

Math Curriculum Map for Fourth Grade

	1	2	3	4	5	
Unit Name or Theme	Place Value and Notation	Decimals	Fractions and Percentages	Multiplication	Division	Unit Name or Theme
Enduring Understandings and Performance Indicators	<p>Place value can be extended beyond hundreds</p> <p>Whole numbers can be rounded</p> <p>Numbers can be rounded and ordered</p> <p>Multi-digit whole numbers signify base ten numerals</p> <p>Multi-digit whole numbers can be compared</p>	<p>I can use appropriate strategies to solve addition and subtraction problems</p> <p>Numerical values can be communicated in decimals</p> <p>Decimals can be converted into fractions and percentages</p>	<p>Relationships exist among fractions, decimals and percentages</p> <p>Fractions demonstrate numbers, decimals, measurements and percentages</p> <p>Fractions can be expressed with improper and proper representation</p> <p>Percentages represent values and can be compared with whole numbers, data sets and information</p>	<p>Addition and multiplication share mathematical properties</p> <p>Multiples can be used to solve problems</p> <p>Multiplication can be used to assist in solving everyday problems</p>	<p>Division shares mathematical properties with addition, subtraction and multiplication</p> <p>Divisors and dividends share relationships</p> <p>Division can be used to assist in solving everyday problems</p>	Enduring Understandings and Performance Indicators
Essential Questions	<p>How are place value patterns repeated in large numbers?</p> <p>How does understanding place value help me solve problems?</p> <p>In a multi-digit whole number, what place values do each digit represent?</p> <p>How can I compare multi-digit numbers?</p> <p>How can I round multi-digit whole numbers?</p>	<p>How can decimals be rounded?</p> <p>How can models help me demonstrate decimals?</p> <p>How would you compare and order whole numbers and decimals?</p>	<p>How can I demonstrate the connection among fractions, decimals and percentages?</p> <p>How can I determine the GCF?</p> <p>How do I identify the LCM?</p> <p>What is the relationship between multiplication and division of fractions?</p> <p>How can models be used to compute fractions with like and unlike denominators?</p> <p>How many ways can we use models to compare and determine equivalent fractions?</p>	<p>What are the mathematical properties that govern addition and multiplication?</p> <p>How can multiples be used to solve problems?</p> <p>How do I use prime factors to solve problems?</p> <p>What strategies assist me in solving multiplication problems?</p> <p>How does my knowledge about multiplication help me solve other problems?</p>	<p>How do I know if a number is divisible by 2, 3, 5 and 10?</p> <p>What strategies assist me in solving division problems?</p> <p>How can I represent divisibility?</p> <p>How does my knowledge about division help me solve other mathematical problems?</p>	Essential Questions

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Assessment Strategies Formative & Summative	<p>Quizzes Tests Group project Paper/pencil class work Homework Math journals</p>	<p>Everyday Math assessments Observations Paper/pencil class work Homework Math journals</p>	<p>Everyday Math assessments Paper/pencil tasks Math journals</p>	<p>Everyday Math Singapore Math Math journals</p>	<p>Observations Everyday Math Singapore Math Math journals</p>	Assessment Strategies Formative & Summative
Instructional Skills and Strategies	<p>Instructional Skills and Strategies: Name, compute, order and round decimals</p> <p>Compare place value among multi-digit numerals</p> <p>Recognize, write and discuss place value and patterns among multi-digit numerals</p> <p>Solve mathematical word problems</p> <p>Recognize and name multi-digit whole numbers</p> <p>Write multi-digit whole numbers</p> <p>Compare two multi-digit numbers using symbols</p>	<p>Instructional Skills and Strategies: Use decimal notation for fractions</p> <p>Compare two decimals to hundredths by reasoning about size</p> <p>Record comparisons among decimals</p> <p>Justify conclusions in mathematical terms</p> <p>Use a visual model to represent decimal values</p> <p>Use decimal notations for fractions with denominators 10 or 100</p> <p>Compare two decimals to hundredths by reasoning about their size</p>	<p>Instructional Skills and Strategies: Compare decimals to fractional benchmarks</p> <p>Shade grids to represent fractions as decimals</p> <p>Identify greatest common factor and least common multiple</p> <p>Test for divisibility using rules</p> <p>Square numbers; identify square roots</p> <p>Subtract like and unlike denominators</p> <p>Order fractions and mixed numbers</p> <p>Add and subtract fractions</p> <p>Compare percentages; ordering from least to greatest</p> <p>Determine LCM, GCF among numbers</p> <p>Express fractions with denominator of 10 as an equivalent fraction with denominator of 100</p>	<p>Instructional Skills and Strategies: Use addition, subtraction and multiplication with whole numbers to solve problems</p> <p>Interpret multiplication as a comparison</p> <p>Communicate understandings of multiplication</p> <p>Solve multiplication problems following multistep patterns, drawings, comparisons, addition</p> <p>Find all factor pairs for a whole number in the range 1-100</p> <p>Distinguish between prime and composite numbers</p> <p>Multiply up to four digit whole numbers</p>	<p>Instructional Skills and Strategies: Use addition, subtraction, multiplication and division with whole numbers to solve problems</p> <p>Find all factor pairs</p> <p>Determine whether a given whole number between 1-100 is prime or composite</p> <p>Divide everyday mathematical problems using drawings, comparisons</p> <p>Find whole number quotients and remainders with up to four digit dividends and one digit divisors</p> <p>Use strategies based on place value, multiplication, comparisons</p> <p>Illustrate division problems using rectangular arrays and models</p>	Instructional Skills and Strategies

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Primary Resources	<p>EveryDay Math Math journals Internet resources Singapore Math</p>	<p>Everyday Math Workbook (teacher generated) Calculators Math journals Internet resources Singapore Math</p>	<p>Everyday Math Math journals Internet resources Singapore Math</p>	<p>Everyday Math Math journals Internet resources Singapore Math</p>	<p>Everyday Math Math journals Internet resources Singapore Math</p>	Primary Resources
Links with CCSS/NCTM	<p>CCSS 4.NBT.1., 4.NBT.2, 4.NBT.3 NCTM Number and Operation Standard, Problem Solving, Communication, Connection, Representation</p>	<p>CCSS 4.NF.6, 4.NF.7 NCTM Number and Operations, Problem Solving, Communications, Connections, Representation</p>	<p>CCSS 4.NF.1, 4.NF.2, 4.NF.3abcd, 4.NF.6 NCTM Number and Operations, Algebra, Communications, Connections, Representation</p>	<p>CCSS 4.OA.1, 4.OA.2, 4.OA.3, 4.OA.4, 4.NBT.5 NCTM Number and Operations, Problem Solving, Reasoning and Proof Communications, Connections, Representation,</p>	<p>CCSS 4.OA.1., 4.OA.2, 4.OA.3, 4.NBT.6 NCTM Problem Solving, Communications, Connections, Representation</p>	Links with CCSS/NCTM

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	6	7	8	9	10	
Unit Name or Theme	Graphs and Data	Ratio and Probability	Geometry	Problem Solving >>		Unit Name or Theme
Enduring Understandings and Performance Indicators	<p>The possible results of an experiment can be described and graphed</p> <p>A difference can be determined between predicted and actual outcomes</p> <p>Data can be represented in various forms</p> <p>Data can be interpreted</p>	<p>Solve problems with ratios and proportions</p> <p>Shade, construct, deconstruct ratios</p> <p>Identify proportions</p> <p>Solve percent problems</p> <p>Utilize “shortcut” strategies</p>	<p>2 and 3 dimensional shapes can be represented by models and constructs</p> <p>Geometric shapes can be described, classified and compared according to their characteristics</p> <p>Geometric patterns can be recognized, described, extended and created based on attributes and numbers</p> <p>Symmetry represents balanced and repeated patterns found in geometric shapes and in nature</p>	<p>The likelihood of an event can be described or written</p> <p>Economics can be regulated and mathematically calculated</p> <p>Consumer math requires mathematical reasoning</p>	>>	Enduring Understandings and Performance Indicators
Essential Questions	<p>How can I determine which graph or table is appropriate to use in representing data?</p> <p>How can I represent and organize data?</p> <p>How can I interpret data?</p> <p>How can I solve problems involving measurements?</p>	<p>How is the probability of an event determined and described?</p> <p>How can estimation be used to identify proportions?</p> <p>How can I choose the appropriate mathematical operation to solve problems?</p>	<p>How can I represent a shape as a 2 or 3 dimensional figure?</p> <p>How can I record characteristics of geometric shapes?</p> <p>What is the relationship among geometric shapes or patterns?</p> <p>How can I identify symmetry?</p> <p>How can we quantify an event or data without whole numbers?</p>	<<	<p>How can I record or describe the conduction of a consuming?</p> <p>Why is it important to document spending?</p> <p>What skills do I need to utilize as a consumer?</p>	Essential Questions
Assessment Strategies Formative & Summative	<p>Everyday Math assessments</p> <p>Math journals</p> <p>8 Step Model Drawing</p> <p>Daily mental math</p>	<p>Everyday Math assessments</p> <p>Math journals</p> <p>8 Step Model Drawing</p>	<p>Everyday Math assessments</p> <p>Observations</p> <p>April assessment</p>	<p>Everyday Math assessments</p> <p>Observations</p> <p>Shape designs</p> <p>May assessment</p>	<p>Everyday Math assessments</p> <p>Observations</p> <p>Experiments</p> <p>Final assessment</p>	Assessment Strategies Formative & Summative

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Instructional Skills and Strategies	<p>Instructional Skills and Strategies: Record measurements in a two column table</p> <p>Make a line plot to display a data set</p> <p>Represent measurements using diagrams</p> <p>Form line graphs to display temperature</p> <p>Develop bar graphs</p> <p>Create, conduct and analyze surveys</p> <p>Develop and interpret pie graphs</p> <p>Form inferences and draw conclusions based on data in large and small groups</p>	<p>Instructional Skills and Strategies: Recognize and generate equivalent forms of commonly used fractions, decimals or percents</p> <p>Recognize, identify and quantify proportions</p> <p>Shade, construct and deconstruct ratios</p> <p>Solve percent problems</p> <p>Utilize shortcut strategies</p>	<p>Instructional Skills and Strategies: Create 2 and 3 dimensional models and constructs</p> <p>Compare geometric shapes</p> <p>Classify geometric shapes</p> <p>Describe geometric shapes</p> <p>Recognize, describe, produce and extend geometric patterns</p> <p>Describe attributes using mathematical terms</p> <p>Use numbers to maneuver geometric patterns</p> <p>Recognize and replicate symmetry in nature, art and patterns</p> <p>Construct a symmetrical design</p>	<p>Instructional Skills and Strategies: Singapore Math- 8 step drawings</p> <p>Shop with a given amount of money, using mathematical reasoning</p> <p>Add and subtract money</p> <p>Estimate using money</p> <p>Compare prices</p> <p>Reduce prices based upon percentages</p> <p>Write checks</p> <p>Conduct banking procedures using deposit and withdraw as a form of addition and subtraction</p>	>>	Instructional Skills and Strategies
Primary Resources	Everyday Math Singapore Math Internet resources	Workmats & manipulatives Everyday Math Singapore Math Internet resources	Workmats & manipulatives Everyday Math Singapore Math Internet resources	Everyday Math Singapore Math Internet resources	Everyday Math Singapore Math Internet resources	Primary Resources
Links with CCSS/ NCTM	CCSS 4.MD.1, 4.MD.2, 4.MD.4 NCTM Problem Solving, Communications, Connections and Representation	CCSS NCTM Number and Operations, Problem Solving, Communications, Connections, Representation	CCSS NCTM Problem Solving, Communications, Connections, Representation	CCSS NCTM Problem Solving, Communications, Connections, Representation	CCSS NCTM Data Analysis and Probability, Problem Solving, Reasoning and Proof, Communications, Connections, Representation	Links with CCSS/NCTM