

Unit 2

Unit Conversions and Problem Solving with Metric Measurement

Grade 4 Math

Description:

Unit 2 focuses on length, mass, and capacity in the metric system. Place value serves as a guide for moving between larger and smaller units. Students will review place value concepts while building fluency with decomposing, or converting from larger to smaller units. Conversions will be recorded in a two-column table. Prior knowledge of grams, kilograms, meters, and centimeters will be used as students learn the relative sizes of measurement units. Emphasis will be placed on applying unit conversions as students solve multi-step word problems involving distances, liquid volumes, and masses of objects.

Louisiana Student Standards for Mathematics (LSSM)

Measurement and Data: Supporting Cluster	
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	
4.MD.A.1	Know relative sizes of measurement units within one system of units including ft, in, 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. (Conversions are limited to one-step conversions.) Record measurement equivalents in a two-column table. For example, know that 1 ft. is 12 times as long as 1 in. Express length of a 4 ft. snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36),
4.MD.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 whole numbers and/or simple fractions (addition and subtraction of fractions with like denominators and multiplying a fraction times a fraction or a whole number), 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.

Enduring Understandings:

- One unit of measurement can be compared to another within a single system of measurement.

Essential Questions:

- How can we compare one unit of measurement to another unit of measurement within the same system?

- Measurement can be used to solve problems.
- There can be different strategies to solve a problem, but some are more effective and efficient than others.
- A problem solver understands what has been done, knows why the process was appropriate, and can support it with reasons and evidence.

- How can measurement be used to solve problems?
- How do I decide what strategy will work best in a given problem situation?
- How does explaining my process help me to understand a problem's solution better?