

<b>TES Math Map 2009</b>	Teacher(s): Amanda Wade, Stephanie Gebauer, Lauren Johnson	Creation Date: 4/30/10
	Grade Level: 5 <sup>th</sup> grade	Revision Date:

	First Trimester			Second Trimester			Third Trimester			
<b>Math Unit</b>	Computation Assessment and Measurement Place value, rounding estimating (4-6 weeks)	Computation Assessment and Measurement Place value, rounding estimating (4-6 weeks)	Mathematical Thinking (4 weeks)	Building on Numbers You Know (4 weeks)	Geometry (5 weeks)	Finish up Geometry Perimeter and Area (6 weeks)	Fractions, Decimals and Percents (5 weeks)	CSAP Practice and Test (4 weeks)	Shopping Spree (2 weeks)  Excel Graphing (2 weeks)	Pre-Algebra
<b>Timeframe and Month</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May/June</b>
<b>Inquiry Questions</b>	<ul style="list-style-type: none"> <li>What kinds of questions can be answered by measuring?</li> <li>How can measurements be used to solve problems involving shapes?</li> <li>What are the ways we can describe the size of an object or shape?</li> <li>How does what we measure influence how we measure?</li> <li>What would the world be like without a common system of measurement?</li> </ul>	<ul style="list-style-type: none"> <li>What kinds of questions can be answered by measuring?</li> <li>How can measurements be used to solve problems involving shapes?</li> <li>What are the ways we can describe the size of an object or shape?</li> <li>How does what we measure influence how we measure?</li> <li>What would the world be like without a common system of measurement?</li> </ul>	<ul style="list-style-type: none"> <li>What characteristics can be used to classify numbers into different groups?</li> <li>How many prime numbers are there such that the prime number plus two is also prime?</li> <li>Why do the divisibility rules work?</li> </ul>	<ul style="list-style-type: none"> <li>How are multiplication and division related?</li> <li>What makes one strategy or algorithm better than another?</li> <li>What do remainders mean and how are they used?</li> <li>When is the "correct" answer not the most useful answer?</li> </ul>	<ul style="list-style-type: none"> <li>How do geometric relationships help us solve problems?</li> <li>Is a square still a square if it's tilted on its side?</li> <li>How are three-dimensional shapes different from two-dimensional shapes?</li> <li>What would life be like in a two-dimensional world?</li> <li>Why is it helpful to classify things like angles or shapes?</li> </ul>	<ul style="list-style-type: none"> <li>How do geometric relationships help us solve problems?</li> <li>Is a square still a square if it's tilted on its side?</li> <li>How are three-dimensional shapes different from two-dimensional shapes?</li> <li>What would life be like in a two-dimensional world?</li> <li>Why is it helpful to classify things like angles or shapes?</li> </ul>	<ul style="list-style-type: none"> <li>Why can't the denominator of a fraction be zero?</li> <li>Are there more fractions than whole numbers?</li> <li>Why can a decimal model always be immediately read as a fraction, but a fraction model cannot always be immediately read as a decimal?</li> <li>Is there a smallest fraction? Why?</li> <li>Is there a decimal closest to one? Why?</li> <li>Why is there no limit to the number of ways a fraction can be represented?</li> <li>Why would you play a game that is unfair? How do</li> </ul>	<ul style="list-style-type: none"> <li>What if nothing in life changed?</li> <li>Does a change in one area of life always affect another? How?</li> <li>Does a function table always have to show a pattern? Why?</li> </ul>	<ul style="list-style-type: none"> <li>What information would you gather about students in your school?</li> <li>What is the best way to show data?</li> <li>How can you make sense out of the data you collect?</li> <li>If something is true about the students in your school, is it likely to be true about students in other schools? Why or why not?</li> </ul>	<ul style="list-style-type: none"> <li>How can patterns and relationships be used to describe and explain real-life situations?</li> <li>Is it possible to predict the future? Why?</li> <li>What makes a pattern difficult to describe?</li> </ul>

	ent?						you know when you've conducted enough trials to be able make a conclusion? • Why are fractions, decimals, and percents good ways to quantify the likelihood of an event?			
<b>New Concepts</b>	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas	Mastery of skills/concepts in all areas
<b>Lessons, Activities, Tasks</b>	<ul style="list-style-type: none"> <li>Investigations (exclude Many Posters)</li> <li>prime &amp; square numbers, factors and multiples, number puzzles</li> <li>Supplement: Math Detective, Word Problems, Computation Hmwk (mad minute nightly)</li> <li>Math Journals</li> </ul>	<ul style="list-style-type: none"> <li>Mean, Median, Mode – supplemented material</li> </ul>	<ul style="list-style-type: none"> <li>Investigations (exclude How I Solved It, Different Strategies, Million Dots)</li> <li>Supplement: Multiplication (double and triple digit), Long Division</li> </ul>	<ul style="list-style-type: none"> <li>Teacher Created Unit based on vocabulary &amp; hands on activities</li> <li>geoboards, pattern blocks, tangram puzzles, 3D figures, protractors, triangles, measuring angles, Bingo, plane &amp; space figures</li> </ul>	<ul style="list-style-type: none"> <li>Teacher Created Unit – hands on activities and CSAP friendly assessments</li> <li>Standard and Metric measurement, area, perimeter, volume, benchmark measurements, rulers, and real world application</li> </ul>	<ul style="list-style-type: none"> <li>Investigations (exclude clock fractions, moves on fraction track, fill two, survey plans, daily schedule</li> <li>+, -, X, divide fractions, like &amp; unlike denominators, compare and convert fractions, decimals and percents</li> <li>Fraction Strips, Number Lines, Real World, Math Journal</li> <li>Supplemental Worksheets</li> <li>computation practice</li> </ul>	<ul style="list-style-type: none"> <li>Between Never and Always</li> <li>Investigations</li> <li>show percents on a likelihood line, 0 as impossible and 1 as most likely, ratios</li> <li>Spinner, Coin Toss, Dice</li> <li>CSAP released items – packets (Seth)</li> </ul>	<ul style="list-style-type: none"> <li>CSAP released items and practice packets</li> <li>CSAP vocabulary graphing &amp; interpreting data</li> </ul>	<ul style="list-style-type: none"> <li>Shopping Spree – simulation using tax, percentage, sales</li> <li>Graphs – spreadsheet, surveys</li> </ul>	<ul style="list-style-type: none"> <li>Introduction to concepts: order of operations, missing value and variable, etc...</li> </ul>
<b>Standards</b> (write out from TSD document) <b>1. Number Sense, Properties, and Operations</b>	•	•	1. Demonstrates the meaning and applies the concepts of a square, odd, even, prime, composite, factor and multiple to solve problems. 2. Use different representations (clusters) for the same whole numbers e.g. $325 = 300 + 20 +$	•	•	•	•	•	•	•

			<p>5 = 2 hundreds + 12 tens + 5 ones equals 13 x 25.</p> <p>3. Represent numbers up to one million using expanding notation and exponents.</p> <p>4. Use the commutative, associative and distributive properties to solve problems. (Pre-algebra unit)</p> <p>5. Select and justify estimation strategies based on a problem's need for accuracy.</p>							
<b>2. Patterns, Functions, and Algebraic Structures</b>	•	•	•	•	•	•	•	•	•	<p>1. Solves problems by making and analyzing geometric and numeric patterns using words, tables, graphs and technology.</p> <p>2. Matches a description of a scenario with its graph.</p> <p>3. Introduce linear and non-linear patterns.</p>
<b>3. Data, Analysis, Statistics, and Probability</b>	<p>1. Formulate a question and hypothesis to design appropriate data collection and display methods.</p> <p>2. Organize and construct data displays including: tables, pie charts, pictographs, line plots, bar</p>	•	•	•	•	•	•	<p>1. Uses zero to represent the probability of an impossible event, uses one to represent the probability of a certain event, and uses common fractions and percents for events that are neither certain nor impossible.</p> <p>2. Design a</p>	<p>1. Formulate a question and hypothesis to design appropriate data collection and display methods.</p> <p>2. Organize and construct data displays including: tables, pie charts, pictographs, line plots, bar</p>	•

	<p>graphs, and line graphs. 3.Find the range, median, mode and mean of a set of data. 4.Analyze data in various graphs to draw conclusions and make convincing arguments.</p>							<p>game involving a chance device, such as number cube or spinner, and explain why the game is fair or unfair. 3.Demonstrate an understanding that a larger number of trials gives more accurate data.</p>	<p>graphs, and line graphs. 3.Find the range, median, mode and mean of a set of data. 4.Analyze data in various graphs to draw conclusions and make convincing arguments.</p>	
<p><b>4. Shape, Dimension, and Geometric Relationships</b></p>	<ul style="list-style-type: none"> <li>1. Determine the appropriate unit and tool, both metric and US customary, to estimate and measure distance and area.</li> <li>2.Estimate and measure length to the nearest 1/8 inch and millimeter.</li> <li>3.Estimate and measure the perimeter of a polygon and area of rectangle.</li> <li>4.Interpret and select appropriate scales on number lines, graphs, and maps</li> <li>6.Model volume using cubic units</li> <li>7.Distinguish between appropriate units for linear measurement vs. area (e.g. inches vs. square inches)</li> </ul>	<ul style="list-style-type: none"> <li>1. 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Identify and draws 2-D shapes</li> <li>2.Understand relationships between 2-D and 3-D shapes.</li> <li>3.Compare and analyze the attributes of 2-D and 3-D dimensional shapes, e.g. congruency, vertices, edges, faces, sides, and angles (right, obtuse, acute)</li> <li>4.Apply concepts of parallel, perpendicular, congruency and symmetry</li> <li>5.Estimate and measure the size of angles</li> <li>6.Identify type of triangle by degree of angle (acute, obtuse, right) or length of side (scalene, isosceles, equilateral)</li> <li>7.Using two angles to determine the degree of the third angle.</li> <li>8.Classify geometric figures as polygons,</li> </ul>	<ul style="list-style-type: none"> <li>1. 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					circles, types of triangles, and/or types of quadrilaterals.	angle. 8.Classify geometric figures as polygons, circles, types of triangles, and/or types of quadrilaterals.				
<b>Process Skills (√ box)</b> <b>1. Critical Thinking and Reasoning</b>	<ul style="list-style-type: none"> <li>Overnight Measurement (River)</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Zip Around</li> <li>Mystery Number</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Measurement Walk</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Multi-step real world problems</li> </ul>	<ul style="list-style-type: none"> <li>Shopping Spree</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>2. Collaboration</b>	<ul style="list-style-type: none"> <li>Measurement Olympics</li> <li>Field Coordinates</li> </ul>	<ul style="list-style-type: none"> <li>Grocery store shopping (Clarks)</li> <li>Plan a meal</li> </ul>	<ul style="list-style-type: none"> <li>Number Puzzles</li> <li>Logic Line-up</li> </ul>	<ul style="list-style-type: none"> <li>Peer coaching for long and friendly division</li> </ul>	<ul style="list-style-type: none"> <li>Geo Memory</li> <li>Geomy</li> </ul>	<ul style="list-style-type: none"> <li>Measurement Walk</li> </ul>	<ul style="list-style-type: none"> <li>Student line-up</li> <li>In Between Game</li> <li>Capture the Fraction</li> <li>Fraction War</li> </ul>	<ul style="list-style-type: none"> <li>Check answers with your partner</li> <li>Dice throw</li> <li>Quarter Toss</li> </ul>	<ul style="list-style-type: none"> <li>Shopping Spree</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>3. Invention</b>	<ul style="list-style-type: none"> <li>Gallon Man</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Geometric scenes</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Shopping Spree</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>4. Self-Direction</b>	<ul style="list-style-type: none"> <li>Coordinates (field)</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Dynamath</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Origami</li> <li>Tangrams</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>In Between Game</li> <li>Capture the Fraction</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Shopping Spree</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>5. Information Literacy</b>	<ul style="list-style-type: none"> <li>Overnight Measurement (River)</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Dynamath</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Likelihood Line</li> </ul>	<ul style="list-style-type: none"> <li>Excel Graphing</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Resources</b>	<p>Supplemental worksheets</p> <p>Measurement Mania</p>	Supplemental worksheets	<p>Investigations Exclude Sessions: 2.5, 3.1, 4.2, 4.3, 4.4, 4.5, 4.6</p> <p>Math Detective (3-4)</p> <p>5<sup>th</sup> Grade Math Skills</p> <p>Daily Word Problems-5<sup>th</sup></p> <p>Mad Minutes</p>	<p>Investigations Exclude Sessions: 3.7 till the end</p>	<p>Supplemental worksheets</p> <p>Math Detective</p> <p>Groovy Geometry</p>	<p>Collection of supplemental worksheets</p> <p>Mailbox worksheets</p> <p>Math Detective</p> <p>Grandfather Tang</p> <p>Sir Circumference and the Knights of Angleland</p> <p>Hershey Measurement Book</p> <p>M+M's Lesson</p>	<p>Investigations Exclude Investigation 2 except 2.3 Exclude Investigation 4</p> <p>Supplemental skill sheets</p> <p>Scholastic Fractions and Decimals</p>	<p>CSAP Released Items</p> <p>CSAP materials from Carol</p> <p>CSAP Coach</p>	<p>Shopping Spree Simulation</p> <p>Websites</p> <p>Excel</p>	<p>Non-fiction Writing Prompts for Math</p> <p>Scholastic Algebra Readiness</p> <p>Scholastic Pre-Algebra</p>
<b>Assessments</b>	<p>Computation Pre-Assessment</p> <p>Measurement Quiz</p>	Place value, rounding, estimating quiz	<p>Fact quiz</p> <p>Number Puzzles</p> <p>Factor/Multiple Quiz</p> <p>Mathematical Thinking Unit Test</p> <p>Mean, Median, Mode Quiz</p>	<p>Stacking multiplication/Division Quiz</p> <p>Building Numbers Test</p>	Geometry Quiz	Geometry Test	<p>Fractions Quiz</p> <p>Unit Test</p>	<p>CSAP Practice Packets</p>	<p>Shopping Spree Quiz</p> <p>Graphing Quiz</p>	Pre-algebra Quiz

<b>Vocabulary</b>	Sum Difference Product Quotient Length Capacity Weight Benchmark measurements Standard system Metric system Estimation	See previous.	Prime Square Composite Factor Multiple Odd Even Mean Median Mode Range	DEAD MICE SMELL BAD Dividend Divisor Quotient	See attached vocabulary.	Perimeter Area Volume Circumference Radius Diameter Length Height width	Equivalent Simplest form Reduce GCF=greatest common factor LCM=Least common multiple Numerator Denominator	CSAP Vocabulary	sales - % off percent tax subtotal Total Allotted	PEMDAS (please excuse my dear aunt sally)  variable  equation
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