

2022-2023 4th Grade CIP & BIM Alignment and Pacing Document

** means there are things to consider when aligning the BIM math lesson to the SOL

Pacing	SOL(s)	BIM Lesson(s)	Vertical Alignment
Q1 Weeks 1-2	4.1a TSW read, write, and identify the place and value of each digit in a nine-digit whole number. 4.1b TSW compare and order whole numbers expressed through millions. 4.1c TSW round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand.	*Lesson 1.1: Understand Place Value *Lesson 1.2: Read & Write Multi-Digit Numbers *Lesson 1.3: Compare Multi-Digit Numbers *Lesson 1.4: Round Multi-Digit Numbers **Nine-digit numbers will have to be embedded, as the text only goes up to six-digit numbers. **The “not equal” sign will also have to be embedded when comparing numbers.	*3rd grade place value did not go past six-digit whole numbers. *3rd grade comparing and ordering used whole numbers that were 9,999 or less. *3rd grade rounding used whole numbers that were 9,999 or less.
Q1 Weeks 3-6	4.4a TSW demonstrate fluency with multiplication facts through 12 x 12, and the corresponding division facts. 4.4b TSW estimate and determine sums, differences, products (basic facts only) of whole numbers. 4.4c TSW estimate and determine quotients (basic facts only) of whole numbers. 4.4d TSW create and solve single-step and multistep practical problems involving addition, subtraction, and multiplication (basic facts only), and single-step practical problems involving division (basic facts only) with whole numbers.	*Lesson 2.1: Estimate Sums and Differences *Lesson 2.2: Add Multi-Digit Numbers *Lesson 2.3: Subtract Multi-Digit Numbers *Lesson 2.4: Use Strategies to Add and Subtract *Lesson 2.5: Problem Solving: Addition and Subtraction *Lesson 3.1: Understand Multiplicative Comparisons	*3rd grade added and subtracted whole numbers of 9,999 or less. *3rd grade represented basic multiplication and division facts with models (arrays, number lines, repeated addition), with 10 x 10 being the largest fact used. *3rd grade required fluency with multiplication facts of 0, 1, 2, 5, and 10. *3rd grade created and solved single-step practical problems that involved multiplication and/or division through 10 x 10.
Q1 Week 7	4.16 TSW recognize and demonstrate the meaning of equality in an equation.	n/a	*3rd grade created equations to represent equivalent mathematical relationships.
Q1 Week 8	4.14a TSW collect, organize, and represent data in bar graphs and line graphs. 4.14b TSW interpret data represented in bar graphs and line graphs. 4.14c TSW compare two different representations of the same data (chart & bar graph, chart & line graph, pictograph & bar	n/a	*3rd grade worked with pictographs and bar graphs only. *Line graphs will be new content for 4th grade.

	graph).		
Q1 Week 9	4.15 TSW identify, describe, create, and extend patterns found in objects, pictures, numbers, and tables.	*Lesson 6.5: Number Patterns *Lesson 6.6: Shape Patterns **Make sure to embed patterns in tables as well.	*3rd grade used addition and subtraction only for number patterns.
Week 10	Q1 Benchmark (Math Quarterly Assessment)		
Q2 Weeks 11-15	4.4a TSW demonstrate fluency with multiplication facts through 12 x 12, and the corresponding division facts. 4.4b TSW estimate and determine sums, differences, and products of whole numbers (multi-digit multiplication). 4.4c TSW estimate and determine quotients of whole numbers, with and without remainders. 4.4d TSW create and solve single-step and multistep practical problems involving addition, subtraction, and multiplication, and single-step practical problems involving division with whole numbers.	*Lesson 4.1: Multiply by 10's *Lesson 4.2: Estimate Products *Lesson 4.3: Use Area Models to Multiply 2-Digit Numbers *Lesson 4.5: Use Partial Products to Multiply 2-Digit Numbers *Lesson 4.6: Multiply 2-Digit Numbers *Lesson 3.10: Problem Solving: Multiplication *Lesson 4.8 Problem Solving: Multiplication with 2-Digit Numbers *Lesson 5.1: Divide Tens, Hundreds, and Thousands *Lesson 5.2: Estimate Quotients *Lesson 5.3: Understand Division and Remainders *Lesson 5.4 Use Partial Quotients *Lesson 5.5: Use Partial Quotients with a Remainder *Lesson 5.6: Divide 2-Digit Numbers by a 1-Digit Number *Lesson 5.7: Divide Multi-Digit Numbers by 1-Digit Numbers *Lesson 5.8: Divide by One-Digit Numbers *Lesson 5.9: Problem Solving: Division **There are many lessons and strategies in the text. The building math specialist would be happy to help you choose which lessons to use.	*3rd grade multiplied a single-digit number (5 or less) with a two-digit number.
Q2 Weeks 16-17	4.10a TSW identify and describe points, lines, line segments, rays, and angles, including endpoints and vertices.	*Lesson 13.1: Points, Lines, and Rays *Lesson 13.2: Identify and Draw Angles *Lesson 13.3: Identify Parallel and Perpendicular	*Symbolic notation of geometric figures will be new content for 4th grade. *Intersecting, parallel, and

	<p>4.10b TSW identify and describe intersecting, parallel, and perpendicular lines.</p> <p>4.11 TSW identify, describe, compare, and contrast plane and solid figures according to their characteristics (number of angles, vertices, edges, and the number and shape of faces) using concrete models and pictorial representations.</p> <p>4.12 TSW classify quadrilaterals as parallelograms, rectangles, squares, rhombi, and/or trapezoids.</p>	<p>Lines</p> <p>*Lesson 14.5: Classify Quadrilaterals</p>	<p>perpendicular lines will be new content for 4th grade.</p> <p>*Solid figures will be new content for 4th grade.</p> <p>*3rd grade had to identify a quadrilateral by the number of sides.</p> <p>*Classifying quadrilaterals will be new content for 4th grade.</p>
Week 18	Q2 Benchmark (Math Quarterly Assessment)		
Q3 Week 19	4.5a TSW determine common multiples and factors, including least common multiple and greatest common factor.	<p>*Lesson 6.1: Understand Factors</p> <p>*Lesson 6.3: Relate Factors and Multiples</p> <p>**Consider using lesson 6.2. Using divisibility rules is a great strategy for finding factors.</p> <p>**The text does not include finding the least common multiple or the greatest common factor, so make sure to embed this.</p>	*All new content for 4th grade.
Q3 Weeks 20-21	4.2b TSW represent equivalent fractions. 4.2c TSW identify the division statement that represents a fraction, with models and in context.	<p>*Lesson 7.1: Model Equivalent Fractions</p> <p>*Lesson 7.2: Generate Equivalent Fractions by Multiplying</p> <p>*Lesson 7.3: Generate Equivalent Fractions by Dividing</p>	*3rd grade fractions were always represented with pictorial models.
Q3 Weeks 22-23	4.2a TSW compare and order fractions and mixed numbers, with and without models.	<p>*Lesson 7.4: Compare Fractions Using Benchmarks</p> <p>*Lesson 7.5: Compare Fractions</p> <p>**The “not equal” sign will have to be embedded when comparing fractions.</p>	*3rd grade fractions were always represented with pictorial models.
Q3 Weeks 24-25	4.5b TSW add and subtract fractions and mixed numbers having like and unlike denominators. 4.5c TSW solve single-step practical problems involving addition and subtraction with fractions and mixed numbers.	<p>*All lessons in Chapter 8</p> <p>**Addition and Subtraction with unlike denominators will need to be embedded, as the text only uses fractions with like denominators.</p> <p>**The text also uses many fractions that have denominators larger than 12.</p>	*3rd grade only added and subtracted fractions with like denominators of 12 or less.

Q3 Weeks 26-27	4.3a TSW read, write, represent, and identify decimals expressed through thousandths. 4.3b TSW round decimals to the nearest whole number. 4.3c TSW compare and order decimals. 4.3d TSW, given a model, write the decimal and fraction equivalents.	*Lesson 10.1: Understand Tenths *Lesson 10.2: Understand Hundredths *Lesson 10.3: Fractions and Decimals *Lesson 10.4: Compare Decimals **Thousandths will need to be embedded, as the text does not include that place value. **The “not equal” sign will have to be embedded when comparing decimals.	*3rd grade only used decimals when working with money (bills and coins). *The thousandths place will be new content for 4th grade.
Q3 Week 28	4.6a TSW add and subtract with decimals. 4.6b TSW solve single-step and multistep practical problems involving addition and subtraction with decimals.	*Lesson 10.5: Add Decimal Fractions and Decimals *Lesson 10.6: Fractions, Decimals, and Money *Lesson 10.7: Operations with Money	*3rd grade only used decimals when working with money (bills and coins). *Working with the thousandths place will be new content for 4th grade.
Week 29	Q3 Benchmark (Math Quarterly Assessment)		
Q4 Week 30	4.13a TSW determine the likelihood of an outcome of a simple event. 4.13b TSW represent probability as a number between 0 and 1, inclusive. 4.13c TSW create a model or practical problem to represent a given probability.	n/a	*Representing probability on a number line will be new content for 4th grade.
Q4 Week 31	4.9 TSW solve practical problems related to elapsed time in hours and minutes within a 12-hour period.	*Lesson 11.8: Problem Solving: Elapsed Time **Many of the problems in this lesson deal with fractions of hours and are multi-step. This may not be the best resource to align with Virginia standard 4.9	*3rd grade solved practical problems related to elapsed time only in one-hour increments within a 12-hour period.
Q4 Weeks 32-33	4.8a TSW estimate and measure length and describe the result in U.S. customary and metric units. 4.8b TSW estimate and measure weight/mass and describe the result in U.S. Customary and metric units. 4.8c TSW, given the equivalent measure of one unit, identify equivalent measures of length and weight/mass between units within the U.S. Customary system.	*Lesson 11.1: Length in Metric *Lesson 11.3: Length in Customary *Lesson 11.2: Mass & Capacity in Metric **Capacity in Metric does not need to be taught. *Lesson 11.4: Weight in Customary *Lesson 11.5: Capacity in Customary	*Weight/Mass will be new content for 4th grade.

	<p>4.8c TSW, given the equivalent measure of one unit, identify equivalent measures of liquid volume between units within the U.S. Customary system.</p> <p>4.8d TSW solve practical problems that involve length, weight/mass, and liquid volume in U.S. Customary units.</p>		
<p>Q4 Week 34</p>	<p>4.7 TSW solve practical problems that involve determining perimeter and area in U.S. Customary and metric units.</p>	<p>*All lessons in Chapter 12</p> <p>**The text teaches the formula $(2 \times l) + (2 \times w)$ for perimeter; however, teaching students to find the sum of all sides is acceptable.</p>	<p>*3rd grade counted and/or used pictures for perimeter problems.</p> <p>*Algorithms will be new content for 4th grade.</p>
Week 36			
Week 37			
Week 38			
Week 39			
Week 40			