2 Math Unit 07: Measure and Compare Lengths

Content Area: **Mathematics**
Course(s):
Time Period: **Marking Period 3**
Length: **17 days**
Status: **Published**

Unit Overview

Measurement of Length

Students build on their understanding of measuring lengths using non-standard units to learn to measure using standard units including inches, feet, yards, centimeters, and meters throughout this unit.

- Measurement Tools: Students are introduced to several measurement tools within this unit.
- Comparing Measurements: As students become comfortable measuring objects, the then compare the lengths of two objects. Students measure both objects and then compare the measurements to determine the difference.
- Relating Measurements: Students are asked to relate these measurements to each other. By understanding how these measurements relate, students are able to make more accurate measurements.
- Estimate Measurements: Students are asked to estimate the length of objects prior to measuring, using a standard measurement tool. This skill can help students determine the appropriateness of their precise measurements.

What Students Are Learning

- Students measure length in customary and metric units.
- Students compare lengths in customary and metric units.
- Students examine the relationship among inches, feet, and yards, and between centimeters and meters.
- Students estimate length in customary and metric units
- Students solve word problems involving length.

Number Routines

- Let's Count
- Decompose It
- About How Much?
- Where Does It Go?
- Notice & Wonder
- Numberless Word Problem

Standards

2.M.A.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2.M.A.2	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

2.M.A.3	Estimate lengths using units of inches, feet, centimeters, and meters.
2.M.A.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
2.M.B.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
2.M.B.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Materials

Core Materials:

Reveal Math

7.1 Measure Length with Inches

7.2 Measure Length with Feet and Yards

7.3 Compare Lengths Using Customary

7.4 Relate Inches, Feet, and Yards

7.5 Estimate Length Using Customary Units

7.6 Measure Length with Centimeters and Meters

7.7 Compare Lengths Using Metric Units

7.8 Relate Centimeters and Meters

7.9 Estimate Length Using Metric Units

7.10 Solve Problems Involving Length

7.11 Solve More Problems Involving Length

Supplemental Materials:

- ST Math
- Happy Numbers
- 3 Act Lessons
- Building Fact Fluency Kit
- Brainingcamp Manipulatives
- Nearpod Lessons
- Brainpop Resources
- Online Resources

Technology

DA	Data & Analysis
8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
8.1.2.DA.3	Identify and describe patterns in data visualizations.
8.1.2.DA.4	Make predictions based on data using charts or graphs.
8.2.2.ED.2	Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.
8.2.2.ED.3	Select and use appropriate tools and materials to build a product using the design process.

Assessment

Formative Assessment

- Unit Readiness Diagnostics
- Lesson Checks
- Exit Tickets
- Teacher Observation

Summative Assessment

- Unit Assessment Performance Task
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

Accommodations & Modifications

Special Education

Differentiated Instruction			
Accommodate Based on Students' Individual Needs: Strategies			
Time/General	**Processing**	**Comprehension**	**Recall**
• Extra time for assigned tasks • Adjust length of assignment • Timeline with due dates for reports and projects • Communication system between home and	• Extra response time • Have students verbalize steps • Repeat, clarify, or reword directions • Mini-breaks between tasks • Provide a warning	• Precise step-by-step directions • Short manageable tasks • Brief and concrete	• Teacher-made checklist • Use visual graphic organizers • Reference resources to

school • Provide lecture notes/outline	for transitions • Reading partners	directions • Provide immediate feedback • Small group instruction • Emphasize multi-sensory learning	promote independence • Visual and verbal reminders • Graphic organizers
Assistive Technology • Computer/whiteboard • Tape recorder • Spell-checker • Audio-taped books	**Tests/Quizzes/Grading** • Extended time • Study guides • Focused/chunked tests • Read directions aloud	**Behavior/Attention** • Consistent daily structured routine • Simple and clear classroom rules • Frequent feedback	**Organization** • Individual daily planner • Display a written agenda • Note-taking assistance • Color code materials

504

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

ELL

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support

- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Math Diagnosis & Intervention System

At-risk of Failure

- Additional time during intervention time
- Questions read aloud
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

Gifted & Talented

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

Interdisciplinary Connections

ELA:

RI.2.10. Read and comprehend informational texts, including history/social studies, science, and technical texts, at grade level text complexity proficiently with scaffolding as needed.

Science:

K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Career Readiness, Life Literacies & Key Skills

9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.
9.1.2.CR.1	Recognize ways to volunteer in the classroom, school and community.
9.1.2.CAP.2	Explain why employers are willing to pay individuals to work.
9.4.2.CT	Critical Thinking and Problem-solving
9.1.2. FI.1	Differentiate the various forms of money and how they are used (e.g., coins, bills, checks, debit and credit cards).

Career Ready Practices

- **Stem in Action :**
- **Stem Career: Animal Trainer: Jorden talks about her aspirations to be an animal trainer.**
- **Jorden measures animals: Jorden explains how to use measurement to help measure animals.**

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.