Lancaster School District

Grade 4 Math YAAG
2016-2017

The YAAG is your curriculum guide for the 2016-2017 school year. It provides guidance to teach the math Common Core State Standards by focusing on the identified critical areas. You will find reference to the newly adopted textbooks. However, please note that the YAAG is our curriculum guide and the textbook is one tool you will be using to move students into mastery of the standards.

The **Critical Areas for Grade 4** as identified in the Common Core State Standards for Mathematics, California are the following:
In Grade 4, instructional time should focus on three critical areas: (1) developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

The **Major clusters compose** 70% of the SBACC assessment. These clusters include:
Operations and Algebra
- (4.OA.1–3) Use the four operations with whole numbers to solve problems.
Numbers and Base Ten
- (4.NBT.1–3) Generalize place-value understanding for multi-digit whole numbers.
- (4.NBT.4–6) Use place-value understanding and properties of operations to perform multi-digit arithmetic.
Numbers and Operations – Fractions
- (4.NF.1–2) Extend understanding of fraction equivalence and ordering.
- (4.NF.3–4) Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- (4.NF.5–7) Understand decimal notation for fractions, and compare decimal fractions.

To help you build a deeper understanding of the standards, each YAAG includes hyperlinks to the following resources:
- CA Math CCSS
- CA Grade-level Math Framework
- Math Practices
- Math Practice Posters (in student friendly language with visuals, K-6)

Teachers are asked to approach their instruction in the following manner:
- **First**- Build meaning of the standards by unwrapping them and examining the CA framework documents.
- **Second-** Look to your current textbook and online resources to identify the alignment of learning experiences and practices that students will need to build concepts, fluency and problem solving.
- **Third-** Use outside/online resources for areas that the textbook needs additional support.

Lancaster School District

2016-2017 MATH Year-at-a-Glance
Grade 4

MATH CCSS_CA	CA Math Framework	Kansas Flipbooks	CCSS Progressions	Math Practices	MP Posters

Chapter	Chapter 1	Chapter 2	Chapter 3, Chapter 4, Chapter 5, Chapter 6	Chapter 8 Chapter 9 Chapter 10	Chapter 7* (two options) a. Teach Ch. 7 after Ch.8, 9, &10 b. Teach Ch. 7 in conjunction with Ch. 8, 9, & 10 (e.g., on Tuesdays or Fridays)	Chapter 13 Chapter 14	Chapter 11 Chapter 12
Chapter Length	3 weeks	2 weeks	13 weeks	10 weeks		4 weeks	5 weeks
Dates	Aug. 8 – Aug. 26	Aug. 29 – Sept. 9	Sept. 12 – Dec. 16	Jan. 9 – Mar. 17		Apr. 3 – Apr. 28	May 1 – June 7
Chapter Focus	Place Value	Add and Subtract Whole Numbers	Understand Multiplication and Division, Multiply by 1-Digit and 2-Digit Number and Divide by a 1-Digit Number	Fractions, Operations with Fractions and Fractions and Decimals *Patterns and Sequences**		Perimeter and Area Geometry	Customary Measurement and Metric Measurement
Think Smart to SBAC (Pgs. 13-52 of Think Smart for the Smarter Balanced Assessment)	Number Talks		**Begin October 3rd** Countdown: Week 20 - 11 Pgs. 13-32	Countdown: Week 10 – 1 Pgs. 33 - 52		N/A	N/A
Chapter Notes and Supplements	• Georgia Unit 1 • Engage NY Module 1	• Georgia Unit 2 • Engage NY Module 3	• Georgia Unit 3 and Unit 4 and Unit 5 • Engage NY Module 5 • Engage NY Module 6 Chapter 7 *Georgia Unit 2 and Unit 3*			• Georgia Unit 6 and Unit 7 • Engage NY Module 2 • Engage NY Module 4 • Engage NY Module 7	

Lancaster School District

Routines Fluency Choose one to do every day for no more then 10 minute.	• 4s, 6s, 7s, 8s, 9s • Practice (skip counting) • Number Talks (Sherry Parrish) • Number Talks Video	• 8s, 9s, extended facts • Multiplication Facts • Number Talks	• Countdown to SBAC • Multiplication, Division and Primes	• Countdown to SBAC • Fractions		• Number Talks • Basic Facts, Decimal Equivalents, Fractions •	• Number Talks
Overall Resources	• McGraw Hill Online Resources	• *CommonCore Sheets.com*	• www.Coolmath.com	• www.Frontrowmath.com			• LearnZillion.com
Intervention	Refer to MY Math RTI materials online through the publisher website or the District website or on the N drive. Diagnostic Placement Test RTI Grade Level Guide						
Math CCSS **Bold standards indicate areas of intense focus.**	**4.NBT.1** **4.NBT.2** **4.NBT.3**	**4.NBT.3** **4.NBT.4** **4.OA.3** 4.OA.5	**4.NBT.1** **4.NBT.3** **4.NBT.4** **4.NBT.5** **4.NBT.6** **4.OA.1** **4.OA.2** **4.OA.3** 4.OA.4	**4.NF.1** **4.NF.5** **4.NF.7** 4.OA.4	**4.NF.2** **4.NF.6** **4.OA.3** 4.OA.5	4.MD.3 4.MD.5a-b 4.MD.6 4.MD.7 4.G.1 4.G.2 4.G.3	4.MD.1 4.MD.2 4.MD.4

Lancaster School District

Grade 4 Standards	Q1	Q2	Q3	Q4
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.	x	x		
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.	x	x		
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.	x	x		
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.	x	x	x	
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.		x	x	
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. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*	x	x		
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.	x			
4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.	x	x		
4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.	x	x		
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.		x		
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.		x		
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.			x	
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.			x	
4.NF.3.a Understand a fraction a/b with a > 1 as a sum of fractions 1/b. a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.			x	
4.NF.3.b Understand a fraction a/b with a > 1 as a sum of fractions 1/b. 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.			x	
4.NF.3.c Understand a fraction a/b with a > 1 as a sum of fractions 1/b. 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.			x	
4.NF.3.d Understand a fraction a/b with a > 1 as a sum of fractions 1/b. 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.			x	
4.NF.4.a 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.			x	
4.NF.4.b Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. b. Understand a multiple of a/b as a			x	

Lancaster School District

Standard				
multiple of 1/b, and use this understanding to multiply a fraction by a whole number.				
4.NF.4.c Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. 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.		x		
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 For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.		x		
4.NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.		x		
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 the number line or another visual model.		x		
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.			x	
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.			x	
4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.				x
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 presented in line plots.				x
4.MD.5.a Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: 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.				x
4.MD.5.b Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.				x
4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.				x
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.				x
4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.				x
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. *(Two dimensional shapes should include special triangles, e.g., equilateral, isosceles, scalene, and special quadrilaterals, e.g., rhombus, square, rectangle, parallelogram, trapezoid.CA added language)*				x
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.				x