Fourth Grade Math Curriculum Map

Quarter 1-Mid Quarter 1						
Domains	*Numbers and Operations in Base Ten*	*Numbers and Operations in Base Ten*	*Numbers and Operations in Base Ten*	*Numbers and Operations in Base Ten*	*Operations and Algebraic Thinking*	*Operations and Algebraic Thinking*
Cluster	Generalize place value understanding for multi-digit whole numbers.	Generalize place value understanding for multi-digit whole numbers.	Use place value understanding of properties of operations to perform multi-digit arithmetic.	Generalize place value understanding for multi-digit whole numbers	Use the four operations with whole numbers to solve problems.	Gain familiarity of factors and multiples.
Target Standards	MAFS.4.NBT.1.1 : Recognize that in a multi-digit number, a digit in one place represents ten times what it represents in the place to its right.	MAFS.4.NBT.1.2 : Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, <, and = symbols to record the results of comparisons.	MAFS.4.NBT.2.4 : Fluently add and subtract multi-digit whole numbers using the standard algorithm.	MAFS.4.NBT.1.3 : Use place value understanding to round multi-digit whole numbers to any place.	MAFS.4.OA.1.1 : Interpret a multiplication equation as a comparison, e.g., interpret 35=5x7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.	MAFS.4.OA.2.4 : Investigate factors and multiples. a: Find all factor pairs for a whole number in the range 1-100. b: Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a one-digit number. c: Determine whether a given whole number in the range 1-100 is prime or composite.
Mathematical Practices	6, 7 and 8	6, 7 and 8	6, 7 and 8	6, 7 and 8	1 and 3	3 and 7
Objective/Learning Goal/SWBT	*Explain that a digit in one place is worth ten times the amount of the digit to its right. *Demonstrate with models that in a multi-digit whole number, a digit in one place represents ten times the amount of the digit to its right.	*Read and write multi-digit numbers through one million in base-ten numerals, number names, and expanded form. *Compare the value of digits in multi-digit whole numbers. *Compare two multi-digit numbers to 1,000,000 using place value and record the comparison numerically using the following symbols, <, >, or =.	*Add or subtract with regrouping. *Add or subtract using the standard algorithm. *Explain how and why the standard algorithm for addition and subtraction works. *Determine the missing digit in an addition or subtraction problem.	*Recognize that the digit to the right of an identified place value will determine how to round a number. *Write a multi-digit number rounded to any given place and justify the reasonableness of their response.	*Read a basic multiplication equation as a comparison. *Represent statements of multiplicative comparisons as multiplication equations.	*Recognize that a factor is a number being multiplied. *Determine factors of whole numbers in the range 1-100 using manipulatives. *Recognize that multiples can be thought of as the result of skip counting by each of the factors.
IReady Resources	Unit 1 Lesson 1	Unit 1 Lesson 2	Unit 1 Lesson 3	Unit 1 Lesson 4	Unit 2 Lesson 5	Unit 2 Lesson 7

5/2016
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Fourth Grade Math Curriculum Map

Mid Quarter 1-End Quarter 1					
Domains	*Numbers and Operations in Base Ten*	*Numbers and Operations in Base Ten*	*Operations and Algebraic Thinking*	*Operations and Algebraic Thinking*	*Operations and Algebraic Thinking*
Cluster	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Use the four operations with whole numbers to solve problems.	Use the four operations with whole numbers to solve problems.	Generate and analyze patterns.
Target Standards	MAFS.4.NBT.2.5 : Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	MAFS.4.NBT.2.6 : Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	MAFS.4.OA.1.2 : Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	MAFS.4.OA.1.a-b : Determine the unknown whole number in an equation relating four whole numbers using comparative rational thinking.	MAFS.4.OA.3.5 : Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.
Mathematical Practices	1, 2 and 8	1,2 and 8	1 and 3	1 and 3	3 and 7
Objective/Learning Goal/SWBT	*Solve multi-digit multiplication problems that extend to 2-digit by 2-digit or 4-digit by 1-digit using a variety of strategies. *Explain and justify a chosen strategy to solve multi-digit multiplication problems.	*Solve division of a multi-digit number by a one-digit number using strategies and explain a chosen strategy. *Recognize a remainder as what is left over after dividing equally. *Use the relationship between multiplication and division to check the quotient.	*Determine when to multiply or divide in word problems. *Distinguish multiplicative comparison from additive comparison. *Solve word problems involving multiplicative comparison using drawings. *Translate a word problem involving multiplicative comparison into a expression or equation involving a symbol for the unknown number.	*Identify the equal sign as expressing equivalence between numbers. *Determine if a given equation is true or false by comparing, composing, and/or decomposing the numbers. *Interpret an unknown quantity without solving. *Justify why an equation is true or false.	*Identify and demonstrate numeric and nonnumeric patterns (repeating and growing). *Generate a pattern that follows a given rule. *Identify features in patterns following a given rule.
IReady Resources	Unit 3 Lesson 11	Unit 3 Lesson 12	Unit 2 Lesson 6	Unit 2 Lesson 8A	Unit 2 Lesson 8B

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Fourth Grade Math Curriculum Map

Quarter 2-Mid Quarter 2			
Domains	*Operations and Algebraic Thinking*	*Numbers and Operations-Fractions*	*Numbers and Operations-Fractions*
Cluster	Use the four operations with whole numbers to solve problems.	Extend understanding of fraction equivalence and ordering.	Extend understanding of fraction equivalence and ordering.
Target Standards	MAFS.4.OA.1.3 : Solve multi-step word problems posed with whole numbers and having whole-number operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	MAFS.4.NF.1.1 : Explain why a fraction a/b is equivalent to a fraction (n x a) / (n x b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	MAFS.4.NF.1.2 : Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or a benchmark fraction, such as ½. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, <, or =.
Mathematical Practices	1, 2 and 8	3, 5 and 7	3, 5 and 7
Objective/Learning Goal/SWBT	*Choose the correct operation to perform at each step of a multi-step word problem with whole number answers. *Solve multi-step word problems that involve any of the four operations using various strategies. *Justify the strategies used to solve multi-step word problems. *Interpret remainders that result from multi-step word problems. *Assess the reasonableness of answers to multi-step word problems using estimation strategies and mental math.	*Generate equivalent fractions using visual models. *Recognize how to display 1 in the form of a fraction. *Apply the Identity Property of Multiplication to generate equivalent fractions numerically. *Explain, using visual representation, how and why fractions can be equivalent even though the numbers are not the same.	*Explain that fractions can only be compared when they refer to the same whole. *Compare two fractions visually. *Determine whether a fraction is closest to zero, to one whole or to a benchmark fraction. *Compare two fractions with different numerators and different denominators. *Record the results of comparisons with the symbols <, >, or =.
IReady Resources	Unit 2 Lessons 9-10	Unit 4 Lesson 13	Unit 4 Lesson 14

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Fourth Grade Math Curriculum Map

Mid Quarter 2-End Quarter 2					
Domains	*Numbers and Operations-Fractions*	*Numbers and Operations-Fractions*	*Numbers and Operations-Fractions*	*Numbers and Operations-Fractions*	*Numbers and Operations-Fractions*
Cluster	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	Understand the decimal notation for fractions and compare decimal fractions.	Understand the decimal notation for fractions and compare decimal fractions.	Understand the decimal notation for fractions and compare decimal fractions.
Target Standards	MAFS.4.NF.2.3 : Understand a fraction a/b with a>1 as a sum of fractions 1/b.	MAFS.4.NF.2.4 : Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	MAFS.4.NF.3.5 : Express a fraction with denominator 10 as an equivalent fraction with denominator 100 and use this technique to add two fractions with denominators 10 and 100.	MAFS.4.NF.3.6 : Use decimal notation for fractions with denominators 10 or 100.	MAFS.4.NF.3.7 : Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, <, or =.
Mathematical Practices	4 and 7	1, 2, 5 and 6	3 and 7	3 and 7	3 and 7
Objective/Learning Goal/ SWBT	*Demonstrate with visual models that adding fractions within the same whole is joining parts of that whole. *Demonstrate with visual models that subtracting fractions within the same whole is separating parts of that whole. *Decompose a mixed number. *Add and subtract mixed numbers.	*Decompose a fraction into a representation of a multiple of unit fractions. *Understand that a fraction can be represented as the numerator times the unit fraction with the same denominator. *Multiply a fraction by a whole number. *Use visual models and equations to solve word problems that involve multiplying a whole number and fraction.	*Read, write, and identify decimal fractions. *Rewrite a fraction with a denominator of 10 as an equivalent fraction with a denominator of 100. *Add two fractions with denominators 10 and/or 100.	*Identify the place value of digits to the right of the decimal point. *Read, write, and identify decimals through the hundredths place from graphic and numeric representations. *Translate the number name (word form) of a decimal into its equivalent fraction. *Represent a decimal value on a number line.	*Explain that decimals can only be compared when they refer to the same whole. *Compare decimals with models and record the comparison numerically using symbols >, <, or =. *Justify the comparison by reasoning about the size of the decimal or by using a visual model.
IReady Resources	Unit 4 Lessons 15-17	Unit 4 Lessons 18-19	Unit 4 Lesson 20	Unit 4 Lesson 21	Unit 4 Lesson 22

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Fourth Grade Math Curriculum Map

Quarter 3-Mid Quarter 3

Domains	*Measurement and Data*	*Measurement and Data*	*Measurement and Data*	*Measurement and Data*	*Measurement and Data*
Cluster	Solve problems involving measurement and conversions of measurements from a larger unit to a smaller unit.	Solve problems involving measurement and conversions of measurements from a larger unit to a smaller unit.	Solve problems involving measurement and conversions of measurements from a larger unit to a smaller unit.	Represent and interpret data.	Understand concepts of angles and measure angles.
Target Standards	MAFS.4.MD.1.1 : Know relative sizes of measurement units within one system of units including km, m, cm, kg, g, lb, oz, L, mL, hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.	MAFS.4.MD.1.2 : Use the four operations to solve word problems involving distances, intervals of time, and money, including problems involving simple fractions or decimals. Represent fractional quantities of distance and intervals of time using linear models.	MAFS.4.MD.1.3 : Apply the area and perimeter formulas for rectangles in real world and mathematical problems.	MAFS.4.MD.2.4 : Make a line plot to display a data set of measurements in fractions of a unit. Solve problems involving addition and subtraction of fractions by using information presented in line plots.	MAFS.4.MD.3.5 : Recognize angles as geometric shapes that are formed whenever two rays share a common endpoint, and understand concepts of angle measurement.
Mathematical Practices	2, 6 and 7	1, 2 and 6	1 and 3	2 and 4	4, 5 and 6
Objective/Learning Goal/SWBT	*Define units of measure. *Differentiate between units of measure for length, volume, and mass/weight within one system. *Convert larger units of measure into the smaller equivalent unit counterparts. *Complete a two-column table (function table) showing measurement equivalents.	*Use the four operations to solve word problems where all measurements are in the same unit and expressed by whole numbers. *Solve problems where all measurements are in the same unit and include fractions and/or decimals. *Use the four operations to solve word problems involving intervals of time or money.	*Solve real-world problems involving perimeter using the formulas. *Write area measures in square units. *Solve real-world problems involving area using the formulas. *Solve problems involving the area of a rectangle with length or width missing.	*Create a line plot recording measurement data including fraction units. *Use the measurement data on a line plot to solve addition and subtraction problems.	*Define an angle. *Explain the relationship between a circle and the number of degrees in an angle. *Explain that it takes 360 one-unit degrees to make a circle. *Use the geometric notation for degrees to label the measure of an angle.
IReady Resources	Unit 5 Lesson 23	Unit 5 Lessons 24-25	Unit 5 Lesson 26	Unit 5 Lesson 27	Unit 5 Lesson 28

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Fourth Grade Math Curriculum Map

Mid Quarter 3-End Quarter 3					
Domains	*Measurement and Data*	*Measurement and Data*	*Geometry*	*Geometry*	*Geometry*
Cluster	Understand concepts of angles and measure angles.	Understand concepts of angles and measure angles.	Draw and identify lines and angles and classify shapes by properties of their lines and angles.	Draw and identify lines and angles and classify shapes by properties of their lines and angles.	Draw and identify lines and angles and classify shapes by properties of their lines and angles.
Target Standards	MAFS.4.MD.3.6 : Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	MAFS.4.MD.3.7 : Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real- world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	MAFS.4.G.1.1 : Draw points, lines, line segments, rays, angles, and perpendicular and parallel lines. Identify these in two-dimensional figures.	MAFS.4.G.1.2 : Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of a specified size. Recognize right triangles as a category, and identify right triangles.	MAFS.4.G.1.3 : Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.
Mathematical Practices	4, 5 and 6	4, 5 and 6	3, 5 and 7	3, 5 and 7	3,5 and 7
Objective/Learning Goal/SWBT	*Measure an angle to the nearest whole number using a protractor. *Use a protractor to create an angle given a specific measure.	*Explain that the angle measurement of a larger angle is the sum of the angle measures of its decomposed parts. *Use addition and subtraction to solve for the missing angle measurements. *Solve word problems involving unknown angles.	*Draw the following two-dimensional objects: point, line, line segment, ray, right angle, acute angle, obtuse angle, straight angle, perpendicular lines, and parallel lines. *Classify angles of two-dimensional figures as right, acute, straight, or obtuse. *Identify the two-dimensional objects listed above in two-dimensional figures.	*Classify two-dimensional shapes into the following categories: those with parallel lines, those with perpendicular lines, those with both parallel and perpendicular lines, those with no parallel or perpendicular lines. *Classify two-dimensional shapes into categories based on the presence or absence of acute, obtuse, or right angles. *Classify triangles by their sides. *Identify different types of right triangles, scalene and isosceles.	*Identify and describe figures that have line symmetry. *Draw lines of symmetry in both regular and non-regular polygons.
IReady Resources	Unit 5 Lesson 29	Unit 5 Lesson 30	Unit 6 Lesson 31	Unit 6 Lesson 32	Unit 6 Lesson 33

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Fourth Grade Math Curriculum Map

Quarter 4-Mid Quarter 4		
Domains	*Operations and Algebraic Thinking*	*Operations and Algebraic Thinking*
Cluster	Multiply and divide within 100.	Use the four operations with whole numbers to solve problems.
Target Standards	MAFS.3.OA.3.7 : Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	MAFS.4.OA.1.3 : Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
Mathematical Practices	1 and 3	1, 2 and 8
Objective/Learning Goal/SWBT	*Determine when to multiply or divide in word problems *Distinguish multiplicative comparison from additive comparison. *Solve word problems involving multiplicative comparison using drawings. *Translate a word problem involving multiplicative comparison into an expression or equation involving a symbol for the unknown number.	*Choose the correct operation to perform at each step of a multi-step word problem with whole-number answers. *Solve multi-step word problems that involve any of the four operations using various strategies. *Justify the strategies used to solve multi-step word problems. *Represent a multi-step word problem using an equation involving a symbol for the unknown number. *Interpret remainders that result from multi-step word problems. *Assess the reasonableness of answers to multi-step word problems using estimation strategies and mental math.
IReady Resources		Lessons 9-10

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Fourth Grade Math Curriculum Map

Mid Quarter 4-End Quarter 4		
Domains	*Numbers and Operations in Base Ten*	*Numbers and Operations in Base Ten*
Cluster	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Use place value understanding and properties of operations to perform multi-digit arithmetic.
Target Standards	MAFS.4.NBT.2.5 : Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	MAFS.4.NBT.2.6 : Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
Mathematical Practices	1, 2 and 8	1, 2 and 8
Objective/Learning Goal/SWBT	*Solve multi-digit multiplication problems that extend to 2-digit by 2-digit or 4-digit by 1- digit using a variety of strategies. *Explain and justify a chosen strategy to solve multi-digit multiplication problems.	*Solve division of a multi-digit number by a one-digit number using strategies and explain a chosen strategy. *Recognize a remainder as what is left over after dividing equally. *Use the relationship between multiplication and division to check the quotient.
IReady Resources	Lesson 11	Lesson 12

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