

<b>TES Math Map</b>	Teacher(s): Kristen Milord, Michele Foote, Matt Kroll	Creation Date: 1/4/10
	Grade Level: 3	Revision Date: 1/4/10

	First Trimester			Second Trimester			Third Trimester			
<b>Math Unit</b>	<b>Unit 1: Trading Stickers, Combining Coins: Addition, Subtraction, and the Number System 1</b>	Unit 2: Surveys and Line Plots: Data Analysis	Unit 3: Collections and Travel Stories: Addition, Subtraction, and the number System 2	Unit 4: Perimeter, Angles, and Area: 2D Geometry and Measurement/ Unit 9??	Unit 5: Equal Groups: Multiplication and Division	Unit 6: Stories, Tables, and Graphs: Patterns, Functions, and Change	Unit 7: Finding Fair Shares: Fractions and Decimals	Unit 8: How many Hundreds? How Many Miles?: Addition, Subtraction, and the Number System 3	Tocowans	
<b>Timeframe and Month</b>	<b>August/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>	<p>How do patterns in our place value system help us compare who numbers? How does the position of a digit in a number affect its value? How can a whole number be represented in different, equivalent forms? What makes a computational method efficient? What makes a good estimate? How do you know when computational method works?</p> <p>How do you know when there is a pattern? What patterns do you notice when you count by 25, 50, and 100? How are patterns useful?</p>	<p>What are the ways data can be displayed? How do data displays help us understand information? What makes a good survey questions?</p> <p>How important is precise measurement? Why are there different units to measure different things?</p>	<p>How do patterns in our place value system help us compare who numbers? How does the position of a digit in a number affect its value? How can a whole number be represented in different, equivalent forms? What makes a computational method efficient? What makes a good estimate? How do you know when computational method works?</p> <p>How do you know when there is a pattern? What patterns do you notice when you count by 25, 50, and 100? How are patterns useful?</p>	<p>How can you describe geometric figures? How important is precise measurement? Why are there different units to measure different things?</p>	<p>How do patterns in our place value system help us compare whole numbers? What makes a computational method efficient? What makes a good estimate? How do you know when computational method works? How are multiplication and division related? How can you use a multiplication or division fact to find a related fact? How can multiplication and division be modeled?</p> <p>How do you know when there is a pattern? What patterns do you notice when you count by 25, 50, and 100? How are patterns useful? How do you use the commutative property to help you learn the multiplication facts?</p>	<p>How do you know when there is a pattern? What patterns do you notice when you count by 25, 50, and 100? How are patterns useful? How do you use the commutative property to help you learn the multiplication facts?</p> <p>What are the ways data can be displayed? How do data displays help us understand information? What makes a good survey questions?</p> <p>How important is precise measurement? Why are there different units to measure different things?</p>	<p>How can a whole number be represented in different, equivalent forms? How can a fraction be represented in different, equivalent forms? How do we show part of something? How do you know when there is a pattern? How are patterns useful?</p>	<p>How can a whole number be represented in different, equivalent forms? What makes a computational method efficient? What makes a good estimate? How do you know when computational method works?</p>		

<b>New Concepts</b>	none	mode mean median	Place value to 1000 including addition and subtraction of three digit numbers	perimeter, angles, vertices	multiplication division square number prime number	negative temperature line graphs	decimals	landmark numbers		
<b>Lessons, Activities, Tasks</b>	Inv. 1 all sessions Inv. 2 all sessions	Inv. 1—sessions condensed Inv. 2.1, 2.2, 2.4-2.7 Inv. 3.1, 3.2, 3.3	Inv. 1 all sessions Inv. 2 all sessions Inv. 3 all sessions Inv. 4 all sessions	Inv 1.1, 1.2, 1.4, 1.5 Inv. 2.1 Inv. 3 all sessions	Inv. 1 all sessions Inv. 2 all sessions Inv. 3 all sessions Inv. 4 all sessions	Inv. 1 all sessions	Inv. 1.1, 1.2, 1.3 Inv. 2.1, 2.3 Inv. 3 all sessions	Inv. 1 all sessions Inv. 2 all sessions Inv. 3 all sessions		
<b>Standards</b> <b>1. Number Sense, Properties, and Operations</b>	1.1.1 Students understand the place value of whole numbers 1.1.2 Count, read, and write whole numbers to 10,000 1.1.3 Compare and order whole numbers to 10,000 1.1.4 Identify the place value for each digit in four digit numbers 1.1.6 Use expanded notation to compose and decompose numbers (e.g., $3,206 = 3,000 + 200 + 6$ ) 1.1.8 Generalize the change represented when moving from one place to another place in a number 1.2.1 Use number sense to estimate and justify the reasonableness of solutions to problems 1.2.2 Use flexible methods		1.1.1 Students understand the place value of whole numbers 1.1.2 Count, read, and write whole numbers to 10,000 1.1.3 Compare and order whole numbers to 10,000 1.1.4 Identify the place value for each digit in four digit numbers 1.1.6 Use expanded notation to compose and decompose numbers (e.g., $3,206 = 3,000 + 200 + 6$ ) 1.1.8 Generalize the change represented when moving from one place to another place in a number 1.2.1 Use number sense to estimate and justify the reasonableness of solutions to problems 1.2.2 Use flexible methods of computing, including student-generated strategies and standard algorithms 1.2.3 Estimate using strategies such as front-end estimation or landmark numbers 1.2.4 Find the sum or difference of two		1.2.1 Use number sense to estimate and justify the reasonableness of solutions to problems 1.2.2 Use flexible methods of computing, including student-generated strategies and standard algorithms 1.2.5 Demonstrate fluency with multiplication and division facts with single-digit factors (1,2,3,5,10) 1.2.6 Describe relationships between related facts (addition and subtraction) and between multiplication and division 1.2.7 Use the relationship between addition and multiplication to solve problems 1.2.8 Represent addition, subtraction, multiplication, and division problems with drawings, models, number sentences, and stories		1.3.1 Understand the relationship between whole numbers, simple fractions, and simple decimals (e.g., 50 cents is $\frac{1}{2}$ of a dollar, 75 cents is $\frac{3}{4}$ of a dollar) 1.3.2 Use drawings, models and numerals to represent fractions (halves, thirds, fourths, sixths, eighths) based on a whole shape, number set, or number line 1.3.3 Estimate and justify the reasonableness of solutions to problems involving representations of fractions 1.3.4 Compare and order fractions represented by drawings or concrete materials to show equivalency and to add and subtract simple fractions in context (e.g., $\frac{1}{2}$	1.1.1 Students understand the place value of whole numbers 1.1.2 Count, read, and write whole numbers to 10,000 1.1.3 Compare and order whole numbers to 10,000 1.1.4 Identify the place value for each digit in four digit numbers 1.1.5 Round off numbers to the nearest tens and hundreds 1.1.6 Use expanded notation to compose and decompose numbers (e.g., $3,206 = 3,000 + 200 + 6$ ) 1.1.8 Generalize the change represented when moving from one place to another place in a number 1.2.1 Use number sense to estimate and justify the reasonableness of solutions to problems 1.2.2 Use flexible		

	<p>of computing, including student-generated strategies and standard algorithms</p> <p>1.2.3 Estimate using strategies such as front-end estimation or landmark numbers</p> <p>1.2.4 Find the sum or difference of two whole numbers up to 999 with regrouping</p> <p>1.2.6 Describe relationships between related facts (addition and subtraction) and between multiplication and division</p> <p>1.2.8 Represent addition, subtraction, multiplication, and division problems with drawings, models, number sentences, and stories</p> <p>1.3.7 Identify different combinations of coins up to \$1.00</p>		<p>whole numbers up to 999 with regrouping</p> <p>1.2.6 Describe relationships between related facts (addition and subtraction) and between multiplication and division</p> <p>1.2.8 Represent addition, subtraction, multiplication, and division problems with drawings, models, number sentences, and stories</p>				<p>of a pizza is the same amount as <math>\frac{2}{4}</math> of another pizza that is the same size; show that <math>\frac{3}{8}</math> is larger than <math>\frac{1}{4}</math>)</p> <p>1.3.5 Add and subtract fractions with common denominators (e.g., determine that <math>\frac{1}{8} + \frac{3}{8}</math> is the same as <math>\frac{1}{2}</math>)</p> <p>1.3.6 Know and understand that an hour can be divided into fractions (quarter after, half past, quarter 'til)</p> <p>1.3.7 Identify different combinations of coins up to \$1.00</p>	<p>methods of computing, including student-generated strategies and standard algorithms</p> <p>1.2.3 Estimate using strategies such as front-end estimation or landmark numbers</p> <p>1.2.4 Find the sum or difference of two whole numbers up to 999 with regrouping</p> <p>1.2.5 Demonstrate fluency with multiplication and division facts with single-digit factors (1,2,3,5,10)</p> <p>1.2.6 Describe relationships between related facts (addition and subtraction) and between multiplication and division</p> <p>1.2.7 Use the relationship between addition and multiplication to solve problems</p> <p>1.2.8 Represent addition, subtraction, multiplication, and division problems with drawings, models, number sentences, and stories</p>		
<p><b>2. Patterns, Functions, and Algebraic Structures</b></p>	<p>2.1.1 Reproduce, extend, create and describe patterns using pictures, tables,</p>	<p>2.1.1 Reproduce, extend, create and describe patterns using pictures, tables, geometric shapes or numbers</p>	<p>2.1.1 Reproduce, extend, create and describe patterns using pictures, tables, geometric shapes or numbers</p>	<p>2.1.1 Reproduce, extend, create and describe patterns using pictures, tables, geometric shapes or numbers</p>	<p>2.1.1 Reproduce, extend, create and describe patterns using pictures, tables, geometric shapes or numbers</p>	<p>2.1.1 Reproduce, extend, create and describe patterns using pictures, tables, geometric shapes</p>	<p>2.1.1 Reproduce, extend, create and describe patterns using pictures, tables, geometric shapes</p>			

	<p>geometric shapes or numbers</p> <p>2.1.3 Use the commutative property to solve addition and multiplication problems</p> <p>2.1.4 Use the associative property to solve addition problems</p> <p>2.1.5 Select appropriate operational and relational symbols to make an expression true</p>		<p>2.1.3 Use the commutative property to solve addition and multiplication problems</p> <p>2.1.4 Use the associative property to solve addition problems</p> <p>2.1.5 Select appropriate operational and relational symbols to make an expression true</p>		<p>2.1.2 Skip count by and analyze patterns in multiples (2,3,4,5,6,7,8,9,10, 11,12,25,50, and 100)</p> <p>2.1.3 Use the commutative property to solve addition and multiplication problems</p> <p>2.1.5 Select appropriate operational and relational symbols to make an expression true (e.g., if <math>4 \_ 3 = 12</math>, what operational symbol goes in the blank?)</p> <p>2.1.6 Determine how the change in one quantity affects the change in another (e.g. the relationship between the number of bicycles and the number of wheels)</p>	<p>or numbers</p> <p>2.1.2 Skip count by and analyze patterns in multiples (2,3,4,5,6,7,8,9,10,11,12,25,50, and 100)</p> <p>2.1.3 Use the commutative property to solve addition and multiplication problems</p> <p>2.1.5 Select appropriate operational and relational symbols to make an expression true (e.g., if <math>4 \_ 3 = 12</math>, what operational symbol goes in the blank?)</p> <p>2.1.6 Determine how the change in one quantity affects the change in another (e.g. the relationship between the number of bicycles and the number of wheels)</p>	<p>or numbers</p> <p>2.1.2 Skip count by and analyze patterns in multiples (2,3,4,5,6,7,8,9,10,11,12,25,50, and 100)</p> <p>2.1.5 Select appropriate operational and relational symbols to make an expression true</p>			
<p><b>3. Data, Analysis, Statistics, and Probability</b></p>		<p>3.1.1 Collect, organize and display data using bar graphs, line plots, pictographs, or frequency tables (tallies)</p> <p>3.2.1 Compose questions to generate data.</p> <p>3.2.2 Determine and describe median and mode from a data set</p> <p>3.2.3 Using various displays of data, interpret the data and draw conclusions</p>				<p>3.1.1 Collect, organize and display data using bar graphs, line plots, pictographs, or frequency tables (tallies)</p> <p>3.2.1 Compose questions to generate data.</p> <p>3.2.2 Determine and describe median and mode from a data set</p> <p>3.2.3 Using various displays of data, interpret the data and draw conclusions</p>				

**4. Shape, Dimension, and Geometric Relationships**

4.3.1 Use standard units to measure objects to the nearest half-inch, whole inch or centimeter  
4.3.5 Estimate and measure temperature in Fahrenheit and Celsius  
4.3.6 Select the appropriate unit and tool of measurement for length, weight, temperature and time  
4.3.7 Compare and order objects according to attributes of length, capacity, temperature and time  
4.3.8 Carry out simple unit conversions within a measurement system (e.g., inches to feet, hours to minutes)

4.1.1 Identify, describe, construct, and classify two-dimensional shapes by attributes such as sides, angles and symmetry  
4.1.2 Identify figures which are congruent  
4.1.3 Identify lines of symmetry in geometric and other familiar shapes  
4.1.4 Use geometric properties of points, lines, line segments to describe figures  
4.1.5 Recognize and demonstrate transformations – reflections, translations, and rotations – of basic shapes or designs (Flips, turns and slides)  
4.3.1 Use standard units to measure objects to the nearest half-inch, whole inch or centimeter  
4.3.2 Estimate and measure the perimeter of an object or a distance  
4.3.6 Select the appropriate unit and tool of measurement for length, weight, temperature and time  
4.3.7 Compare and order objects according to attributes of length, capacity, temperature and time  
4.3.8 Carry out simple unit conversions within a measurement system (e.g., inches to feet, hours to minutes)

4.3.5 Estimate and measure temperature in Fahrenheit and Celsius  
4.3.6 Select the appropriate unit and tool of measurement for length, weight, temperature and time  
4.3.7 Compare and order objects according to attributes of length, capacity, temperature and time

<b>Process Skills</b> 1. Critical Thinking and Reasoning 2. Collaboration 3. Invention 4. Self-Direction Information Literacy									
<b>Resources</b>			supplemental time Scott Foresman	supplemental measurement/length Scott Foresman	x fact quickie quizzes	supplemental graphs CSAP released items	supplemental addition and subtraction of fractions		
<b>Assessments</b>	End of Unit (M46-48)	Assessment Checklist: data Ses. 2.6 (M14-15) How Many People Live in Your Home?	Assessment Checklist (M39) Ses. 2.3 (M35-36) Numbers on the 1,000 chart Ses. 3.6 (M61) How Far Did they Travel? End of Unit (M64-65)	Assessment Checklist (M14) Ses. 1.3 (M15) Measuring Perimeter End of Unit (M23-24) Length/Measurement Assessment	Ses. 2.5 (M13) Counting Around the Class Ses. 4.7 (M44) End of Unit Quickie Quizzes (x facts)	Ses. 1.5 (M20-21) A Summer Day in Cairo, Egypt	Scott Foreman chp 10 test, modified, with... Student Activity book p. 24, 30	Ses. 2.5 (M40) Addition Strategies Ses. 3.3 (M52) Subtraction Strategies End of Unit (M54-55) Quickie Quizzes (+/- facts)	
<b>Vocabulary</b>	digit, sum, addends, degree, Fahrenheit, Celsius, equation, equal, place value, tens place, ones place, hundreds, thousands, difference, number line, unmarked number line, penny, dime, dollar, combinations, quarter, nickel, half dollar, strategies, same, different, combine  adding by place adding one # in parts	data, categories, bar graph, double bar graph, key, scale, interval, survey, tally marks, compare, mode, less than half, more than half, line plot, range, outlier, median, scale  distance, length, US standard system, inch, foot, yard, metric system, centimeter, meter	landmark numbers, hundreds place, thousands place, difference, elapsed time, add up, subtract back, digits, place value  time, digital, analog, minute, second, hour, am/pm, noon, midnight, half past, quarter til, quarter after, schedule	metric system, centimeter, meter, 2 dimensional (2-D), triangle, side, measurement benchmark, perimeter, domino, domino, triomino, tetromino, flip, slide, turn, slide, congruent, vertex (vertices), right angle, obtuse, acute, quadrilateral, degree, parallelogram, rectangle, rhombus, square, trapezoid	multiplication, equation, product, multiple, multiply, dimension, array, square number, prime number, division, divide	temperature, degrees, negative, horizontal axis, vertical axis, repeating pattern, unit, multiple, column, row, table,	fraction, denominator, numerator, equivalent fractions, decimal	positive, negative, hundreds, estimate, addend, difference, sum, landmark	