

**4th Grade Math Curriculum
Gasconade County R-2 School District
2018-19**

Grade Level: 4

Subject: Math

| Month | Unit Name and Ready Math Resource Link | Missouri Learning Standards | Key Vocabulary | Essential Questions |
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| Aug. | <p>Lesson 1: Understand Place Value</p> <p>Lesson 2: Compare Whole Numbers</p> <p>Lesson 3: Add and Subtract Whole Numbers</p> | <p>4.NBT.A.2 Read, write and identify multi-digit whole numbers up to one million using number names, base ten numerals & expanded form.</p> <p>4.NBT.A.3 Compare two multi-digit numbers using the symbols $>$, $=$ or $<$, and justify the solution.</p> <p>4.NBT.A.4 Understand that in a multi-digit whole number, a digit represents 10 times what it would represent in the place to its right.</p> <p>4.NBT.A.5 Demonstrate fluency with addition & subtraction of whole numbers.</p> | <p>Lesson 1: place value, period, word form, standard form, expanded form</p> <p>Lesson 2: compare, greater than, less than</p> <p>Lesson 3: sum, difference, regroup</p> | <p>Can I use a place value chart to understand the value of each digit in a number?</p> <p>Can I identify the value of a digit based on its position in a number?</p> <p>Can I demonstrate how moving from one place- value position to the next changes the value of a digit by a factor of ten?</p> <p>Can I show that any number can be represented in different ways?</p> <p>Can I use standard, word, and expanded form to read & write multi-digit whole numbers?</p> <p>Can I use symbols ($>$, $<$, $=$) to show the relationship between two multi-digit numbers?</p> <p>Can I compare multi- digit numbers in order to solve word problems?</p> <p>Can I use the standard algorithm to add multi- digit whole numbers?</p> <p>Can I use the standard algorithm to subtract multi-digit whole numbers?</p> |

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| Sept. | <p>Lesson 4: Round Whole Numbers</p> <p>Lesson 5: Understand Multiplication</p> <p>Lesson 6: Multiplication and Division in Word Problems</p> <p>Lesson 7: Multiples and Factors</p> | <p>4.NBT.A.1 Round multi-digit whole numbers to any place.</p> <p>4.NBT.A.6 Multiply a whole number of up to four digits by a one-digit whole number & multiply two two-digit numbers, and justify the solution.</p> <p>4.NBT.A.7 Find whole-number quotients & remainders with up to four-digit dividends & one-digit divisors, and justify the solution.</p> <p>4.RA.A.1 Multiply or divide to solve problems involving a multiplicative comparison.</p> <p>4.RA.A.2 Solve multi-step whole number problems involving the four operations & variables & using estimation to interpret the reasonableness of the answer.</p> <p>4.RA.B.4 Recognize that a whole number is a multiple of each of its factors & find the multiples for a given whole number.</p> <p>4.RA.B.5 Find all factor pairs for whole numbers within 100.</p> <p>4.RA.B.5 Determine if a whole number within 100 is composite or prime . . .</p> | <p>Lesson 4: round, to estimate, an estimate</p> <p>Lesson 5: multiplicative comparison, product, factor, equation</p> <p>Lesson 6: unknown, symbol</p> <p>Lesson 7: factors of a number, factor pair, multiple, composite number, prime number</p> | <p>Can I round multi- digit whole numbers?</p> <p>Can I explain how to round a multi-digit whole number to a specific place value?</p> <p>Can I use rounded numbers to estimate a sum or difference in a word problem?</p> <p>Can I use a multiplication sign to represent the relationship between two numbers as a multiplicative comparison?</p> <p>Can I identify a multiplication equation as showing two ways to describe a product as a comparison between two factors?</p> <p>Can I write an equation to represent a multiplicative comparison described in a word problem?</p> <p>Can I write a word problem using a multiplicative comparison to describe a given multiplication equation?</p> <p>Can I use drawings & symbols to represent a word problem involving multiplicative comparison?</p> <p>Can I use an equation to solve for</p> |

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| | | | | <p>the unknown in a multiplicative comparison problem?</p> <p>Can I solve word problems involving multiplicative comparisons by using multiplication or division?</p> <p>Can I use basic multiplication facts to list all the factors of a number?</p> <p>Can I use basic multiplication facts to determine whether a number is a multiple of another number?</p> <p>Can I apply understanding of multiples & factors to solving problems?</p> |
| Oct. | <p>Lesson 8: Number and Shape Patterns</p> <p>Lesson 9: Model Multi-Step Problems</p> <p>Lesson 10: Solve Multi-Step Problems</p> <p>Lesson 11: Multiply Whole Numbers</p> <p>Lesson 12: Divide Whole Numbers</p> | <p>4.NBT.A.6 Multiply a whole number of up to four digits by a one-digit whole number & multiply two two-digit numbers, and justify the solution.</p> <p>4.NBT.A.7 Find whole-number quotients & remainders with up to four-digit dividends and one-digit divisors, & justify the solution.</p> <p>4.RA.A.2 Solve multi-step whole number problems involving the four operations & variables & using estimation to interpret the reasonableness of the answer.</p> <p>4.RA.A.3 Solve whole number division problems involving variables in which</p> | <p>Lesson 8: rule, pattern</p> <p>Lesson 9: expression</p> <p>Lesson 10: remainder, reasonable</p> <p>Lesson 11: partial products, multiplication</p> <p>Lesson 12: dividend, divisor, partial quotient</p> | <p>Can I use rules to generate or extend a number pattern?</p> <p>Can I use manipulatives or drawings to show a shape pattern?</p> <p>Can I describe, analyze, & extend patterns in numbers & shapes?</p> <p>Can I use equations with a letter standing for the unknown to represent multi-step word problems?</p> <p>Can I write & solve an equation in order to solve a multi-step word problem?</p> |

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| | | <p>remainders need to be interpreted, and justify the solution.</p> <p>4.RA.C.6 Generate a number pattern that follows a given rule.</p> <p>4.RA.C.7 Use words or mathematical symbols to express a rule for a given pattern.</p> | | <p>Can I interpret the remainder in a division word problem?</p> <p>Can I use estimation strategies to check that an answer is reasonable?</p> <p>Can I multiply whole numbers of up to four digits by one-digit whole numbers?</p> <p>Can I multiply a two-digit number by a two-digit number?</p> <p>Can I use area models & partial products to multiply?</p> <p>Can I divide up to four-digit dividends by one-digit divisors, with remainders?</p> <p>Can I use area models, subtraction of partial products, & partial quotients to divide?</p> <p>Can I recognize the relationship between multiplication & division?</p> |

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| Nov. | <p>Lesson 13: Understand Equivalent Fractions</p> <p>Lesson 14: Compare Fractions</p> <p>Lesson 15: Understand Fraction Addition and Subtraction</p> <p>Lesson 16: Add and Subtract Fractions</p> | <p>4.NF.A.1 Explain and/or illustrate why two fractions are equivalent.</p> <p>4.NF.A.2 Recognize & generate equivalent fractions.</p> <p>4.NF.B.4 Understand addition & subtraction of fractions as joining/ composing & separating/decomposing parts referring to the same whole.</p> <p>4.NF.B.5 Decompose a fraction into a sum of fractions with the same denominator & record each decomposition with an equation & justification.</p> <p>4.NF.B.6 Solve problems involving adding & subtracting fractions & mixed numbers with like denominators.</p> | <p>Lesson 13: fraction, numerator, denominator, equivalent fractions</p> <p>Lesson 14: benchmark fraction, common denominator</p> <p>Lesson 15: unit fraction</p> | <p>Can I understand the value of a fraction?</p> <p>Can I understand how a fractions model represents a fraction?</p> <p>Can I use models to demonstrate that two fractions are equivalent?</p> <p>Can I represent equivalent fractions using models?</p> <p>Can I multiply & divide to find equivalent fractions?</p> <p>Can I use symbols (>,<=) to compare fractions with different numerators & denominators?</p> <p>Can I recognize that fractions with different denominators & the same numerators represent different values?</p> <p>Can I use benchmark fractions to compare fractions?</p> <p>Can I recognize that you can only compare two fractions when both refer to the same whole?</p> <p>Can I understand addition as joining parts?</p> <p>Can I understand subtraction as</p> |

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| | | | | <p>separating parts?</p> <p>Can I extend my understanding of addition & subtraction of whole numbers to addition & subtraction of fractions?</p> <p>Can I use fraction models to add & subtract fractions with like denominators?</p> <p>Can I add fractions with like denominators?</p> <p>Can I subtract fractions with like denominators?</p> <p>Can I use fraction models, number lines, and equations to represent word problems?</p> |
| Dec. | <p>Lesson 17: Add and Subtract Mixed Numbers</p> <p>Lesson 18: Understand Fraction Multiplication</p> <p>Lesson 19: Multiply Fractions</p> | <p>4.NF.B.4 Understand addition & subtraction of fractions as joining/ composing & separating/decomposing parts referring to the same whole.</p> <p>4.NF.B.5 Decompose a fraction into a sum of fractions with the same denominator & record each decomposition with an equation & justification.</p> <p>4.NF.B.6 Solve problems involving adding & subtracting fractions & mixed numbers with like denominators.</p> | <p>Lesson 17: mixed number</p> <p>Lesson 18: product</p> | <p>Can I break apart fractions greater than 1 into a fraction equivalent to 1 and a fraction less than 1?</p> <p>Can I write a mixed number as a fraction & write a fraction greater than 1 as a mixed number?</p> <p>Can I add & subtract mixed numbers with like denominators?</p> <p>Can I write & solve an equation with mixed numbers with like denominators in order to solve a</p> |

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| | | <p>4.NF.B.7 Apply & extend previous understandings of multiplication to multiply a fraction by a whole number.</p> <p>4.NF.B.8 Solve problems involving multiplication of a fraction by a whole number.</p> | | <p>word problem?</p> <p>Can I multiply a unit fraction (numerator of 1) by a whole number?</p> <p>Can I multiply a fraction with a numerator greater than 1 by a whole number?</p> <p>Can I solve word problems that involve multiplying a fraction by a whole number?</p> |
| Jan. | <p>Lesson 20: Fractions as Tenths and Hundredths</p> <p>Lesson 21: Relate Decimals and Fractions</p> <p>Lesson 22: Compare Decimals</p> <p>Lesson 23: Convert Measurements</p> | <p>4.NF.A.3 Compare two fractions using the symbols $>$, $=$ or $<$, and justify the solution.</p> <p>4.NF.C.9 Use decimal notation for fractions with denominators of 10 or 100.</p> <p>4.NF.C.10 Understand that fractions & decimals are equivalent representations of the same quantity.</p> <p>4.NF.C.11 Read, write & identify decimals to the hundredths place using number names, base ten numerals & expanded form.</p> <p>4.NF.C.12 Compare two decimals to the hundredths place using the symbols $>$, $=$ or $<$, and justify the solution.</p> <p>4.GM.C.6a Know relative sizes of</p> | <p>Lesson 20: tenths, hundredths</p> <p>Lesson 21: decimal, decimal point</p> <p>Lesson 23: convert, metric system, customary system</p> | <p>Can I rewrite a fraction that has a denominator of 10 as an equivalent fraction with a denominator of 100?</p> <p>Can I rewrite a fraction that has a denominator of 100 as an equivalent fraction with a denominator of 10?</p> <p>Can I explain the relationship between tenths & hundredths?</p> <p>Can I add two fractions with denominators of 10 and 100?</p> <p>Can I convert decimals into fractions, with denominators of 10 or 100?</p> <p>Can I convert fractions into decimals, with denominators of 10</p> |

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| | | <p>measurement units within one system of units. Convert measurements in a larger unit in terms of a smaller unit.</p> <p>4.GM.C.7 Use the four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects & money.</p> | | <p>or 100?</p> <p>Can I compare two decimals up to hundredths, using the $>$, $<$, and $=$ symbols?</p> <p>Can I solve word problems involving comparisons of tenths & hundredths decimals?</p> <p>Can I identify the units of measurement within a measurement system?</p> <p>Can I convert measurements from a larger unit to a smaller unit within the same system?</p> <p>Can I use a conversion table showing equivalent measurements within the same system?</p> |
| Feb. | <p>Lesson 24: Time and Money</p> <p>Lesson 25: Length, Liquid Volume, and Mass</p> <p>Lesson 26: Perimeter and Area</p> <p>Lesson 27: Line Plots</p> | <p>4.GM.C.7 Use the four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects & money.</p> <p>4.GM.C.8 Apply the area . . . formulas for rectangles to solve problems.</p> <p>4.GM.C.8 Apply the area & perimeter formulas for rectangles to solve problems.</p> <p>4.DS.A.1 Create a . . . line plot to display</p> | <p>Lesson 25: liquid volume, mass,</p> <p>Lesson 26: formula, perimeter, area,</p> <p>Lesson 27: line plot</p> | <p>Can I solve word problems involving time & money?</p> <p>Can I convert larger units of time to smaller units in order to solve word problems about time?</p> <p>Can I convert amounts of money in bills & coins to solve word problems about money?</p> <p>Can I convert large units of measurement to smaller units in</p> |

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| | | <p>measurement data.</p> <p>4.DS.A.2 Solve problems involving addition & subtraction by using information presented in a data display.</p> | | <p>order to solve word problems involving length, liquid volume or mass?</p> <p>Can I write & solve equations in order to solve word problems involving length, liquid volume, and mass?</p> <p>Can I use the formula for perimeter to solve problems?</p> <p>Can I use the formula for area to solve problems?</p> <p>Can I make a line plot that displays data in fractional units?</p> <p>Can I solve addition word problems by using a line plot?</p> <p>Can I solve subtraction word problems by using a line plot?</p> |
| Mar. | <p>Lesson 28: Understand Angles</p> <p>Lesson 29: Measure and Draw Angles</p> <p>Lesson 30: Add and Subtract with Angles</p> <p>Lesson 31: Points, Lines, Rays, and Angles</p> | <p>4.GM.A.1 Draw & identify points, lines, line segments, rays, angles, perpendicular lines & parallel lines.</p> <p>4.GM.B.4 Identify & estimate angles & their measure.</p> <p>4.GM.B.5 Draw & measure angles in whole-number degrees using a protractor.</p> | <p>Lesson 28: angle, ray, vertex, degree, right angle, acute, obtuse,</p> <p>Lesson 29: protractor</p> <p>Lesson 30: compose, decompose</p> <p>Lesson 31: point, line segment, line, parallel</p> | <p>Can I recognize an angle as a geometric shape?</p> <p>Can I identify acute, right & obtuse angles?</p> <p>Can I recognize the relationship between the measure of an angle & the part of a circle that the angle turns through?</p> |

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| | | | <p>lines, perpendicular lines</p> | <p>Can I use a protractor to measure an angle?</p> <p>Can I draw an angle of a specific degree?</p> <p>Can I use benchmark angle measures to estimate the measure of an angle?</p> <p>Can I recognize that an angle can be split up into several smaller angles?</p> <p>Can I recognize that several smaller angles can be combined to form a larger angle?</p> <p>Can I add & subtract to find angle measures?</p> <p>Can I use addition & subtraction to solve word problems about angle measures?</p> <p>Can I identify & draw points, lines, line segments, rays, & angles, & identify them in two-dimensional figures?</p> <p>Can I identify & draw parallel & perpendicular lines, distinguish between the two, & identify them in two-dimensional figures?</p> |
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| Apr. | <p>Lesson 32: Classify Two-Dimensional Figures</p> <p>Lesson 33: Symmetry</p> | <p>4.GM.A.2 Classify two-dimensional shapes by their sides and/or angles.</p> <p>4.GM.A.3 Construct lines of symmetry for a two-dimensional figure.</p> | <p>Lesson 32: polygon, rectangle, equilateral triangle, isosceles triangle, scalene triangle, acute triangle, right triangle, obtuse triangle, quadrilateral, parallelogram, rhombus, trapezoid</p> <p>Lesson 33: line of symmetry</p> | <p>Can I sort two-dimensional figures based on parallel or perpendicular sides & on acute, obtuse, or right angles?</p> <p>Can I recognize that triangles can be classified based on the lengths of their sides (isosceles, scalene, equilateral)?</p> <p>Can I name a triangle based on the kind of angles it has (acute, right, obtuse)?</p> <p>Can I recognize lines of symmetry in two-dimensional figures?</p> <p>Can I draw lines of symmetry in two-dimensional figures?</p> |
| May | <p>Grade 4: Additional Fluency Practice</p> | <p>Review of all necessary MO Learning Standards</p> | <p>Review of vocabulary</p> | |