MATH - 4th

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August 2015

Fourth Grade Mathematics Curriculum Map

Content	Skills	Assessment	Resources
1. Place Value	4.NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. 4.NBT.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.	Chapter 1 Progress Check (Lessons 1.1-1.4)	District 709 WebLinks • FunBrain Place Value Puzzler

September 2015

Content	Skills	Assessment	Resources
1. Place Value: Rounding/Estimation 2. Addition/Subtraction Algorithms 3. Multistep Word Problems 4. Number/Shape Patterns	4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place. 4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm. 4.OA.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. 4.OA.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.	1. Chapter 1 Practice, Review, and Reflect 2. Chapter 1 Assessment 3. Chapter 2 Progress Check (Lessons 2.1-2.4) 4. Chapter 2 Progress Check (Lessons 2.5-2.7) 5. Chapter 2 Practice, Review, and Reflect 6. Chapter 2 Assessment	District 709 WebLinks • Brain Pop Video: Rounding • Math Magician • Math Baseball • Spacey Math

October 2015

Content	Skills	Assessment	Resources
1. Relationship of Multiplication and Division/Fact Families 2. Multiplication/Division Facts 3. Properties of Multiplication and Division 4. Factors and Multiples 5. Multistep Word Problems 6. Number/Shape Patterns	4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 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. 4.NBT.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. 4.OA.4 Find all factor pairs for a whole number in the range 1-100. 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 given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite. 4.OA.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. 4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent	1. Chapter 3 Progress Check (Lessons 3.1-3.4) 2. Chapter 3 Practice, Review, and Reflect 3. Chapter 3 Assessment	District 709 WebLinks: • Brain Pop Video: Multiplication • Brain Pop Video: Commutative Property • Brain Pop Video: Associative Property • Math Magician • AAA Math Grade 4

	features of the pattern that were not explicit in the rule itself.		

November 2015

Content	Skills	Assessment	Resources
1. Multiplication Using Larger Numbers (up to 4-digit by 1-digit)	4.NBT.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.	1. Chapter 4 Progress Check (Lessons 4.1-4.4) 2. Chapter 4 Progress Check (Lessons 4.5-4.9) 3. Chapter 4 Practice, Review, and Reflect 4. Chapter 4 Assessment	IXL Math
2. Multistep Word Problems	4.OA.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. 4.OA.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.		
3. Number/Shape Patterns	4.OA.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.		

December 2015

Content	Skills	Assessment	Resources
1. Multiplication Using Larger Numbers (2-digit by 2-digit)	4.NBT.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.	1. Chapter 5 Progress Check (Lessons 5.1-5.2) 2. Chapter 5 Practice, Review, and Reflect 3. Chapter 5 Assessment	IXL Math
2. Multistep Word Problems	4.OA.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.		
3. Number/Shape Patterns	4.OA.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.		

January 2016

Content	Skills	Assessment	Resources
1. Area and Perimeter	4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.	1. Chapter 13 Progress Check (Lessons 13.1-13.2) 2. Chapter 13 Practice, Review, and Reflect 3. Chapter 13 Assessment 4. Chapter 14 Progress Check (Lessons 14.1-14.2)	District 709 Web Links: • FunBrain Shape Surveyor • AAA Math Geometry • Pattern Generator • Geometry Jeopardy • Brain Pop Video: Parallel and Perpendicular Lines • Geometry Project Web
2. Two-Dimensional Geometry (Lines, Rays, and Angles)	4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. 4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.		
3. Multistep Word Problems	4.OA.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.		
4. Number/Shape Patterns	4.OA.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.		

February 2016

Content	Skills	Assessment	Resources
1. Two-Dimensional Geometry (Classifying Angles)	4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: 4.MD.5.a An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. 4.MD.5.b An angle that turns through n one-degree angles is said to have an angle measure of n degrees.	1. Chapter 14 Progress Check (Lessons 14.3-14.7) 2. Chapter 14 Practice, Review, and Reflect 3. Chapter 14 Assessment	District 709 Web Links: • Symmetry Kaleidoscope • Brain Pop Video: Polygons • Brain Pop Video: Measuring Angles • Symmetry Artist • Angles
2. Two-Dimensional Geometry (Measuring Angles)	4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. 4.MD.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.		
3. Two-Dimensional Geometry (Figures)	4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.		
4. Two-Dimensional Geometry (Symmetry)	4.G.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.		
5. Multistep Word Problems	4.OA.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.		
6. Number/Shape Patterns	4.OA.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.		

March 2016

Content	Skills	Assessment	Resources
1. Equivalent Fractions	4.NF.1 Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × 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. 4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.	1. Chapter 8 Progress Check (Lessons. 8.1-8.2) 2. Chapter 8 Progress Check (Lessons 8.3-8.7) 3. Chapter 8 Practice, Review, and Reflect 4. Chapter 8 Assessment 5. Chapter 9 Progress Check (Lessons 9.1-9.4) 6. Chapter 9 Progress Check (Lessons 9.5-9.7) 7. Chapter 9 Practice, Review, and Reflect 8. Chapter 9 Assessment	District 709 Web Links: • AAA Math Grade 4 • Fractions Project Web • Everyday Math Resources--Fractions
2. Decomposing Fractions	4.NF.3 Understand a fraction a/b with a > 1 as a sum of fractions 1/b. 4.NF.3.b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.		
3. Comparing and Ordering Fractions	4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.		
4. Fraction Algorithms (Addition and Subtraction)	4.NF.3.a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.		

	4.NF.3.b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.		
5. Mixed Numbers	4.NF.3.c Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.		
6. Fraction Algorithms (Multiplication)	4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.		
	4.NF.4.a Understand a fraction a/b as a multiple of 1/b.		
	4.NF.4.b Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number.		
7. Multistep Word Problems	4.NF.3.d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.		
	4.NF.4.c Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.		
8. Number/Shape Patterns	4.OA.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.		

April 2016

Content	Skills	Assessment	Resources
1. Relating Fractions to Decimals	4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. 4.NF.6 Use decimal notation for fractions with denominators 10 or 100. 4.NF.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 <, and justify the conclusions, e.g., by using a visual model.	1. Chapter 10 Progress Check (Lessons 10.1-10.3) 2. Chapter 10 Practice, Review, and Reflect 3. Chapter 10 Assessment 4. Chapter 6 Progress Check (Lessons 6.1-6.6) 5. Chapter 6 Progress Check (Lessons 6.7-6.9) 6. Chapter 6 Practice, Review, and Reflect 7. Chapter 6 Assessment	District 709 Web Links: • Brain Pop Video: Decimals • Everyday Math Resources--Division
2. Long Division	4.NBT.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.		
3 Multistep Word Problems	4.OA.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.		
4. Number/Shape Patterns	4.OA.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.		

May 2016

Content	Skills	Assessment	Resources
1. Customary Measurement	4.MD.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. 4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information	1. Chapter 11 Progress Check (Lessons 11.1-11.4) 2. Chapter 11 Progress Check (Lessons 11.5-11.7) 3. Chapter 11 Practice, Review, and Reflect 4. Chapter 11 Assessment 5. Chapter 12 Progress Check (Lessons 12.1-12.3)	District 709 Web Links: • FunBrain Measuring • Interactive Measurement • AAA Math Grade 4 • Customary Measurement Project Web • Brain Pop Video: Measurement

2. Metric Measurement 3. Multi-Step Word Problems	presented in line plots. 4.MD.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. 4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	6. Chapter 12 Practice, Review, and Reflect 7. Chapter Assessment	