

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

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

## Unit Overview

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Students will learn about the metric system.

## Enduring Understandings

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

We can convert metric units of measurement.

We can solve real world problems involving metric measurements.

## Essential Questions

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

## Instructional Strategies & Learning Activities

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Pacing Guide

Suggested Pacing

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 <i>pp.</i> 775-780 Metric Units of Length	Estimate and measure lengths within the metric system.	<ul style="list-style-type: none"><li>classroom objects</li><li>base-ten unit</li><li>centimeter ruler</li><li>meterstick</li></ul>	centimeter (cm) kilometer (km) meter (m) metric system millimeter (mm)	4.MD.1  Supporting Cluster

Lesson 2 <i>pp.</i> 781-786 Metric Units of Capacity	Estimate and measure metric capacities.	<ul style="list-style-type: none"> <li>• food coloring</li> <li>• container of water</li> <li>• eyedropper</li> <li>• 1 liter container</li> </ul>	liter (L) milliliter (mL)	MP 2, 3, 5, 8 4.MD.1  Supportn g Cluster
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Lesson 3 <i>pp.</i> 787-792 Metric Units of Mass	Estimate and measure mass and learn the difference between weight and mass.	<ul style="list-style-type: none"> <li>• packages with labels</li> <li>• objects that have a mass of 1 gram and 1 kilogram</li> </ul>	gram (g) kilogram (kg) mass	MP 1, 2, 3, 4, 8 4.MD.1  Supportn g Cluster
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**Check My Progress**

Lesson 4 <i>pp.</i> 795-800 Problem-Solving Investigation: Make an Organized List	Make an organized list to solve problems.			MP 2, 3, 4, 6, 8  4.MD.2  Supportn g Cluster
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Lesson 5 <i>pp.</i> 801-806 Convert Metric Units	Convert metric units.	<ul style="list-style-type: none"> <li>• base-ten blocks</li> </ul>		MP 1, 2, 3, 4, 5 4.MD.1 4.MD.2  Supportn g Cluster
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Lesson 6 <i>pp.</i> 807-812 Solve Measurement Problems	Solve problems involving measurement.	<ul style="list-style-type: none"> <li>• construction paper</li> <li>• markers</li> </ul>		MP 2, 3, 4, 7 4.MD.1 4.MD.2  Supportn g Cluster
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**My Review and Reflect**

MP  
1, 2, 3, 4, 5, 6

**Integration of 21st Century Themes and Career Exploration**

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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.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

## **Technology Integration**

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

TECH.8.1.5.A.CS1	Understand and use technology systems
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.CS2	Select and use applications effectively and productively.

## **Interdisciplinary Connections**

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Leveled readers, "Ancient Giants of the Forest".

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.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.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**

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-Reteach Master

-Hands-On Activity

-Enrich Master

## **Modifications & Accommodations**

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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**

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- AIMS Web
- Diagnostic and EOY Assessments

### **Formative Assessments**

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- Check My Progress
- My Chapter Review
- Homework Practice
- Independent Practice

### **Summative Assessments**

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- Chapter 12 assessment

## Instructional Materials

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See instructional materials listed above.

## Standards

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|-------------|---|
| MA.4.MD.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.  |
| MA.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 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. |