April Gr 3 Unit 11: Measurement

Content Area: **Math**
Course(s):
Time Period: **April**
Length: **4-5 Weeks**
Status: **Obsolete**

Unit Overview

Students will understand how to estimate capacity, estimate mass, solve word problems involving capacity and mass. This unit also covers telling time and time intervals.

Enduring Understandings

Capacity is the amount of liquid that a container can hold.

Mass is the amount of matter that an object has.

A digital clock shows time in numbers, an analog has an hour hand and a minute hand.

We measure intervals by adding or subtracting minutes.

Essential Questions

Why do we measure?

Instructional Strategies & Learning Activities

- **Pacing Guide**
  Suggested Pacing

Instruction	8 days
Review/Assessment	2 days
Total*	**10 days**

- *Includes additional time for remediation and differentiation.
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Lesson	Objective	Material & Manipulatives	Vocabulary	Standard
Lesson 1 *pp. 633-638* **Hands On: Estimate and Measure Capacity**	Explore estimating and measuring liquid volume using metric units of capacity.	• 3 large and 3 small containers to hold liquids	**capacity liquid volume**	**3.MD.2 Major**

		• metric measuring cups • teaspoons • paper cups • water • plastic liter bottle	**liter (L)** **metric unit** **milliliter (mL)** **unit**	**Cluster** **MP 2, 3, 4, 5, 6**
Lesson 2 *pp. 639-644* **Solve Capacity Problems**	Use the four operations to solve one-step word problem involving liquid volume.	• 2 clear, empty liter bottles • labels • food coloring • water		**3.MD.2** **3.OA.3** **Major Cluster** **MP 1, 2, 4, 5, 6**
Lesson 3 *pp. 645-650* **Hands On: Estimate and Measure Mass**	Explore estimating and measuring metric units of mass.	• bucket balances • 2 g and 5 g weights • base-ten cubes • 1 kg and 1 g weights • 3 objects, about 1 kg • 3 objects, about 1 g	**gram (g)** **kilogram (kg)** **mass**	**3.MD.2** **Major Cluster** **MP 2, 3, 4, 5, 6, 8**
Lesson 4 *pp. 651-656* **Solve Mass Problems**	Use the four operations to solve one-step word problems involving mass.	• 4 small, equal-sized boxes		**3.MD.2** **3.OA.3** **Major Cluster** **MP 1, 2, 3, 4, 5, 6, 7**
Check My Progress				
Lesson 5 *pp. 659-664* **Tell Time to the Minute**	Tell time to the nearest minute.	• fraction circles • analog clocks	**analog clock** **digital clock**	**3.MD.1** **Major Cluster** **MP 2, 3, 4, 5, 6, 7**
Lesson 6 *pp. 665-670* **Time Intervals**	Determine time intervals to solve problems.	• Work Mat 2	**time interval**	**3.MD.1** **Major Cluster** **MP 1, 2, 3, 4, 5, 8**
Lesson 7 *pp. 671-676* **Problem-Solving Investigation: Work Backward**	Work backward to solve problems.			**3.MD.1** **3.MD.2** **Major Cluster** **MP 1, 4, 6, 8**
My Review and Reflect				

Integration of Career Readiness, Life Literacies and Key Skills

WRK.9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
WRK.9.2.5.CAP.2	Identify how you might like to earn an income.
WRK.9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
WRK.9.2.5.CAP.4	Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.
TECH.9.4.5.CI.3	Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity (e.g., 8.2.5.ED.2, 1.5.5.CR1a).
TECH.9.4.5.CT.4	Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).
TECH.9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology (e.g., 8.1.5.NI.2).
TECH.9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.
	Curiosity and a willingness to try new ideas (intellectual risk-taking) contributes to the development of creativity and innovation skills.
	An individual's passions, aptitude and skills can affect his/her employment and earning potential.
	Collaboration with individuals with diverse perspectives can result in new ways of thinking and/or innovative solutions.
	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.

Technology and Design Integration

Students will interact with Smartboard, Chromebooks and document camera.

CS.3-5.8.1.5.CS.3	Identify potential solutions for simple hardware and software problems using common troubleshooting strategies.
CS.3-5.8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
CS.3-5.DA	Data & Analysis
	Data can be organized, displayed, and presented to highlight relationships.

Interdisciplinary Connections

Math Leveled reader "Think About It!"

LA.RI.3.1	Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
LA.RI.3.4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.

LA.RI.3.7	Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
LA.RI.3.10	By the end of the year, read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.

Differentiation

Each My Math unit throughout the series offers "approaching level", "on level" and "Beyond level" differentiated instructional hands-on choices, as well as ELL differentiated support. Please refer to the teacher edition for the activities.

Modifications & Accommodations

IEP and 504 accommodations will be followed.

Benchmark Assessments

Aimsweb Assessment, Chapter Pretests, Dreambox

Formative Assessments

Teacher observation

Student conferences

Discussion

Activities

games

homework

Summative Assessments

My Math chapter assessments

Instructional Materials

See materials listed above

Standards

MA.3.MD.A.1	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
MA.3.MD.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
MA.3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.