
 ● Lesson 11-3: Act Math: Cash Bucket, TE p. 408
 ● Lesson 11-4: Problem Solving: Critique Reasoning

 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. 120-121
 ● Introducing Bar Diagrams to Visualize Multiplication and Division Problems, p. 123-126
 ● Identifying Steps in a 2-Step Problem, p. 126-129
 ● Explore 2-Step Problems, p. 130-131
 ● Additional Ideas for Support and Practice, p. 133-134 | [Two, Fives, and Tens](#): Solve multiplication problems by using doubles/ repeated addition.

 [Fun With Fives](#): Derive multiplication facts from 2, 5, and 10 times tables.

 [A Little Bit More/A Little Bit Less](#): Derive multiplication facts from 2, 5, and 10 times tables. |
| 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. | **Game Time:** *In this learning plan, students will tell time to the minute and solve elapsed time problems with unknowns in all positions. (Suggested Timeframe 2 days)*
 ● [Teacher Guidance](#)
 ● [Student Reproducibles](#)

 Time to Get Clean: *In this learning plan, students will examine a family's morning routine as they discuss and explore telling time to the minute* | **SAVVAS enVision Topic 14: Solve Time, Capacity, and Mass Problems** *In Topic 14, students learn to tell and write time to the nearest minute. They estimate and measure liquid volumes and masses, using appropriate units and tools.*
 ● Lesson 14-1: Time to the Minute
 ● Lesson 14-2: Units of Time: Measure Elapsed Time
 ● Lesson 14-3: Units of Time: Solve Word Problems
 ● Lesson 14-9: Problem Solving Reasoning | [How Long Now?](#): Compare the duration of events and learn to read time to the hour and half-hour.

 [How Long Does it Take?](#): Calculate how long is spent on various activities in a week.

 [ClockWise (Time)](#): Explore |

	and elapsed time. (suggested Timeframe 2-3 days)	**MIP Module 11: Exploring Time**	hours and half-hours using analogue and digital clocks.

and elapsed time. (suggested Timeframe 2-3 days)
- [Teacher Guidance](#)
- [Student Reproducibles](#)
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Daily Schedule:
In this learning plan, students will use created schedules and calculate elapsed time to the nearest half and quarter of an hour. (Suggested Timeframe 2-3 days)
- [Teacher Guidance](#)
- [Student Reproducibles](#)

MIP Module 11: Exploring Time
The key ideas focused on in this module include telling and writing time to the nearest minute, using addition and subtraction to solve problems about time, and solving problems about elapsed time including determining a start time, elapsed time, or end time.
- Human Clock, p. 245
- Additional Ideas for Support and Practice, p. 247
- Elapsed Time With A Number Line, p. 247-249
- Elapsed Time With An Open Number Line, p. 249-251
- Elapsed Time Using a T-Chart, p. 251-253
- Additional Ideas for Support and Practice, p. 255-256

hours and half-hours using analogue and digital clocks.

Content Resources

MCS Links:
- [MCS Math Curriculum Map](#)
- [MCS Math Instructional Framework](#)

GA DOE Links:
Access all GADOE Curriculum Resources at the following site: [GaDOE Inspire](#).

Additional Resources:
- [Interactive Clock](#)
- [Interactive Clock - Toy Theater](#)
- [Mathigon](#)(clocks)
- [Toy theater](#) (Virtual manipulatives)
- [Greg Tang Math](#)
- [Think and Share Unit 5](#)

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)

Mathematical Discourse:
- [ESOL Math Talk Starters](#)
- [Sentence Stems](#)