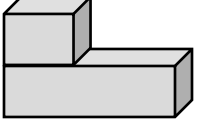


# Fifth Grade Mathematics Newsletter




Marking Period 1, Part 1

MT	<b>Learning Goals by Measurement Topic (MT)</b> <u>Students will be able to . . .</u>	
<b>Number and Operations in Base Ten</b>	<ul style="list-style-type: none"> <li>estimate and use the standard algorithm to multiply multi-digit whole numbers.</li> <li>determine when to use the standard algorithm to multiply multi-digit whole numbers.</li> </ul>	
<b>Measurement and Data</b>	<ul style="list-style-type: none"> <li>identify volume (the number of unit cubes needed to fill a space) as an attribute (characteristic) of solid figures (rectangular prisms).</li> <li>apply strategies to determine volume.</li> <li>relate volume to the operations of addition and multiplication.</li> <li>determine the volume of a solid figure composed (put together) of two non-overlapping rectangular prisms.</li> </ul>	 <p>non-overlapping rectangular prisms</p>
<b>Operations and Algebraic Thinking</b>	<ul style="list-style-type: none"> <li>write and interpret numerical expressions (a mathematical phrase that has no equality or inequality) using parentheses.</li> <li>identify and evaluate (solve) numerical expressions.</li> <li>identify and write expressions that record calculations with whole numbers.</li> <li>describe and interpret the relationship between numerical expressions without evaluating them.</li> </ul>	

<b>Thinking and Academic Success Skills (TASS)</b>		
	<u>It is . . .</u>	<u>In mathematics, students will . . .</u>
<b>Flexibility</b>	being open and responsive to new and diverse ideas and strategies and moving freely among them.	<ul style="list-style-type: none"> <li>determine when to use a particular strategy to solve a problem.</li> <li>determine the method of computation based on the understanding of place value and properties of operations.</li> <li>solve for the volume of a figure using a formula or counting cubic units.</li> <li>identify how numbers and relationships can be represented in multiple ways.</li> </ul>
<b>Collaboration</b>	working effectively and respectfully to reach a group goal.	<ul style="list-style-type: none"> <li>share ideas and listen to the ideas of others in order to help clarify the group's understanding of multiplication, volume, and expressions.</li> <li>share ideas about different ways to decompose (take apart) a solid figure.</li> <li>work together to solve real world problems relating to volume.</li> </ul>

# Fifth Grade Mathematics Newsletter

Marking Period 1, Part 1

Learning Experiences by Measurement Topic (MT)		
MT	 <u>In school, your child will . . .</u>	 <u>At home, your child can . . .</u>
Number and Operations in Base Ten	<ul style="list-style-type: none"> <li>answer and respond to questions.</li> </ul> <p><u>Possible Question:</u> What is the best strategy to use to solve <math>6,000 \times 300</math>? Why?</p> <p><u>Possible Response:</u> Mental multiplication because I know that if I multiply <math>6 \times 3</math>, I will get 18. I chose not to use the standard algorithm because I can quickly see a way to mentally multiply to determine the product; multiplying multiples of ten, hundred, thousand, or ten thousand are easy for me to do mentally by using my knowledge of the powers of ten.</p>	<ul style="list-style-type: none"> <li>practice basic facts fluency for multiplication and division.</li> </ul> <p><u>Websites to support learning:</u></p> <ul style="list-style-type: none"> <li><a href="http://www.bbc.co.uk/bitesize/ks1/maths/multiplication/play/">http://www.bbc.co.uk/bitesize/ks1/maths/multiplication/play/</a></li> <li><a href="http://www.bbc.co.uk/schools/starship/maths/games/cross_the_swamp/big_sound/full.shtml">http://www.bbc.co.uk/schools/starship/maths/games/cross_the_swamp/big_sound/full.shtml</a></li> <li><a href="http://www.bbc.co.uk/skillswise/game/ma12pape-game-written-multiplication">http://www.bbc.co.uk/skillswise/game/ma12pape-game-written-multiplication</a></li> </ul> <ul style="list-style-type: none"> <li>use flexibility in choosing and explaining a strategy (mental math, partial product, standard algorithm) that can be used to solve real life problems using multiplication.</li> </ul> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <p>standard algorithm</p> <math display="block">\begin{array}{r} 22 \\ 34 \\ 256 \\ \times 47 \\ \hline 1792 \\ +10240 \\ \hline 12032 \end{array}</math> </div> <div style="text-align: center;"> <p>partial product</p> <math display="block">\begin{array}{r} 43 \\ \times 17 \\ \hline 301 \quad 7 \times 43 \\ + 430 \quad 10 \times 43 \\ \hline 731 \end{array}</math> </div> </div>
Measurement and Data	<p><u>Possible Question:</u> How would you solve for the <b>volume</b> of this cube?</p>  <p><u>Possible Response:</u> <math>V = \text{base} \times \text{height}</math>  <math>\text{Base} = 3 \times 3</math> (length <math>\times</math> width) = 9 units  <math>V = 9</math> (base) <math>\times</math> 3 (height) = 27 cubic units</p>	<ul style="list-style-type: none"> <li>find the volume of various rectangular prisms in your home.</li> </ul> <p><u>Examples:</u> boxes, Legos, books, etc.</p> <ul style="list-style-type: none"> <li>analyze different ways that volume can be represented.</li> </ul>
Operations and Algebraic Thinking	<p><u>Possible Question:</u> What do you notice about these two expressions?</p> $(4 + 3) \times 5 \quad (4 + 3) \times 10$ <p><u>Possible Response:</u> In the first expression, there are five groups of <math>4 + 3</math>; and in the second expression, there are ten groups of <math>4 + 3</math>. In the first expression, the sum will be multiplied by 5; in the second expression, the sum is double the sum of the first expression.</p>	<ul style="list-style-type: none"> <li>use parentheses to create an expression for buying 3 children's movie tickets at \$7 each and 2 adult movie tickets for \$12.</li> </ul> <p><u>Possible Response:</u> <math>(3 \times 7) + (2 \times 12)</math></p> <p><u>Possible questions to ask your child:</u></p> <ul style="list-style-type: none"> <li>How do parentheses help you evaluate (solve) the expression?</li> <li>How would your answer change if it didn't have grouping symbols?</li> </ul>

# **Fifth Grade Mathematics Newsletter**

Marking Period 1, Part 1