



**Marietta City Schools
District Unit Planner**

Second Grade

Unit Name	Unit 1: Using Tables, Graphs and Charts	Unit duration	3 weeks
------------------	--	----------------------	---------

GA K-12 Standards

In this unit students will use statistical investigative questions to learn more about their class. Students will have the opportunity to collect, analyze and display data through pictures and bar graphs. Throughout this unit, students will extend 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 solve problems involving addition and subtraction within 1,000 (100) using strategies based on place value, including decomposing a ten, the properties of operations, relationship between addition and subtraction, and part-whole strategies. Students will begin to develop fluency using mental math and strategies.

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 0.
- **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.

- **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.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** 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 and analyze graphical displays of data to answer relevant questions.

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	
<ul style="list-style-type: none"> ● I can count forward and backwards by 1's, 5's 10's and 100's from any number within 1000 ● I can use different strategies to add and subtract within 20 ● I can identify and create a numerical patterns ● I can create and analyze graphs and charts with up to 4 categories. ● I can persevere through math problems using various mathematical strategies 	
Tier II Vocabulary Words- High Frequency Multiple Meaning	Tier III Vocabulary Words- Subject/ Content Related Words
compare, compose, data, decompose, difference, estimate, equal, greater than, less than, units, represent, scale	bar graph, base ten model, category title, digit, equal, expanded form, models, number line, number names, numerical patterns, part-whole strategies, patterns, picture graph, place value, rod, flat, skip count, sum, three-digit numbers, two-digit numbers K-12 Mathematics Glossary

Formative Assessment(s):

- [MCS K-5 Activity & Assessment Collection](#)
- DoE Unit 1 Diagnostic Assessment
- 2.MDR.5.4 Mini
- 2.NR.1/2.NR.2 Mini

- 2.PAR.4.1 Mini (*Because of the timing of this unit, this assessment includes simple patterns (counting by 5s and 10s). Future units should include assessments for this standard with more complex patterns (add 3, subtract 6, etc).*)

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 Menu		Differentiation Considerations
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.	<p style="text-align: center;"><u>GA DOE Learning Plans</u></p> <p><u>Classroom Favorites</u> <i>In this learning plan, students will get to know each other by creating a statistical investigative question that can be answered by gathering, representing, and interpreting data.</i></p> <ul style="list-style-type: none">● <u>Teacher Guidance</u>● <u>Student Materials</u> <p><u>Getting to Know You</u> <i>In this learning plan, students will write and ask a statistical investigative question to get to know their classmates better.</i></p> <ul style="list-style-type: none">● <u>Teacher Guidance</u>● <u>Student Materials</u> <p><u>Our Colorful Classroom</u> <i>In this learning plan, students will look for as many red, blue, green, and yellow items in the classroom, then graph their findings.</i></p> <ul style="list-style-type: none">● <u>Teacher Guidance</u>● <u>Student Materials</u> <p><u>Class Garden Pictograph and Bar Graph</u> <i>This learning plan builds on knowledge of first grade by having students create a picture graph as a tool for representing data.</i></p> <ul style="list-style-type: none">● <u>Teacher Guidance</u>● <u>Student Materials</u>	<p style="text-align: center;"><u>MCS Curriculum Resources</u></p> <p><u>MIP Module 13: Representing and Interpreting Data</u></p> <ul style="list-style-type: none">● Understanding Picture Graphs p.303-310● Understanding Bar Graphs p.310-321 <p><u>SAVVAS Topic 15: Graphs and Data</u></p> <ul style="list-style-type: none">● Topic 15 Lesson 3: Bar Graph● Topic 15 Lesson 4: Picture Graph● Topic 15 Lesson 5: Draw conclusions from Graphs● Topic 15 Lesson 6: Problem Solving: Reasoning● Topic 15: 3-Act Task	

	<p><u>Pattern Block Graphing</u> <i>In this learning plan, students will scoop pattern blocks and generate pictographs and bar graphs based on the number of each pattern block they scoop.</i></p> <ul style="list-style-type: none"> • <u>Teacher Guidance</u> • <u>Student Materials</u> <p><u>Where Do Box Turtles Live?:</u> <i>This learning plan combines science standards with mathematics. Students will look at data that has been collected over a period of time by an environmentalist and analyze (notice and wonder) what they see.</i></p> <ul style="list-style-type: none"> • <u>Teacher Guidance</u> • <u>Student Materials</u> 		
<p>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 0.</p> <p>2.NR.2.1: Fluently add and subtract within 20 using a variety of mental, part-whole strategies</p> <p>2.PAR.4.1: Identify, describe, and create a numerical pattern resulting from</p>	<p><u>Number Sense Routines</u> <i>In this learning plan 2nd grade students can explain how the instructional strategies indicated can be utilized in the specified phases of the instructional design.</i></p> <ul style="list-style-type: none"> • <u>Teacher Guidance</u> • <u>Student Reproducible</u> 	<p><u>SAVVAS Lessons: Counting in Groups</u></p> <ul style="list-style-type: none"> • Topic 3 Lesson 1: Add Tens and Ones on a Hundred Chart • Topic 9 Lesson 6: Place-Value Patterns with Numbers • Topic 9 Lesson 7: Skip Count by 5s, 10s, and 100s to 1,000 • Topic 10 Lesson 1: Add 10 and 100 • Topic 11 Lesson 1: Subtract 10 and 100 <p><u>SAVVAS Lessons: Addition and Subtraction Strategies within 20</u></p> <ul style="list-style-type: none"> • Topic 1: Lesson 1: Addition Fact Strategies • Topic 1: Lesson 2: Doubles Near Doubles • Topic 1: Lesson 3: Make 10 to Add • Topic 1: Lesson 4: Count On and Count Back <p><u>SAVVAS Lessons</u></p> <ul style="list-style-type: none"> • Topic 3 Lesson 1: Add Tens and Ones on a Hundred Chart • Topic 5 Lesson 1: Subtract Tens and Ones on a Hundred Chart • Topic 10 Lesson 1: Add 10 and 100 	<p><u>Walk the Bridge</u></p> <p><u>Tape Measure Counting</u> <u>Outdoor Counting</u></p> <p><u>Number Line Flips</u></p> <p><u>Visualizing/Imaging Many Hands</u></p>

repeating an operation such as addition and subtraction.		<u>MIP Module 2: Building Understanding and Fluency of Basic Math Facts</u> <ul style="list-style-type: none"> • Using Ten p. 42-43 • Using Doubles p. 44-45 • Understanding the Equal Sign p. 45 • Double ten frame addition p. 48-51 <u>MIP Module 4: Understanding Place Value</u> <ul style="list-style-type: none"> • Adding and Subtracting 10 and 100 p. 95 	
--	--	--	--

Content Resources	
GA DOE Links: <ul style="list-style-type: none"> • GA DOE Grade 2 Unit 1: Using Tables, Graphs, and Charts • GA DOE Grade 2 Comprehensive Grade Level Overview • GA DOE Grade 2 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: <ul style="list-style-type: none"> • Number Corner or Calendar Time • Number Talks • Estimation 180 • Which One Doesn't Belong • Same of Different • Splat!