In an effort to keep parents and guardians informed of the expectations and content being covered in math class this year, this informational handout will be provided for each chapter. Its intent is to assist in guiding you in ways to support your child in deepening their mathematical understanding.

In each chapter we will spend time reviewing material taught in prior grades as it relates to the standards being taught in fifth grade. Our goal is to keep a balance of skill based learning along with enhancing our student’s ability to problem solve and think conceptually.

**Review Material from Prior Grades**

1) Measurement units and conversions (4.MD.1)
2) Solve measurement word problems with all four operations including simple fractions/decimals and conversions (4.MD.2)
3) Create a line plot to represent data in fractions of a unit and solve word problems with addition and subtraction of fractions using data on a line plot. (4.MD.4)

**New Material for 5th Grade**

1) I can convert measurements of length and weight within the customary system, solve problems by using logical reasoning, convert the capacity of liquids, and estimate the mass of objects and use a balance to measure the mass of objects. (5.MD.1)
2) I can make a line plot to display a data set of measurements in fractions of a unit. (5.MD.2)

**End of Chapter Expectations**

1) Chapter Assessment

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.*
Customary and Metric Systems of Measurement

Family Practice
Check out some of these free, math websites to practice measurement concepts and skills.

1) Greg Tang- Funny Numbers
   http://gregtangmath.com/funnynumbers

2) Compare and Convert Customary and Metric Units
   Create and Interpret Line Plots
   https://www.mathgames.com/grade5

3) Horrendous Soup- A Metric System Game
   http://mrnussbaum.com/soup/

4) Metric Matching
   http://www.sheppardsoftware.com/mathgames/measurement/MeasurementMeters.htm

Units of Time
Students learned in previous grades:

- 1 week = 7 days
- 1 year = 12 months
- 1 year = 365 days
- 52 weeks = 1 year

<table>
<thead>
<tr>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 minute = 60 seconds</td>
</tr>
<tr>
<td>1 hour = 60 minutes</td>
</tr>
<tr>
<td>1 day = 24 hours</td>
</tr>
</tbody>
</table>

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In February, students will begin to take a weekly measurement quiz. These will include conversions in both the customary and metric systems, that 5th graders are required to know for the Mississippi Achievement Assessment Program (MAAP), which is our end of the year assessment. At the end of the 9 weeks, each quiz will be averaged together to make one grade for the classwork component of the students’ overall math average.

<table>
<thead>
<tr>
<th>Customary Conversions</th>
<th>Metric Conversions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length</strong></td>
<td><strong>Length</strong></td>
</tr>
<tr>
<td>1 foot = 12 inches</td>
<td>1 km = 1,000 m</td>
</tr>
<tr>
<td>1 yard = 3 feet</td>
<td>1 m = 100 cm</td>
</tr>
<tr>
<td>1 mile = 5,280 feet</td>
<td>1 dm = 10 cm</td>
</tr>
<tr>
<td>1 mile = 1,760 yards</td>
<td>1 cm = 10 mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td><strong>Weight</strong></td>
</tr>
<tr>
<td>1 pound = 16 ounces</td>
<td>1 kg = 1,000 g</td>
</tr>
<tr>
<td>1 ton = 2,000 pounds</td>
<td></td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td><strong>Volume</strong></td>
</tr>
<tr>
<td>1 cup = 8 fluid ounces</td>
<td>1 L = 1,000 mL</td>
</tr>
<tr>
<td>1 pint = 2 cups</td>
<td></td>
</tr>
<tr>
<td>1 quart = 2 pints</td>
<td></td>
</tr>
<tr>
<td>1 quart = 4 cups</td>
<td></td>
</tr>
<tr>
<td>1 gallon = 4 quarts</td>
<td></td>
</tr>
<tr>
<td>1 gallon = 16 cups</td>
<td></td>
</tr>
</tbody>
</table>

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5th Grade Math Parent Letter Chapter 11

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**Customary and Metric Systems of Measurement**

**Ruler Measurement**
Students will use a ruler to measure the lengths of various items. Students can read a ruler with increments of halves, fourths, and eighths.

![Ruler Image]

**Line Plots**
A line plot shows data on a number line with an 'X' or other mark to show frequency.

Student can make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Students can use operations on fractions to solve problems involving information presented in line plots.

**Example:**
Ten beakers, measured in liters, are filled with a liquid. The line plot below shows the amount of liquid in liters in 10 beakers. If the liquid is redistributed equally, how much liquid would each beaker have? (This amount is the mean.)

![Line Plot Image]

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Metric Conversion

Multiply numbers by 10 if you are getting smaller (same as moving decimal point one space to the right)

5,000,000 m = 5 km
500,000 cm = 5 m
50,000 dec = 5 km

Examples:

1 unit = 1 cm
10 units = 1 dm
100 units = 1 m
1,000 units = 1 km

1 liter = 1 dm³
10 liters = 1 m³
1,000 liters = 1 kℓ

1 kg = 1 g
10 kg = 1 ℃
100 kg = 1 t

1,000 ℃ = 1 kℓ
10,000 ℃ = 1 t ℃