Marietta City Schools
District Unit Planner

Second Grade

Unit Name	**Unit 3:** Measuring Lengths and Distances	**Unit duration (Days)**	3 weeks

GA K-12 Standards

In this unit, students will construct measurement instruments. Students will learn about standard units to estimate, measure, and compare length and distances (inches, feet, and yards). Students will use addition and subtraction to solve problems involving measurement. 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 solve problems involving addition and subtraction within 1,000. Students will continue to develop fluency using mental math and strategies.

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.5.1** Construct simple measuring instruments using unit models. Compare unit models to rulers.
- **2.MDR.5.2** Estimate and measure the length of an object or distance to the nearest whole unit using appropriate units and standard measuring tools.
- **2.MDR.5.3** Measure to determine how much longer one object is than another and express the length difference in terms of a standard-length unit.
- **2.MDR.5.5** Represent whole-number sums and differences within a standard unit of measurement on a number line diagram.

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).

- 2.NR.2.3 Solve problems involving the addition and subtraction of two-digit numbers using part-whole strategies.

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 use units to measure the length of an object.
- I can accurately measure objects using rulers, yardsticks, and measuring tape.
- I can measure two objects and compare their length.

Tier II Vocabulary Words- High Frequency Multiple Meaning	**Tier III Vocabulary Words-** Subject/ Content Related Words
count forward, count backwards, part-part whole, compare problems, separating problems, joining problems, groups of problems, decompose, counting on, making ten, even, odd	inches, feet, yards, ruler, yardstick K-12 Mathematics Glossary

Assessments

Formative Assessment(s):

- MCS K-5 Activity & Assessment Collection
- MCS Mini 2.MDR 5.4

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.MDR.5.1 Construct simple measuring instruments using unit models. Compare unit models to rulers. **2.MDR.5.2** Estimate and measure the	**GA DOE Learning Plans** **Make Your Own Ruler (1-2 Days)** *In this learning plan, students will create their own rulers and then use these rulers to measure and compare gummy worms.* • Teacher Guidance • Student Materials **How Big is a Foot? (1-2 Days)**	**MCS Curriculum Resources** **MIP Module 10: Understanding Length** *The key ideas focused on in this module include measuring and estimating length to the nearest unit, choosing an appropriate tool and unit of measure depending on the measurement task, and adding and subtracting to solve problems about length.* • Making Rulers p. 223-225 • Inches to Feet p. 226-227 • Feet to Yards p. 227-228 • Estimate and Measure p. 230	All About Me Explore the size of a centimeter and measure objects (can easily be adopted to inches) Paper Planes Make paper planes to develop understanding of meter and centimeter measures

length of an object or distance to the nearest whole unit using appropriate units and standard measuring tools.	*In this learning plan, students will learn about the importance of standard units of measure.* ● Teacher Guidance ● Student Materials **Snails and Lizards (1-2 Days)** *In this learning plan, students will measure items in inches, feet, and yards.* ● Teacher Guidance ● Student Materials **Measuring Up to Abe Lincoln (2-3 Days)** *In this learning plan, students will draw a 6' 4" replica of Abe Lincoln. Students will then measure themselves and calculate the difference in inches from their heights to President Lincoln's height* ● Teacher Guidance ● Student Materials	**SAVVAS enVision Topic 12: Measuring Length** ● Lesson 12-1: Estimating Length ● Lesson 12-2: Measure with Inches ● Lesson 12-3: Inches, Feet and Yards ● Lesson 12-4: Measure Length Using Different Customary Units	
2.MDR.5.3 Measure to determine how much longer one object is than another and express the length difference in terms of a standard-length unit.	**Giant Measurements (2-3 Days)** *In this learning plan, students will build "giants" from butcher paper to meet certain length specifications.* ● Teacher Guidance ● Student Materials **Snakes at the Zoo (2-3 Days)** *In this learning plan, students will use graphs and bar models to solve problems involving the different lengths of snakes.* ● Teacher Guidance ● Student Materials	**MIP Module 10: Understanding Length** ● What's the Difference p. 238-239 ● Stretch and Compare p.240 -241 ● Explore Problems p. 241 **SAVVAS enVision Topic 12: Comparing Measurements** ● Lesson 12-8: Compare Lengths ● Lesson 12-9: Problem Solving: Precision **SAVVAS enVision Topic 14: More Addition and Subtraction with Length** ● Lesson 14-1: Add and Subtract Measurements ● Lesson 14-2: Find Unknown Measurements ● Lesson 14-3: Continue to Find Unknown Measurements	
2.MDR.5.5 Represent whole-number sums and differences within a	**Where am I on the Number Line (2-3 Days)** *In this learning plan, students count forward and back on a number line. Students will analyze where a number is located on a number line and its relative position to other numbers.*	**SAVVAS enVision Topic 3: Add Within 100 Using Strategies** ● Lesson 3-2: Adding Tens and Ones on an Open Number Line.	

standard unit of measurement on a number line diagram.	• Teacher Guidance • Student Materials **Number Hop (2-3 Days)** *In this learning plan, students will skip count backwards and forwards by 10's and 1's on a hundreds chart and open number line to reach a target number.* • Teacher Guidance • Student Materials **Animal Measurements (2-3 Days)** *In this learning plan, students will explore and compare animal measurements and then build their own species of animal to measure.* • Teacher Guidance • Student Materials	**SAVVAS enVision Topic 5: Subtract Within 100 Using Strategies** • Lesson 5-2: Count Back to Subtract on an Open Number Line	
2.NR.2.3 Solve problems involving the addition and subtraction of two-digit numbers using part-whole strategies.	**Snakes at the Zoo (2-3 Days)** *In this learning plan, students will use graphs and bar models to solve problems involving the different lengths of snakes.* • Teacher Guidance • Student Materials **Measuring Up to Abe Lincoln (2-3 Days)** *In this learning plan, students will draw a 6' 4" replica of Abe Lincoln. Students will then measure themselves and calculate the difference in inches from their heights to President Lincoln's height* • Teacher Guidance • Student Materials	**SAVAS enVision Topic 3: Add Within 100 Using Strategies** • Lesson 3-1: Add Tens and Ones on a Hundred Chart • Lesson 3-2: Add Tens and ones on an Open Number Line • Lesson 3-3: Break Apart Numbers to Add • Lesson 3-4: Add Using Compensation **SAVVAS enVision Topic 5: Subtract within 100 Using Strategies** • Lesson 5-1: Subtract Tens and Ones on a Hundred Chart • Lesson 5-2: Count Back and Subtract on an Open Number Line • Lesson 5-3: Add Up to Subtract Using an Open Number Line • Lesson 5-4: Break Apart Numbers to Subtract • Lesson 5-5: Subtract Using Compensation	

Content Resources	
GA DOE Links: ● GA DOE Grade 2 Unit 3: Measuring Lengths and Distances ● 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:** ● Number Talks ● Rulers ● Measuring Tape ● Number Line