Grade: 4 Subject: Mathematics	Unit 6: Metric Measurement
Big Idea/Rationale:	• This unit builds on students' understanding of the base-ten structure of the place-value system to help them understand the metric system of measure. This system is important since it will be used in sciences as well as most countries of the world.
Enduring Understanding (Mastery Objective):	Students will understand that: • Some measurements can be approximated using known references as the unit in the measurement process? • Everyday objects have a variety of attributes, each of which can be measured in many ways. • What we measure affects how we measure it. • Measurement can used be describe, compare, and make sense of phenomena.
Essential Questions (Instructional Objective):	• How can measurement be used to solve a problem? • How do you estimate the area and capacity of objects and figures? • How can you act out and use reasoning to solve a problem? • What metric units are used for measurement? • How can you make a table and look for a pattern to solve a problem? • What metric is used to describe mass?
Content (Subject Matter & Learning Objectives):	• Explore the system of metric units of length or distance. • Estimate and measure length and distance, using metric units. • Choose appropriate units for measuring. • Identify and use metric units of area. • Explore metric units of volume and capacity. • Measure volume and capacity, using metric units. • Recognize metric units of mass. • Measure the mass of objects, using metric units. • Demonstrate understanding of the metric temperature scale. • Relate the metric temperature scale to everyday experiences. • Assess student progress on unit objectives.
Standards	• **4MD.A.1:** Knowing relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. • **4MD.A.2:** Use the four operations to solve word problems involving distances, intervals of time , liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a

	smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. • **4MD.A.3:** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. • **Mathematical Practices**
Materials and Resources	• Math Expressions, Student Journals, Manipulatives, Math themed literature, BrainPop, IXL Mathematics