

Grade: 3 Subject: Mathematics	Unit 13: Measurement
Big Idea/Rationale	<ul style="list-style-type: none"> The goal is to extend students’ measurement skills for length, capacity, and weight in the customary system and length, capacity and mass in the metric system. How to read temperature in degrees Fahrenheit and degrees Celsius is also reviewed. This unit’s division review focuses on “measurement division,” in which equal groups of units are made. Students also review division with remainders, adding and subtracting fractions, converting improper fractions and mixed numbers, and word problems, all within measurement contexts.
Enduring Understanding (Mastery Objective)	<p>Students will understand that:</p> <ul style="list-style-type: none"> Everyday objects have a variety of attributes, each of which can be measured in many ways. The length of any object can be used as a measurement unit for length, but a standard unit, such as an inch, is always the same length. Inches, feet, yards and miles are the customary units for measuring length and they are related to each other. The metric units for measuring length are millimeters, centimeters, decimeters, meters and kilometers and they are related to each other. Capacity is the amount of liquid an object can hold. The customary units for measuring capacity are cup, pint, quart and gallon. The metric units for measuring capacity are milliliter and liter. Weight or mass describes how heavy something is. The customary units of weight are ounces and pounds. The metric units for mass are grams and kilograms. Temperature can be expressed using degrees Fahrenheit or degrees Celsius
Essential Questions (Instructional Objective)	<ul style="list-style-type: none"> How can measurements be used to solve problems? How do you measure an object in inches? How can you estimate and measure length? What customary units describe length? What customary units describe how much a container holds? What customary units describe how heavy something is? What metric units describe length? What metric units describe how much a container holds? What metric units describe mass? How are temperatures measured?
Content (Subject Matter)	<ul style="list-style-type: none"> Measure length with non-standard units. Discuss unit of measurement and measuring tools. Measure length in inches, half-inches, and quarter-inches with ruler. Draw line segments to a specified length. Convert between yards, feet, and inches. Find benchmarks for inch, foot, yard, and mile.

	<ul style="list-style-type: none"> • Choose the appropriate customary units of length. • Measure classroom objects to the nearest meter, decimeter, and centimeter. • Convert among centimeters, decimeters, and meters. • Discuss benchmarks for centimeters, decimeters, and meters. • Choose the appropriate metric unit of length. • Measure sides of figures to the nearest quarter inch. • Add measurements to find perimeter. • Add customary lengths in inches, half inches, and quarter inches. • Estimate perimeter and area. • Discover relationships among cups, pints, quarts, half-gallons, and gallons. • Establish benchmarks for capacity and choose units for measuring capacity. • Estimate capacity. • Become familiar with metric units of capacity. Select reasonable metric units for various measurement tasks. • Convert metric units of capacity. • Estimate capacity. • Solve word problems involving capacity. • Convert improper fractions to mixed numbers and mixed numbers to improper fractions. • Visualize fractions and mixed numbers as lengths. • Convert measurements of length and capacity involving fractions. • Find benchmarks for ounce, pounds, grams, and kilograms. • Estimate the weight or mass of an object. • Choose the appropriate unit to measure weight or mass of an object. • Convert between pounds and ounces and between grams and kilograms. • Read temperatures in degrees Fahrenheit and degrees Celsius on a thermometer. • Discuss warm and cold benchmarks. • Estimate temperatures in degrees Fahrenheit and degrees Celsius. • Solve a variety of problems using mathematical concepts and skills. • Use the mathematical processes of problem solving, connections, reasoning and proof, communication, and representation.
Skills/ Benchmarks (CCSS Standards)	<ul style="list-style-type: none"> • 3.OA.B.6: Understand division as an unknown-factor problem. • 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 unit, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. • 3.MD.C.7.C: Use tiling to show in a concrete case that the area of a rectangle with whole number side lengths a and $b + c$ is the sum of $a \cdot b$ and $a \cdot c$. Use area models to represent the distributive property in mathematical reasoning. • 3.MD.D.8: Solve real world and mathematical problems involving

	<p>perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length and exhibiting rectangles with the same perimeter and different area or with same area and different perimeter.</p> <ul style="list-style-type: none">• Mathematical Practices
Materials and Resources	<ul style="list-style-type: none">• Math Expressions, Student Journals, Manipulatives, Math themed literature, BrainPop, IXL Mathematics