Brandon Valley School District
Mathematics
Scope and Sequence
Grade: 5

Quarter 1

Timeline (month/days)	Standard(s)
August 3 Days	**Introductions -STAR BOY Testing**
August/ September 12 days	**Place Value** **5.NBT.1** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. **5.NBT.3** Read, write, and compare decimals to thousandths. **5.NBT.3a** Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000). **5.NBT.3b** Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
September 12 days	**Multiply Whole Numbers** **5.NBT.2** Explain and apply patterns in the number of zeros of the product when multiplying a number by powers of 10. Explain and apply patterns in the placement of the decimal point with respect to the values of the digits in the product or the quotient, when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. **5.NBT.5** Fluently multiply multi-digit whole numbers using an algorithm, including but not limited to the standard algorithm
September/ October 16 days	**Divide by a One-Digit Divisor** **5.NBT.6** Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Explain the calculation by using equations, rectangular arrays, illustrations, area models, or other representations based on place value.

Quarter 2

Timeline (month/days)	Standard(s)
October 11 days	**Divide by a Two-Digit Divisor** **5.NBT.6** Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Explain the calculation by using equations, rectangular arrays, illustrations, area models, or other representations based on place value.
November 15 days	**Add and Subtract Decimals** **5.NBT.4** Use place value understanding to round decimals to any place. **5.NBT.7** Use the four operations with decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations,

	and/or the relationship between addition and subtraction; justify the reasoning used with a written explanation. a. Add and subtract decimals b. Multiply and divide decimals.
December/ January 18 days	**Multiply and Divide Decimals** **5.NBT.5** Fluently multiply multi-digit whole numbers using an algorithm, including but not limited to the standard algorithm **5.NBT.7** Use the four operations with decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; justify the reasoning used with a written explanation. a. Add and subtract decimals b. Multiply and divide decimals **5.NBT.2** Explain and apply patterns in the number of zeros of the product when multiplying a number by powers of 10. Explain and apply patterns in the placement of the decimal point with respect to the values of the digits in the product or the quotient, when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. **5.NBT.6** Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Explain the calculation by using equations, rectangular arrays, illustrations, area models, or other representations based on place value
Dec/January 1 day	**STAR MOY Assessment**

Quarter 3

Timeline (month/days)	Standard(s)
January 12 days	**Expressions and Patterns** **5.OA.1** Use and explain parentheses, in numerical expressions, and evaluate expressions with these symbols. **5.OA.2** Write simple expressions that record calculations with numbers to represent real world problems, and interpret numerical expressions without evaluating them.(For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.) **5.NBT.7** Use the four operations with decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; justify the reasoning used with a written explanation. a. Add and subtract decimals b. Multiply and divide decimals. **5.OA.3** Generate two numerical patterns using two given rules. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. Identify the relationship between the two patterns. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so. **5.G.2** Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation

	5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).
January 10 days	**Fractions and Decimals** 5.NF3 Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie? 5.NF.2 Solve word problems involving addition and subtraction of fractions. a. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. b. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2. 5.NF.5b Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n×a)/(n×b) to the effect of multiplying a/b by 1. 5.NBT.5 Fluently multiply multi-digit whole numbers using an algorithm, including but not limited to the standard algorithm.
February 16 days	**Add and Subtract Fractions** 5.NF.2 Solve word problems involving addition and subtraction of fractions. a. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. b. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2. 5.NF.1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference with a like denominator. It is not necessary at this grade level to simplify the sum or difference. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)
March 15 days	**Multiply and Divide Fractions** 5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. a. Interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)

	5.NF.4a. Interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.) **5.NF4.b** Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. **5.NF.5a** Interpret multiplication as scaling (resizing), by: a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. **5.NF.6** Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem. **5.NF.7** Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions . a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3. b. Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4 . c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins? **(this topic will carry over into the 4th quarter)**

Quarter 4

Timeline (month/days)	Standard(s)
March/April 16 days	**Measurement** **5.MD.1** . Convert customary and metric measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m). Use these conversions in solving multi-step, real world problems involving distances, intervals of time, liquid volumes, masses of objects, and money (including problems involving simple fractions or decimals). For example, 3.6 liters and 4.1 liters can be combined as 7.7 liters or 7700 milliliters. **5.MD.2** . Make a line plot to display a data set. a. Use operations on fractions of a unit (1/2, 1/4, 1/8) for this grade to solve problems involving information presented in line plots. b. Use information from a line plot representing an unequal situation and redistribute whole or fractional parts to create an equal distribution. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally
April 15 days	**Geometry**

	5.G.4 Classify two-dimensional figures in a hierarchy based on properties. For example, all rectangles are parallelograms, because they are all quadrilaterals with two pairs of opposite, parallel, equal-length sides. **5.G.3** Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles **5.MD.3** Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units. **5.MD.4** Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units. **5.MD.5** . Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. b. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication. c. Apply the formulas V = l × w × h and V = B × h (where B is the area of the base) for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems. d. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems
May 1 day	**STAR EOY Assessment**

*Pink-priority, Yellow-supporting, Green-supplementary.
*60 minute class periods.

Notes Q1 (common curriculum materials - vendor/pg number, common assessments, common intervention/enrichment activities, other)

- Chapter 1 (August 19 - September 10)
  - (McGraw Hill volume 1) - Place Value pgs 11- 61
  - Complete chapter 1 objectives in ALEKS
  - Chapter 1 (McGraw Hill) Assessment
- Chapter 2 (September 10 - September 30)
  - (McGraw Hill volume 1)- Multiply Whole Numbers- pages 81-137
  - Complete chapter 2 objectives in ALEKS
  - Chapter 2(McGraw Hill) Assessment
- Chapter 3 (October 1 - October 21)
  - (McGraw Hill volume 1)- Divide by One-Digit Divisor- pages 157-233
  - Complete chapter 3 objectives on ALEKS

○ Chapter 3(McGraw Hill) Assessment
Notes Q2 ● Chapter 4 (October 22 - 28) ○ (McGraw Hill volume 1) - Divide by a Two-Digit Divisor- pgs 251-283 ○ Complete chapter 4 objectives in ALEKS ○ Chapter 4(McGraw Hill) Assessment ● Chapter 5 October 29 - November 10) ○ (McGraw Hill volume 1) - Add and Subtract Decimals- pgs 303-361 ○ Complete chapter 5 objectives in ALEKS ○ Chapter 5 (McGraw Hill) Assessment ● Chapter 6 (November 11 - 24th) ○ (McGraw Hill volume 1) - Multiply and Divide Decimals- pgs 379-461 ○ Complete chapter 6 objectives on ALEKS ○ Chapter 6(McGraw Hill) Assessment
Notes Q3 ● Chapter 7 (November 30 - December 7th) ○ (McGraw Hill volume 2) - Expressions and Patterns- pgs 481-531 ○ Complete chapter 7 objectives in ALEKS ○ Chapter 7(McGraw Hill) Assessment ● Chapter 8 (December 8th - December 22) ○ (McGraw Hill volume 2) - Fractions and Decimals- pgs 551-595 ○ Complete chapter 8 objectives on ALEKS ○ Chapter 8 (McGraw Hill)Assessment ● Chapter 9 (January 4 - January 19) ○ (McGraw Hill volume 2) - Add and Subtract Fractions - pgs 613-689 ○ Complete chapter 9 objectives on ALEKS ○ Chapter 9 (McGraw Hill) Assessment ● Chapter 10 (January 21- Feb 5) ○ (McGraw Hill volume 2) - Multiply and Divide Fractions- pgs 707-777 ○ Complete chapter 10 objectives on ALEKS ○ Chapter 10 (McGraw Hill) Assessment
Notes Q4 ● Chapter 11 (Feb 8 - Feb 23) ○ (McGraw Hill volume 2) - Measurement- pgs 801-877 ○ Complete chapter 11 objectives on ALEKS ○ Chapter 11(McGraw Hill) Assessment ● Chapter 12 (Feb 24 - March 10) ○ (McGraw Hill volume 2) - Geometry - pgs 903-973 ○ Complete chapter 12 objectives on ALEKS ○ Chapter 12 (McGraw Hill) Assessment ○ Smarter Balanced Review ○ Smarter Balanced Assessment ○ Review (McGraw Hill volume 1) chapters 3 and 4 Long Division ○ Review (McGraw Hill volume 2) chapters 9 and 10 Fractions