

| <i>Essential Skill Component</i> | <i>Standard</i> | <i>Sub Component</i> | <i>Quarterly Focus</i> |
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| Mathematical Reasoning | | | |
| Applies strategies to solve problems | 5.MP.1 5.MP.4 5.MP.7 5.MP.8 | As it relates to the "Number Sense and Operations-Fractions" strand below | Students look closely to discover a pattern or structure. Examine numerical patterns and relate them to a rule. Students explore operations with fractions with visual models and begin to formulate generalizations. Check their thinking by asking themselves: "What is the most efficient way to solve the problem?" "Does this make sense?" "Can I solve the problem a different way?" |
| Communicates mathematical thinking, using math vocabulary | 5.MP.2 5.MP.3 5.MP.4 5.MP.6 | As it relates to the "Number Sense and Operations-Fractions" strand below | -Recognize that a number represents a specific quantity. -Connect quantities to written symbols and create a logical representation of the problem at hand, considering both the appropriate units involved and the meaning of quantities. -They extend this understanding from whole numbers to their work with fractions and decimals. -Experiment with problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, making a chart, list or graph and creating equations. -Students need opportunities to connect the different representations and explain the connections. -Evaluate the utility of models to determine which models are most useful and efficient to solve problems. -Refine their mathematical communication skills by using clear and precise language in their discussions with others and in their own reasoning. -Students use appropriate terminology when referring to expressions, fractions, geometric figures and coordinate grids. |
| Operations and Algebraic Thinking | | | |
| Writes and interprets numerical expressions | 5.OA.1 5.OA.2 5.OA.3 | | -Use parentheses, brackets, or braces in numerical expressions -Evaluate expressions with parentheses, brackets, or braces, and develop a plan to solve -Generate two numerical expressions using two given rules and graph on a coordinate plane -Identify relationships and patterns between corresponding items -Write and interpret simple expressions Vocabulary: braces, brackets, coordinate plane, expression, ordered pair, parentheses, pattern, rule, x-axis, x-coordinate, y-axis, y-coordinate |
| Fluent multiplication and division facts | 5.NBT.B.5 | | -Solve multiplication and division problems fluently using the standard algorithm Vocabulary: algorithm, <i>product</i> , <i>factor</i> , <i>quotient</i> , <i>divisor</i> , <i>dividend</i> , <i>division</i> , <i>multiplication</i> |

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| Solves multi-step word problems | 5.NF.A.2 5.NF.B.3 5.MD.1 | | |
| Number Sense and Operations in Base Ten | | | |
| Demonstrates understanding of place value | 5.NBT.1 5.NBT.2 5.NBT.3 5.NBT.4 | | <p>-Place value including decimals -Powers of 10 including being able to recognize and explain that a digit in one place represent ten 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, explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of ten -Use whole number exponents to denote powers of 10 -Read, write, and compare decimals to the thousandths place. Compare decimals using $<$, $>$, and $=$ to record results of comparisons -Round decimals -Multiply by powers of 10 -Write whole numbers and decimals to the thousandths place in expanded form -Write whole numbers and decimals to the thousandths place in expanded form in standard form</p> <p>Vocabulary: powers of 10, tenth, hundredth, thousandth, decimal, expanded form, standard form <i>place, value, round</i></p> |
| Performs four operations with multi-digit whole numbers and decimals | 5.NBT.5 5.NBT.B.5 5.NBT.6 5.NBT.7 | | <p>-Add, subtract, multiply, and divide decimal to hundredths using manipulatives and drawings -Fluently multiply multi-digit whole numbers using the standard algorithm -Division of multidigit whole numbers -Illustrate and explain calculation of multiplication and division problems by using equations, rectangular arrays, and/or area models</p> <p>Vocabulary: decimal, decimal point, tenth, hundredth, thousandth, <i>array, area model</i></p> |
| Number Sense and Operations-Fractions | | | |
| Adds and subtracts fractions with unlike denominators | 5.NF.1 5.NF.2 | | <p>-Add and subtract fractions with unlike denominators -Use equivalent fractions as a strategy to add and subtract fractions -Solve word problems with addition and subtraction of fractions -Use visual fraction models or equations to represent the problem -Use number sense of fractions to estimate mentally and assess the reasonableness of answers</p> <p>Vocabulary: <i>fraction, numerator, denominator</i>, equivalent fraction, common denominator</p> |

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| Multiplies and divides fractions | 5.NF.3 5.NF.4 5.NF.6 5.NF.7 | 5.NF.4a 5.NF.4b 5.NF.5a, 5.NF.5b, 5.NF.7a, 5.NF.7b, 5.NF.7c, | -Interpret fractions as dividing whole numbers using visual models -Multiply fractions or whole numbers by fractions -Interpret multiplication as scaling/resizing.-Apply and extend previous understandings of multiplication to multiply a fraction number by a fraction. |
| Measurement and Data | | | |
| Converts like units within a given measurement system | 5.MD.1 | 5.MP.5 5.MD.1 | -Convert measurements in decimal form and metric system -Convert measurements in fraction form and customary system -Convert among different-sized standard measurement units within a given measurements and use these conversions in solving multi-step, real-world problems |
| Represents and interprets data | 5.MD.2 | 5.MD.2 | -Create a line plot of measurement up to nearest 1/8 |
| Understands concepts of volume | 5.MD.3 5.MD.4 5.MD.5 | 5.MD.3 5.MD.4 5.MD.5 | -Recognize volume as an attribute of solid figures and understand concepts of volume measurement. 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. |
| Relates volume to multiplication and addition | 5.MD.3 5.MD.5 | 5.MD.5 | -Solve problems with volume using multiplication and addition Vocabulary: area, cubic unit, length, solid, compose, formula, line plot, volume, conversion, fraction, measurement, width, conversion factor, height, rectangular prism |
| Geometry | | | |
| Graph points on a coordinate plane to solve problems | 5.OA.3 5.G.1 5.G.2 | | Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, give 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. |
| Classifies two dimensional figures based on properties | 5.G.4 | | -Classify two-dimensional figures in a hierarchy based on properties. Vocabulary: acute triangle, number line, polygon, trapezoid, attribute, obtuse triangle, property, triangle, axis/axes, ordered pair, quadrilateral, two-dimensional figure, coordinate plane, origin, rectangle, x-axis, coordinate system, parallelogram, rhombus, x-coordinate, coordinates, pentagon, right triangle, y-axis, hexagon, plane, square, y-coordinate |