Elementary Math; Grade 4   2016 – 2017

	Week	Major Concepts / Topics	Possible Resources: from NC DOE and FL
Quarter 1 Aug 10 – Oct 14	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. Apply concepts of place value with addition and subtraction. 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 using correct symbols. 4.NBT.1.1, 4.NBT.1.2	• Select NBT.1 or 2 or 3 to assist your child
	2	Use place value understanding to round multi-digit whole numbers to ANY place. 4.NBT.1.3	• Select NBT.1 or 2 or 3 to assist your child
	3	Add and subtract multi-digit whole numbers using *the standard algorithm*. Know strategies to apply in case they get lost with an algorithm; use base-ten manipulatives to SHOW they understand before simply performing an operation. 4.NBT.2.4	• Select NBT.4 and the two tasks for assistance
	4	Solve multi-step word problems with whole number answers including problems in which the remainder must be interpreted. Represent problems using equations with a letter for the unknown and assess reasonableness with mental computation and estimation strategies including rounding. 4.OA.1.3	• Select 4.OA.3 for assistance
	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 properties of operation. Illustrate and explain with equations, rectangular arrays, and/or area models. 4.NBT.2.5	• Select 4.NBT.5 for assistance
	6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, use STRATEGIES from place value, properties of operations, and/or the relationship between ×/÷. Illustrate and explain by using equations, rectangular arrays and/or area models. 4.NBT.2.6	• Select 4.NBT.6 for assistance
	7	Apply the area and perimeter formulas for rectangles in real world and math problems. 4.MD.1.3	• Scroll to the bottom and select 4.MD.3
	8	Find all factor pairs for a whole number in range of 1-100. Recognize that a whole number is a multiple of each of its factors. Determine if a given whole number in the range of 1-100 is a multiple of a given one-digit number and determine if a given whole number in the 1-100 range is prime or composite. 4.OA.2.4	• Use any of the three tasks for OA.4 as appropriate
	9	Determine whether an equation is true or false by using *comparative relational thinking*. Focus this quarter on Double digit, same signs only, like 13 + 5 = 10 + 8. 4.OA.1.a	• 4.OA.1a- Is my equation TRUE or False
	Week		
Quarter 2 Oct 18 – Dec 21	1	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Understand a fraction a/b with a > 1 as a sum of fractions 1/b.	• Select from tasks 1-2-4-5-6 only

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		a. Understand addition and subtractions of fractions as joining and separating parts referring to same whole. (Should use fraction tiles and pies for the Concrete of the C-R-A model we're following) b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, record each decomposition by an equation. Justify decompositions. (Denominators of 2,3,4,5,6,8,10,12, and 100 only). 4.NF.2.3	
	2	Extend understanding of fraction *equivalence* and ordering. 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 to recognize/generate equivalent fractions. 4.NF.1.1	• Select from NF.1 that aligns with this quarter
	3	Compare two fractions with different numerators and different denominators creating common dominators or numerators or by comparing to a benchmark fraction like ½. ***Recognize that comparisons are valid ONLY when the two fractions refer to the same whole***. Record results with correct symbols and justify conclusions with a VISUAL FRACTION MODEL. 4.NF.1.2	• Select from NF.2 that aligns with this quarter
	4	Continue earlier weeks	•
	5	Use the four operations with whole numbers to solve problems. 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.OA.1.1	• Select from 4.OA.1 tasks
	6	Generalize place value understanding for multi-digit whole numbers. 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. (Whole numbers less than or equal to 1,000,000 only in fourth grade.) Focus on deepening student understanding of place value in relation to multiples of 10. 4.NBT.1.1	• Select from 4.NBT.1 tasks
	7	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec and be able to use these conversions in solving multi-step, real world problems. Record measurement equivalents in a two-column table 4.MD.1.1	• Select from 4.MD.1 tasks
	8	Continue standards from above.	
	9	Determine whether an equation is true or false by using comparative relational thinking. Focus on double digit, same/different signs only, like 13 + 5 = 10 + 8. 4.OA.1.a	
Quarter 3	**Week**		

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Jan 5 – Mar 10	1	Generate/analyze patterns: generate a number or shape pattern that follows a given rule and identify features that were not explicit in the rule itself. 4.OA.3.5	• Select any task from this link
	2	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 measure parts. (Real world problems with =/- and unknown symbol.) 4.MD.3.7	• Select from 4.MD.7 tasks
	3	Draw points, lines, line segments, rays, 3 angle types, and perpendicular and parallel lines. Identify these in two-dimensional figures. 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. 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. 4.G.1.1, 4.G.1.2, 4.G.1.3	• Select a task from G.1-2-3
	4	Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations. (Readdressed to include multiplication for fractions and apply understanding of "times as much") Use four operations with whole numbers to solve problem x/÷ to solve word problems involving multiplicative comparisons with a symbol for the unknown: distinguish multiplicative from additive comparisons. 4.OA.1.1, 4.OA.1.2	• Select a task from OA.1 or 2 not already done
	5	Generalize place value. Use place value understanding to round multi-digit whole numbers to any place. 4.NBT.1.3	• Select from 4.NBT.3
	6	Solve problems involving measurement/conversion of measurements from larger to smaller units. Use operations to solve word problems involving distances, time intervals, liquid volumes, masses, and money and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Use diagrams such as number line diagrams that feature measurement scales. Use the four operations to solve word problems[1] involving distances, represent measurement quantities using diagrams such as number line diagrams with measurement scale. Make a line plot to display a data set of measurements in unit fractions (1/2, 1/4, 1/8). Solve problems involving +/- of fractions using information in line plots. 4.MD.1.2, 4.MD.2.4	• Select a task from 4.MD.4
	7	Review OA.1.a and b. Determine the unknown whole number in an equation relating four whole numbers using comparative relational thinking. 4.OA.1.a and b	• FI Standard-only-4.OA.1b
	8	Understand a fraction a/b with a > 1 as a sum of fractions 1/b. +/- mixed numbers with like denominators by replacing with an equivalent fraction and/or by using properties of operations and relationship between +/- of fractions referring to the same whole with like denominators. Use fraction models!! Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. a. Understand a fraction a/b as a multiple of 1/b.	• Select a task that aligns with this quarter

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		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. (Use a visual fraction model). c. Solve word problems involving multiplication of a fraction by a whole number. 4.NF.2.3, 4.NF.2.4	
	9	Express a fraction with denominator of 10 as equivalent fraction to denominator of 10, then add. Use decimal notation for fractions with denominator of 10 or 100. Compare two decimals to hundredths by reasoning about size. Comparisons only valid refer to same size. 4.NF.3.5, 4.NF.3.6, 4.NF.3.7	• Select a task from 5.NF.5-6-7
	Week		**See above links for support**
Quarter 4 Mar 21 – May 24	1	Repeat 4.OA.1.3 to provide multiple opportunities for students to develop skills.	
	2	Repeat 4.NBT.2.4 to provide multiple opportunities for students to develop skills.	
	3	Repeat, 4.MD.1.2, from prior unit to emphasize using four operations in all problem types. Use diagrams and number line diagrams with measurement scales.	
	4	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.1.2	
	5	FSA testing window	
	6	Teachers will use their DE data, MFAS tasks, and classroom assessments to pull small groups based upon need. Students will continue to deepen their understanding of grade level math standards through the end of the year.	
	7	Teachers will use a lot of Project-based Learning for enrichment and remediation this last quarter of school.	
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	9		

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