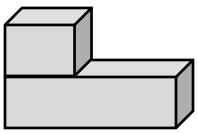
Fifth Grade Mathematics Newsletter

Marking Period 1, Part 1

MT	Learning Goals by Measurement Topic (MT) Students will be able to . . .
Number and Operations in Base Ten	• estimate and use the standard algorithm to multiply multi-digit whole numbers. • determine when to use the standard algorithm to multiply multi-digit whole numbers.
Measurement and Data	• identify volume (the number of unit cubes needed to fill a space) as an attribute (characteristic) of solid figures (rectangular prisms). • apply strategies to determine volume. • relate volume to the operations of addition and multiplication. • determine the volume of a solid figure composed (put together) of two non-overlapping rectangular prisms.  non-overlapping rectangular prisms
Operations and Algebraic Thinking	• write and interpret numerical expressions (a mathematical phrase that has no equality or inequality) using parentheses. • identify and evaluate (solve) numerical expressions. • identify and write expressions that record calculations with whole numbers. • describe and interpret the relationship between numerical expressions without evaluating them.

Thinking and Academic Success Skills (TASS)		
	It is . . .	In mathematics, students will . . .
Flexibility	being open and responsive to new and diverse ideas and strategies and moving freely among them.	• determine when to use a particular strategy to solve a problem. • determine the method of computation based on the understanding of place value and properties of operations. • solve for the volume of a figure using a formula or counting cubic units. • identify how numbers and relationships can be represented in multiple ways.
Collaboration	working effectively and respectfully to reach a group goal.	• share ideas and listen to the ideas of others in order to help clarify the group's understanding of multiplication, volume, and expressions. • share ideas about different ways to decompose (take apart) a solid figure. • work together to solve real world problems relating to volume.

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Learning Experiences by Measurement Topic (MT)

MT	In school, your child will . . .	At home, your child can . . .
Number and Operations in Base Ten	• answer and respond to questions. Possible Question: What is the best strategy to use to solve 6,000 x 300? Why? Possible Response: Mental multiplication because I know that if I multiply 6 x 3, 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.	• practice basic facts fluency for multiplication and division. Websites to support learning: ○ http://www.bbc.co.uk/bitesize/ks1/maths/multiplication/play/ ○ http://www.bbc.co.uk/schools/starship/maths/games/cross_the_swamp/big_sound/full.shtml ○ http://www.bbc.co.uk/skillswise/game/ma12pape-game-written-multiplication • 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. standard algorithm 2 2 3 4 256 x47 1792 +10240 12032 partial product 43 x 17 301 7 x 43 + 430 10 x 43 731
Measurement and Data	Possible Question: How would you solve for the **volume** of this cube?  Possible Response: V= base x height Base = 3 x 3 (length x width) = 9 units V= 9 (base) x 3 (height) = 27 cubic units	• find the volume of various rectangular prisms in your home. Examples: boxes, Legos, books, etc. • analyze different ways that volume can be represented.
Operations and Algebraic Thinking	Possible Question: What do you notice about these two expressions? (4 + 3) x 5 (4 + 3) x 10 Possible Response: In the first expression, there are five groups of 4 + 3; and in the second expression, there are ten groups of 4 + 3. 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.	• use parentheses to create an expression for buying 3 children's movie tickets at $7 each and 2 adult movie tickets for $12. Possible Response: (3 x 7) + (2 x 12) Possible questions to ask your child: ○ How do parentheses help you evaluate (solve) the expression? ○ How would your answer change if it didn't have grouping symbols?

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