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| **Unit Name:**  **Measurement** |
| **Common Core State Standards:**  **4.MD.1** Know 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.  **4.MD.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 qualities using diagrams such as number line diagrams that feature a measurement style. |
| **Essential Vocabulary:**   * Decimal * Convert/conversion * Liquid volume * Mass * Length * Distance * Fraction * Units * Equivalent * Measure * Metric * Customary |
| **Unit Overview:**  In this unit, students will apply their understanding of measurement to help them convert measurements within a single system: metric or customary for the first time. Units of measure that are introduced for the first time are: cups, pints, quarts, gallons, pounds, ounces, kilometers, millimeters, and seconds. Additional, the students will reinforce their understanding of place value by using their knowledge to convert within the metric system. |
| **Strategies/Skills:**  Students will build on their understanding of fractions from 3rd grade to make sense of decimals when comparing their equivalency. They are expected to use a variety of models to support their reasoning about numbers.   * Conversion table * Quantity diagram * Number line diagram |
| **Video Support:**  Video support can be found on LearnZillion.   * <http://learnzillion.com> * Compare and convert customary units of length   <https://learnzillion.com/student/lessons/2316-compare-and-convert-customary-units-of-length>   * Compare and convert customary units of weight   <https://learnzillion.com/student/lessons/2317-compare-and-convert-customary-units-of-weight>   * Compare and convert metric units of length   <https://learnzillion.com/student/lessons/2571-compare-and-convert-metric-units-of-length>   * Compare and convert metric units of weight   <https://learnzillion.com/student/lessons/2631-compare-and-convert-metric-units-of-weight>   * Compare and convert metric units of volume   <https://learnzillion.com/student/lessons/2498-compare-and-convert-metric-units-of-volume>   * Solve problems involving distance using diagrams   <https://learnzillion.com/student/lessons/2723-solve-problems-involving-distance-using-diagrams>   * Solve problems involving time by drawing a diagram   <https://learnzillion.com/student/lessons/2915-solve-problems-involving-time-by-drawing-a-diagram>   * Solve problems involving volume using diagrams   <https://learnzillion.com/student/lessons/2916-solve-problems-involving-volume-using-diagrams>   * Solve problems involving mass using diagrams   <https://learnzillion.com/student/lessons/2917-solve-problems-involving-mass-using-diagrams> |
| **Additional Resources:**  If you have limited/no internet access, please contact your child’s teacher for hard copies of the resources listed in this document.   * NCDPI Unpacking Document: [4th](http://www.ncpublicschools.org/docs/acre/standards/common-core-tools/unpacking/math/4th.pdf) Grade Unpacking Document |