# Pub.:Gr 4 My Math Unit 12: Metric Measure

Content Area: **Math**
Course(s):
Time Period: **April**
Length: **4-5 Weeks**
Status: **Obsolete**

## Unit Overview

Students will learn about the metric system.

## Enduring Understandings

We can estimate measures of length, capacity and mass in the metric system.

We can convert metic units of measurement.

We can solve real world problems involving metric measurements.

## Essential Questions

How can conversion of measurements help me solve real-world problems?

## Instructional Strategies & Learning Activities

Pacing Guide
Suggested Pacing

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| Instruction | 7 days |
| Review/Assessment | 2 days |
| Total* | 9 days |

*Includes additional time for remediation and differentiation.

| Lesson | Objective | Material & Manipulatives | Vocabulary | CCSS Standard |
|---|---|---|---|---|
| Lesson 1 *pp. 775-780* Metric Units of Length | Estimate and measure lengths within the metric | • classroom objects • base-ten unit • centimeter ruler • meterstick | centimeter (cm) kilometer (km) | 4.MD.1 Supportng |

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|---|---|---|---|---|
| | system. | | meter (m)<br>metric system<br>millimeter (mm) | Cluster<br><br>MP<br>2, 3, 5, 8 |
| Lesson 2 *pp. 781-786*<br>Metric Units of Capacity | Estimate and measure metric capacities. | • food coloring<br>• container of water<br>• eyedropper<br>• 1 liter container | liter (L)<br>milliliter (mL) | 4.MD.1<br><br>Supportng Cluster<br><br>MP<br>1, 2, 3, 4, 8 |
| Lesson 3 *pp. 787-792*<br>Metric Units of Mass | Estimate and measure mass and learn the difference between weight and mass. | • packages with labels<br>• objects that have a mass of 1 gram and 1 kilogram | gram (g)<br>kilogram (kg)<br>mass | 4.MD.1<br><br>Supportng Cluster<br><br>MP<br>2, 3, 4, 6, 8 |
| | | **Check My Progress** | | |
| Lesson 4 *pp. 795-800*<br>Problem-Solving Investigation: Make an Organized List | Make an organized list to solve problems. | | | 4.MD.2<br><br>Supportng Cluster<br><br>MP<br>1, 2, 3, 4, 5 |
| Lesson 5 *pp. 801-806*<br>Convert Metric Units | Convert metric units. | • base-ten blocks | | 4.MD.1<br>4.MD.2<br><br>Supportng Cluster<br><br>MP<br>2, 3, 4, 7 |
| Lesson 6 *pp. 807-812*<br>Solve Measurement Problems | Solve problems involving measurement. | • construction paper<br>• markers | | 4.MD.1<br>4.MD.2<br><br>Supportng Cluster<br><br>MP<br>1, 2, 3, 4, 5, 6 |
| | | **My Review and Reflect** | | |

## Integration of 21st Century Themes and Career Exploration

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|---|---|
| CRP.K-12.CRP1 | Act as a responsible and contributing citizen and employee. |

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| CRP.K-12.CRP2 | Apply appropriate academic and technical skills. |
| CRP.K-12.CRP4 | Communicate clearly and effectively and with reason. |
| CRP.K-12.CRP8 | Utilize critical thinking to make sense of problems and persevere in solving them. |
| CRP.K-12.CRP12 | Work productively in teams while using cultural global competence. |

## Technology Integration

- SMARTboard technology
- Google Applications (documents, forms, spreadsheets, presentation)
- Dreambox
- Online textbook

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|---|---|
| TECH.8.1.5.A.1 | Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. |
| TECH.8.1.5.A.CS1 | Understand and use technology systems |
| TECH.8.1.5.A.CS2 | Select and use applications effectively and productively. |

## Interdisciplinary Connections

Leveled readers, "Ancient Giants of the Forest".

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|---|---|
| LA.RI.4.1 | Refer to details and examples in a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text. |
| LA.RI.4.4 | Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area. |
| LA.SL.4.1 | Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly. |

## Differentiation

-Reteach Master

-Hands-On Activity

-Enrich Master

## Modifications & Accommodations

IEP and 504 accommodations will be utilized.

Provide an outline of material to be covered

-Individualized assignments, e.g., length, number, due date, topic

-Allow student to use technology-online textbook

-Use of graphic organizers

-Use highlighter for key information

-Read directions, passages, and word problems aloud as needed-online presentation

-Use of calculator and matrix for multiplication and division

-Provide textbook in audio format

-Demonstrate directions and procedures/give examples

## Benchmark Assessments

-AIMS Web

-Diagnostic and EOY Assessements

## Formative Assessments

Check My Progress

-My Chapter Review

-Homework Practice

-Independent Practice

## Summative Assessments

Chapter 12 assessment

## Instructional Materials

See instructional materials listed above.

## Standards

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|---|---|
| MATH.4.M.A.1 | Know relative sizes of measurement units within one system of units including km, m, cm, mm; 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. |
| MATH.4.M.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. |