Unit 3e-Convert Measurements

Content Area: **Math**
Course(s): **Math 5**
Time Period: **Marking Period 3**
Length: **MP3 Topic 12 12-1 to 12-9**
Status: **Published**

Essential Questions

- What are customary measurement units and how are they related?
- What are metric units and how are they related?

Big Ideas

- **Convert Units:** Students use their knowledge of the meaning of multiplication to convert a measurement with a larger unit to an equivalent measurement with a smaller unit within the same measurement system. Students use their knowledge of the meaning of division to convert a measurement with a smaller unit to an equivalent measurement with a larger unit within the same measurement system. These procedures are applied to customary units of length, capacity, and weight, as well as metric units of length, capacity, and mass. This is also applied to units of time.
- **Solve Measurement Problems:** Students will use measurement conversions to solve problems. They will focus on solving multi-step, real world problems using what they learn about converting units. They will also use precision when solving problems and critiquing the reasoning of others.
- **Place Value and Metric Conversion:** Supports the content from major cluster 5.NBT.A on understanding the place-value system. Students use their understanding of the base-10 patterns for multiplying and dividing by powers of 10 to convert measurements between metric units.

Enduring Understandings

Measurement and Data

5.M.A.1 [M] Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

Number and Operations in Base Ten

5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

5.NBT.B.5 With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.

5.NBT.B.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Mathematical Practices Focus

6. Attend to precision.