

Unit 4M - For Good Measure

Overview

This unit focuses on measurement concepts and skills. Students tell time to the minute and solve elapsed time problems. Then they explore why and how we measure concepts such as biggest, tallest, and fastest. Students estimate, measure, and compare the masses of different objects and work with volume to solve measurement-related story problems. The unit builds upon the strategies to add and subtract 3-digit numbers that were introduced in Unit 3.

21st Century Capacities: Synthesizing

Stage 1 - Desired Results

ESTABLISHED GOALS/ STANDARDS

MP 5 Use appropriate tools strategically.
MP 6 Attend to precision

CCSS.MATH.CONTENT.3.OA.D.8
Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.³

CCSS.MATH.CONTENT.3.NBT.A.2
Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition

Transfer:

Students will be able to independently use their learning in new situations to...

1. Use appropriate tools to make reaching solutions more efficient, accessible and accurate.
2. Represent and interpret patterns in numbers, data and objects (synthesizing)
3. Evaluate the accuracy and efficiency of a given solution.

Meaning:

UNDERSTANDINGS: *Students will understand that:*

1. Conclusions can be drawn by using relevant tools, strategies, relationships, and/or information
2. Tools and visual models help us to problem solve and explain our thinking
3. There are specific attributes of objects that affect how we estimate and measure them

ESSENTIAL QUESTIONS: *Students will explore & address these recurring questions:*

- A. What math tools can I use to solve this problem?
- B. Did I use the most efficient strategy to solve the problem?
- C. How does what we measure affect how we measure?
- D. How does estimating help me?

Grade 3 Math Curriculum

<p>and subtraction.</p> <p>CCSS.MATH.CONTENT.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.</p> <p>CCSS.MATH.CONTENT.3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).¹ 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.²</p>	Acquisition:	
	<p><i>Students will know...</i></p> <ol style="list-style-type: none"> 1. Matter is the amount of mass an object contains and can be measured in grams using a pan balance scale 2. Volume is the amount of space an object takes up and can be measured in (milli)liters 3. A number line can be used to measure the amount of time that has passed (elapsed time) 4. That time is measured in seconds, minutes, hours, days, weeks and years 5. The difference between custom and metric units 6. Vocabulary: foot, inch, centimeter, kilogram, liquid volume, liter, mass, meter, volume, elapsed time, cup, customary system, gallon, gram, metric system, millimeter, ounce, pound, quart, pan balance scale 	<p><i>Students will be skilled at...</i></p> <ol style="list-style-type: none"> 1. solving story problems involving addition or subtraction of lengths, mass and liquid volume 2. telling time to the nearest minute 3. solving elapsed time story problems 4. estimating and then measuring mass, liquid volume and linear objects using the appropriate tools and units

