

Brandon Valley School District

Mathematics

Scope and Sequence

Grade: 4

Quarter 1

Timeline (month/days)	Standard(s)
August 7 Days	Place Value 4.NBT.1 -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 4.NBT.3 - Use place value understanding to round multi-digit whole numbers to any place.
August/ September 9 Days	Add and Subtract Whole Numbers 4.NBT.4 - Fluently add and subtract multi-digit whole numbers using an algorithm 4.NBT.3 - Use place value understanding to round multi-digit whole numbers to any place. 4.OA.3 - Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations
September/ October 14 Days	Understanding Multiplication and Division 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. I 4.OA.4 - This cluster extends the understanding of multiplication and division to thinking about these operations in terms of composing and decomposing numbers into factors. 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), and distinguish multiplicative comparison from additive comparison. 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. 4.OA.1 - Use and interpret multiplicative equations
October 14 Days	Multiply with One-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.3 - Use place value understanding to round multi-digit whole numbers to any place 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.

Quarter 2

Timeline (month/days)	Standard(s)
October/ November	Multiply with Two-Digit Numbers

15 Days	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. 4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place 4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations
November/ December 18 Days	Divide by a One-Digit Number 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.3 Use place value understanding to round multi-digit whole numbers to any place 4.NBT.6-6 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
December Days 6	Patterns and Sequence 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 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.

Quarter 3

Timeline (month/days)	Standard(s)
January 15 Days	Fractions 4.OA.4-4.OA.4 Using whole numbers in the range 1–100. a. Find all factor pairs for a given whole number. b. Recognize that a whole number is a multiple of each of its factors. c. Determine whether a given whole number is a multiple of each of a given one-digit number. d. Determine whether a given whole number is prime or composite 4.NF.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ 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. 4.NF.2 Compare two fractions with different numerators and different denominators, by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. 4.NF.3 A and B Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$. For example, $4/5 = 1/5 + 1/5 + 1/5 + 1/5$ a. Add and subtract of fractions e.g., joining and separating parts referring to the same whole. b. Decompose a fraction into a sum of fractions with like denominators in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.
January/ February Days 14	Operations with Fractions 4.NF.3-C and D 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. 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 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 $1/b$. For example, use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$,

	recording the conclusion by the equation $\frac{5}{4} = 5 \times (\frac{1}{4})$. b. Understand a multiple of $\frac{a}{b}$ as a multiple of $\frac{1}{b}$, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times (\frac{2}{5})$ as $6 \times (\frac{1}{5})$, recognizing this product as $\frac{6}{5}$. (In general, $n \times (\frac{a}{b}) = (\frac{n \times a}{b}) = (n \times \frac{a}{b})$.) 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. For example, if each person at a party will eat $\frac{3}{8}$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?
February / March 10 Days	Fraction and Decimals 4.NF.6 Read and write decimal notation for fractions with denominators 10 or 100. Locate these decimals on a number line. 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.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.
March 4 Days	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.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving 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 4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots

Quarter 4

Timeline (month/days)	Standard(s)
March 3 Days	Metric 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. Recognize and draw lines of symmetry for two-dimensional figures. 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 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
March 6 days	Perimeter and Area 4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems

March/ April 7 Days	Geometry 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, and identify categories of right, acute, and obtuse triangles. 4.G.3 - Recognize and draw lines of symmetry for two-dimensional figures. 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. 4.MD.6 - Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
April 14 Days	State Testing No formal math instruction taking place.
April/ May 15 Days	Place Value and Multiplication Review 4.NBT.1 -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 4.NBT.3 -Use place value understanding to round multi-digit whole numbers to any place. 4.NBT.3 -Use place value understanding to round multi-digit whole numbers to any place 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.

*Pink-priority, Yellow-supporting, Green-supplementary.

*60 minute class periods.

Notes Q1

- Chapter 1- Place Value (Aug.20-28)
 - (McGraw-Hill) Place Value pages 2 - 52
 - Chapter 1 (McGraw-Hill) Assessment
- Chapter 2 Add and Subtract Whole Numbers (Aug.31-Sept.11)
 - (McGraw-Hill) Add and Subtract Whole Numbers pages 54 - 124
 - Chapter 2 (McGraw-Hill) Assessment
- Chapter 3 Understanding Multiplication and Division (Sept.14-Oct.1)
 - (McGraw-Hill) Understanding Multiplication and Division pages 126 -188
 - Chapter 3 (McGraw-Hill) Assessment
- Chapter 4 - Multiply with One-Digit Numbers (Oct.5-23)
 - (McGraw-Hill) Multiply with One-Digit Numbers pages 190 - 270
 - Chapter 4 (McGraw-Hill) Assessment

Notes Q2

- Chapter 5 - Multiply with Two-Digit Numbers (Oct. 26-Nov.16)
 - (McGraw-Hill) Multiply with Two-Digit Numbers pages 272 - 320
 - Chapter 5 (McGraw-Hill) Assessment
- Chapter 6 - Divide by a One-Digit Number (Nov.17-Dec.14)
 - (McGraw-Hill) Divide by a One-Digit Number pages 322 - 404
 - Chapter 6 (McGraw-Hill) Assessment

- Chapter 7- Patterns and Sequences (Dec.15-22)
 - (McGraw-Hill) Patterns and Sequences pages 406 - 474
 - Chapter 7 (McGraw-Hill) Assessment
- Additional Days added in to do STEM or other activities with multiplication and division.

Notes Q3

- Chapter 8 - Fractions (Jan.4-26)
 - (McGraw-Hill) Fractions pages 476 - 572
 - Chapter 8 (McGraw-Hill) Assessment
- Chapter 9 - Operations and Fractions (Jan.27-Feb. 17)
 - (McGraw-Hill) Operations with Fractions pages 554 - 622
 - Chapter 9 (McGraw-Hill) Assessment
- Chapter 10 - Fractions and Decimals (Feb. 18-Mar 3)
 - (McGraw-Hill) Fractions and Decimals pages 624 - 684
 - Chapter 10 (McGraw-Hill) Assessment
- Chapter 11 - Customary Measurement (Mar 4-9)
 - (McGraw-Hill) Customary Measurement pages 686 - 764
 - Chapter 11 (McGraw-Hill) Assessment

Notes Q4

- Chapter 12 - Metric Measurement (Mar 10-12)
 - (McGraw-Hill) Metric Measurement pages 766 - 816
 - Chapter 12 (McGraw-Hill) Assessment
- Chapter 13 - Perimeter and Area (Mar 15-23)
 - (McGraw-Hill) Perimeter and Area pages 818 - 860
 - Chapter 13 (McGraw-Hill) Assessment
- Chapter 14 - Geometry (Mar 24-Apr 1)
 - (McGraw-Hill) Geometry pages 862 - 946
 - Chapter 14 (McGraw-Hill) Assessment
- Mid April - May will be reviewing, using outside sources. Review can not be done using the math materials due to teachers having the flexibility to use independent practice or homework pages in their lessons. (Apr 6-23)
 - Interim Practice Tests /State Testing
- Place Value and Multiplication Review (Apr 26-May 14)