

# Math Curriculum Map for Third Grade

	September	October	November	December	January	
Unit Name or Theme	Number Sense	Money, Addition and Subtraction	Addition and Subtraction with Greater Numbers	Multiplication >>	<< Multiplication	Unit Name or Theme
Enduring Understandings and Performance Indicators	<p>Numbers can help us solve problems</p> <p>The base ten number system is based on combinations of ones, tens and hundreds</p> <p>Ordinal numbers can help us describe positions</p> <p>Numbers can be expressed in multiple forms</p> <p>Logical reasoning can help me solve mathematical and real-world problems</p>	<p>Money can be manipulated into various denominations to represent different values</p> <p>Addition helps us explain relationships between numbers, sets &amp; patterns</p> <p>Subtraction helps us explain differences among numbers, sets &amp; patterns</p> <p>Addition and subtraction are related</p> <p>There are a variety of strategies to use in solving mathematical problems</p>	<p>Understanding number relationships will help me determine the appropriate strategy to use in solving a problem</p> <p>Sums and differences of two and three digit numbers can be estimated</p>	<p>Mathematical properties govern addition and multiplication</p> <p>Multiples can be used to solve problems</p> <p>Skip counting can help me determine multiples of 2,5,10</p>	<p>Logical reasoning can assist me in solving real-world problems</p> <p>A variety of strategies can be applied when multiplying</p> <p>Multiplication is an extension of addition</p>	Enduring Understandings and Performance Indicators

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Essential Questions	<p>How are place value patterns repeated in large numbers?</p> <p>When should I use mental math?</p> <p>How do we use ordinal numbers in everyday life?</p> <p>What is expanded notation?</p> <p>How can I represent expanded notation?</p>	<p>How do I recognize what strategy to use for a specific problem?</p> <p>How can I take apart and recombine numbers in a variety of ways?</p> <p>How can I use expanded notation to assist in finding the sum or difference of two whole numbers up to three digits long?</p> <p>Why is it important to understand the values of coins?</p> <p>How can I model and solve problems by representing, adding and subtracting amounts of money?</p> <p>How many different ways can I demonstrate different amounts of money using various denominations of coins and bills?</p>	<p>How can mathematical situations and problems be represented?</p> <p>How can operations relate to one another?</p> <p>Why do I need to add?</p> <p>Why do I need to subtract?</p> <p>How can I use what I know about hundreds, tens and ones to add and subtract greater numbers?</p> <p>What strategies do I use to find the sums or differences of two and three digit numbers?</p>	<p>How are multiplication and addition related?</p> <p>What are the mathematical operations that govern addition and multiplication? How would I use them?</p> <p>How can multiples be used to solve a problem?</p> <p>How can numbers be broken down into smallest factors?</p> <p>How are repeated addition and multiplication related?</p>	<p>What strategies can I use to solve multiplication problems?</p> <p>Under what conditions should I apply multiplication strategies rather than addition?</p> <p>Why is logical reasoning purposeful?</p>	Essential Questions
Assessment Strategies Formative & Summative	<p>Everyday Math assessments</p> <p>Math Inventory</p> <p>Paper/pencil tasks</p>	<p>Everyday Math assessments</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	<p>Everyday Math assessments</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	<p>Everyday math assessments</p> <p>Cumulative assessment</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	<p>Everyday Math assessments</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	Assessment Strategies Formative & Summative

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Instructional Skills and Strategies	<p><b>Instructional Skills and Strategies:</b> Identify even and odd numbers</p> <p>Use ordinal numbers</p> <p>Express numbers in expanded form, standard form, words, with place value blocks, place value chart</p> <p>Round numbers to ten and hundred</p> <p>Read and understand words that express exact and estimate numbers</p> <p>Read and write 6 digit numbers</p> <p>Compare and order numbers</p> <p>Apply logical reasoning</p> <p>Apply Singapore Math: 8 step model drawing</p>	<p><b>Instructional Skills and Strategies:</b> Count coins and bills</p> <p>Count and make change</p> <p>Apply addition strategies (e.g. skip count, count on, mental math, recombine numbers, unifix cubes, graphing, number lines)</p> <p>Apply subtraction strategies (e.g. count back, take apart, manipulatives, graphing, number lines, mental math)</p> <p>Utilize fact families</p> <p>Apply Singapore Math: 8 step model drawing</p>	<p><b>Instructional Skills and Strategies:</b> Use place value to add and subtract</p> <p>Estimate the sums and differences of mathematical problems</p> <p>Mental math</p> <p>Round up to the nearest tenth, hundredth to add or subtract</p> <p>Regroup to add and subtract within 1000</p> <p>Verbalize mathematical processes</p> <p>Apply Singapore Math: 8 step model drawing</p>	<p><b>Instructional Skills and Strategies:</b> Explore multiplication</p> <p>Relate multiplication to addition</p> <p>Use arrays to discover multiplication</p> <p>Problem solve using mental math and estimation</p> <p>Regroup sets of objects to construct a multiplication problem</p> <p>Determine multiples of given numbers</p> <p>Multiply one digit numbers by multiples of 10</p> <p>Apply Singapore Math: 8 step model drawing</p>	<p><b>Instructional Skills and Strategies:</b> Multiply within 100 using regrouping, addition, mental math</p> <p>Identify and articulate mathematical patterns (i.e. four times a number is always even)</p> <p>Apply Singapore Math: 8 step model drawing</p>	Instructional Skills and Strategies
Primary Resources	EveryDay Math Box and Bag It Math	Everyday Math Math journal	Everyday Math Math journal Numberlines Manipulatives	Everyday Math	Everyday Math	Primary Resources
Links with CCSS/ NCTM	CCSS 3.NBT.1 NCTM Number and Operations, Problem Solving, Communications, Connections, Representation	CCSS 3.NBT.2 NCTM Problem Solving, Communications, Connections, Representation	CCSS 3.NBT.2 NCTM Numbers and Operation Standard, Algebra, Communications, Connections, Representation	CCSS 3.NBT.3 NCTM Number and Operations, Problem Solving, Reasoning and Proof Communications, Connections, Representation	CCSS 3.OA.5, 3.OA.7, 3.OA.9 NCTM Number and Operations, Problem Solving, Communications, Connections, Representation	Links with CCSS/NCTM

# Math Curriculum Map for Third Grade

	February	March	April	May	June	
Unit Name or Theme	Measurement	Probability and Collecting Data	Fractions	Division	Geometry	Unit Name or Theme
Enduring Understandings and Performance Indicators	<p>Measurement can be represented in many different forms</p> <p>Measurements can be illustrated, described and extended with standard and non-standard units</p>	<p>Data can be collected, analyzed and reported</p> <p>Logical reasoning can be applied to mathematical problems</p>	<p>Fractions can be represented by models, drawings, and constructs</p> <p>Fractions can represent events or data</p> <p>Fractions represent numbers on the number line</p> <p>Fractions can be compared</p> <p>The likelihood of an event can be described or written as a fraction</p>	<p>Multiplication and division share a relationship</p> <p>Numbers can be divided with a number of strategies</p>	<p>Attributes of shapes can be described, sorted and graphed</p> <p>Shapes can be transformed</p> <p>2,3 dimensional shapes can be represented by models and constructs</p> <p>Shapes can be congruent</p> <p>Shapes can be manipulated to demonstrate symmetry</p>	Enduring Understandings and Performance Indicators
Essential Questions	<p>How do I use measurement in my life?</p> <p>What tools can I use to measure?</p> <p>How can I communicate measurement?</p>	<p>How do I collect, organize, and interpret data?</p> <p>How does the type of data influence the type of graph?</p> <p>What kinds of questions can be answered using different data displays?</p>	<p>How can I use fractions in real life?</p> <p>How can I represent a shape as a 2 or 3 dimensional figure or fraction?</p> <p>How can we quantify an event or data without whole numbers?</p> <p>How can I use models to show how fractional parts can be combined or separated?</p> <p>How do I explain how changing the size of the whole affects the size or amount of a fraction?</p>	<p>What is the relationship between multiplication and division?</p> <p>What strategies can I use to solve division problems?</p> <p>How can I solve word problems involving equal groups, arrays and measurement quantities?</p> <p>How can I determine the unknown number in a division equation?</p>	<p>How can I transform shapes?</p> <p>How can I demonstrate symmetry among shapes?</p> <p>How can geometric ideas and relationships help me solve problems with numbers and measurement?</p>	Essential Questions
Assessment Strategies Formative & Summative	<p>Everyday Math assessments</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	<p>Everyday Math assessments</p> <p>Cumulative Assessment</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	<p>Everyday Math assessments</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	<p>Everyday Math assessments</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	<p>Everyday Math Assessments</p> <p>Math boxes</p> <p>Mental math reflexes</p> <p>Observations</p> <p>Journal pages</p> <p>Verbal and written expression through journal and discussions</p>	Assessment Strategies Formative & Summative

# Math Curriculum Map for Third Grade

Instructional Skills and Strategies	<p><b>Instructional Skills and Strategies:</b> Develop logical arguments to justify conclusions</p> <p>Apply Singapore Math: 8 step model drawing</p> <p>Measure length, width and height with inches, feet, yards, meters, miles, centimeters, kilometers, decimeters</p> <p>Measure capacity and liquid volumes with cups, pints, quarts and gallons</p> <p>Estimate liquid volumes</p> <p>Measure temperature with Celsius and Fahrenheit</p> <p>Bake brownies (e.g. “Bake off”)</p>	<p><b>Instructional Skills and Strategies:</b> Draw scales picture graphs and scaled bar graphs to represent data sets with several categories</p> <p>Generate and replicate measurement data in line plots</p> <p>Show data sets by making and adjusting graphs</p> <p>Determine appropriate graphs for given data sets</p>	<p><b>Instructional Skills and Strategies:</b> Isolate fractions on number lines</p> <p>Plot points on a number line</p> <p>Construct and destruct models and shapes to represent whole figures, shapes, and fractions</p> <p>Explain why fractions are equivalent</p> <p>Recognize simple equivalent fractions</p> <p>Express whole numbers as fractions</p> <p>Compare two fractions</p> <p>Apply Singapore Math: 8 step model drawing</p>	<p><b>Instructional Skills and Strategies:</b> Use division within 100 to solve word problems in situations</p> <p>Use arrays, equal groups, measurement quantities, drawings and symbols to demonstrate an understanding of division</p> <p>Guess and check with unknown numbers</p> <p>Apply unknown-factors to solve problems</p> <p>Use the relationship between multiplication and division to solve problems</p> <p>Apply Singapore Math: 8 step model drawing</p>	<p><b>Instructional Skills and Strategies:</b> Develop vocabulary to describe shapes, movement and attributes</p> <p>Classify 2 and 3 dimensional shapes</p> <p>Transform shapes through investigation</p> <p>Identify line and rotational symmetry in 2 and 3 dimensional shapes</p> <p>Apply Singapore Math: 8 step model drawing</p> <p>Recognize attributes of plane figures</p> <p>Understand concepts of area measurement (e.g. “unit square”, “<math>n</math> square units”)</p> <p>Count unit squares (e.g. square cm, square m, square in, square ft)</p> <p>Relate area to multiplication and addition (i.e. tile it, multiply lengths to find areas, use models)</p> <p>Recognize areas as additive</p> <p>Find rectilinear figures by decomposition and composition</p>	Instructional Skills and Strategies
Primary Resources	<p>Everyday Math Models</p> <p>Tools for measurement</p> <p>Recipes</p> <p>Game box</p> <p>Dry erase boards</p>	<p>Workmats &amp; manipulatives</p> <p>Everyday Math</p> <p>Game box</p> <p>Dry erase boards</p>	<p>Workmats &amp; manipulatives</p> <p>Everyday Math</p> <p>Game box</p> <p>Dry erase boards</p>	<p>Game box</p> <p>Dry erase boards</p> <p>Color tiles</p>	<p>Game box</p> <p>Dry erase boards</p> <p>Color tiles</p>	Primary Resources
Links with CCSS/NCTM	<p>CCSS 3.NF.1, 3.NF.2ab, 3.NF.3abc, 3.MD.2</p> <p>NCTM Measurement, Problem Solving, Communications, Connections and Representation</p>	<p>CCSS 3.MD.3, 3.MD.4</p> <p>NCTM, Numbers and Operation Standard, Data Analysis and Probability, Problem Solving, Communications, Connections, Representation</p>	<p>CCSS 3.OA.2, 3.OA.3, 3.OA.4, 3.OA.5, 3.OA.6, 3.OA.7</p> <p>NCTM Numbers and Operation Standard, Algebra, Problem Solving, Communications, Connections, Representation</p>	<p>CCSS 3.OA.3, 3.OA.5, 3.OA.6, 3.OA.7</p> <p>NCTM Problem Solving, Communications, Connections, Representation</p>	<p>CCSS 3.MD.5., 3.MD.6, 3.MD.7abcd, 3.MD.8</p> <p>NCTM Geometry, Problem Solving, Communications, Connections, Representation</p>	Links with CCSS/NCTM

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