P.S. 83 Grade 4 Curriculum Map 2018-2019

Month(s)	Highlighted Mathematical Processes	Domains	Essential Questions	Goals	Performance Based Assessments
September October November	**MP.4** Model with mathematics. **MP.5** Use appropriate tools strategically. **MP.7** Look for and make use of structure	Critical Area 1: Place Value and Operations with Whole Numbers Chapters 1–5 53 Days (Instructional Days: 43; Assessment Days: 10)	•How can you use place value to compare, add, subtract, and estimate with whole numbers? (Chapter 1) •What strategies can you use to multiply by 1-digit numbers? (Chapter 2) •What strategies can you use to multiply by 2-digit numbers? (Chapter 3) • How can you divide by 1-digit numbers? (Chapter 4) • How can you find factors and multiples, and how can you generate and describe number patterns? (Chapter 5)	**Use the four operations with whole numbers to solve 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. Generalize place value understanding for multi-digit whole numbers. **Generalize place value understanding for multi-digit numbers.** 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. 4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place. 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.** 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.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. *Also 4.OA.1, 4.OA.2, 4.OA.4, 4.OA.5, 4.NBT.4*	Beginning of the Year Baseline Assessment, Show What You Know, Mid-Chapter Checkpoint, Chapter Review/Test, Chapter Test, Performance Task, Problem of the Month *Students read, write, and compare multi-digit numbers. They write numbers using standard and expanded form, as well as word names. Students use place value to round numbers to the nearest whole. They add and subtract multi-digit numbers using the standard algorithm. *Students solve one- and multi-step problems that involve multiplication. They write equations and apply properties of operations to solve. They use strategies such as arrays, area models, and place value. They assess the reasonableness of their answers through mental computation and rounding. *Students multiply 2-digit numbers to solve word problems. They estimate for reasonable answers with rounding or compatible numbers. They apply multiplication strategies such as multiplying with partial products, using area models, and place value with regrouping. Students solve multi-step multiplication problems using multiplication strategies. *Students reason about the number of digits in a quotient. They divide using two different modeling methods. They use partial products to find a quotient. They explain why a given remainder is correct or incorrect *Students use a variety of strategies to solve real-world problems, including using multiples to extend a number pattern and using factors and divisibility. Students determine whether a set of numbers is prime or composite *Students find missing numbers in addition and subtraction algorithms by applying what they know about the relationship between addition and subtraction. They define the method needed to solve a problem conceptually, then apply all four operations to solve multi-step problems.

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December January	**MP.1** Make sense of problems and persevere in solving them. **MP.2** Reason abstractly and quantitatively. **MP.5** Use appropriate tools strategically.	Critical Area 2: Fractions and Decimals Chapters 6–9 38 Days (Instructional Days: 30; Assessment Days: 8)	What strategies can you use to compare fractions and write equivalent fractions? (Chapter 6) • How do you add or subtract fractions that have the same denominator? (Chapter 7) •How do you multiply fractions by whole numbers? (Chapter 8) • How can you record decimal notation for fractions and compare decimal fractions? (Chapter 9)	**Extend understanding of fraction equivalence and ordering.** 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.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 ½. 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. **Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.** 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. 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. *Also 4.NF.3, 4.NF.5, 4.NF.6, 4.NF.7, 4.MD.2*	Mid-year baseline, Show What You Know, Mid-Chapter Checkpoint, Chapter Review/Test, Chapter Test, Performance Task, Problem of the Month *Students derive a fraction and find its simplest form. They describe the method used to generate equivalent fractions for comparison. They change three fractions to the same denominator and then order the fractions *Students add fractions and mixed numbers, then decompose the sum into unit fractions. They find and correct the error in fraction and mixed number calculations. They add and subtract fractions and mixed numbers. *Students apply multiplication of a fraction by a whole number to solve word problems involving weight. *Students compare fractional weights *Students rename fractions as fractions with denominators of 10 and 100, and express them as decimals. *Students compare decimals and add fractional parts of 10 and 100. *Students add, subtract, multiply, and compare fractions and mixed numbers. Students convert decimals to fractions and fractions to decimals.

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February March April	**MP.1** Make sense of problems and persevere in solving them. **MP.2** Reason abstractly and quantitatively. **MP.5** Use appropriate tools strategically.	Critical Area 3: Geometry, Measurement, and Data Chapters 10–13 36 Days (Instructional Days: 28; Assessment Days: 8)	• How can you draw and identify lines and angles, and how can you classify shapes? (Chapter 10) • How can you measure angles and solve problems involving angle measures? (Chapter 11) How can you use relative sizes of measurements to solve problems and to generate measurement tables that show a relationship? (Chapter 12) • How can you use formulas for perimeter and area to solve problems? (Chapter 13)	**Draw and identify lines and angles, and classify shapes by properties of their lines and angles, 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. 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. *Also 4.OA.5, 4.MD.1, 4.MD.2, 4.MD.3, 4.MD.4, 4.MD.5, 4.MD.6, 4.MD.7*	Show What You Know, Mid-Chapter Checkpoint, Chapter Review/Test, Chapter Test, Performance Task, Problem of the Month *Students identify geometric features. They identify figures with symmetry and draw lines of symmetry. They draw a geometric pattern that includes both specific and self-chosen figures, and write a description of the pattern. *Students identify geometric features. They identify figures with symmetry and draw lines of symmetry. They draw a geometric pattern that includes both specific and self-chosen figures, and write a description of the pattern. *Students measure angles. They add to find a specific angle *Students find the length and width of a rectangle given the area and the dimensions of an object that fits inside the rectangle. They find the greatest and least area with the same perimeter. They provide dimensions of a rectangle given three items that must fit inside the rectangle.

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May June	**MP.1** Make sense of problems and persevere in solving them. **MP.2** Reason abstractly and quantitatively. **MP.5** Use appropriate tools strategically.	Getting Ready Lessons build on Grade 4 Prepare students for Grade 5 content Lesson 1-10 Lesson 11-20	POST How can we prepare students for grade 5 content?	Review of all fourth grade standards and the following fifth grade standards: 5.NBT.1, NBT.2, NBT.3A, NBT.3B NBT.4, NBT.6, NBT.7, 5.NF.2, NF.3, NF.4B, NF.5B, NF.7B, 5.MD.5b 5.OA.1, OA.3 5.G.1	End of the Year Baseline Assessment, Chapter Review/Test, Performance Task