Essential Skill Component	***Standard***	***Sub Component***	***Quarterly Focus***
Mathematical Reasoning			
Applies strategies to solve problems	5.MP.1 5.MP.4 5.MP.7 5.MP.8	As it relates to "Operations and Algebraic Thinking" and "Number Sense and Operations in Base Ten" strands below	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 in a different way?"* *Experiment wih multiple ways to solve problems:* *-numbers, words, drawings,using oblects, making a chart, list or graph, creating equations, etc...* Fifth graders should evaluate the utility of models to determine which models are most useful and efficient to solve problems. -Discover patterns or structure. Examine numerical patterns and relate them to a rule or a graphical representation. *-Students connect place value and their prior work with operations to understand algorithms to fluently multiply multi-digit numbers and performall operations iwth decimals to hundredths.* *- Students explore operations with fractions with visual models and begin to formulate generalizations.*
Communicates mathematical thinking, using math vocabulary	5.MP.2 5.MP.3 5.MP.4 5.MP.6	As it relates to "Operations and Algebraic Thinking" and "Number Sense and Operations in Base Ten" strands below	Connects 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. -Construct arguments using concrete referents, such as objects, pictures, and drawings. -Explain calculations based upon models and properties of operations and rules that generate patterns. -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, *product, factor, quotient, divisor, dividend, division, multiplication*
Solves multi-step word problems	5.NF.A.2 5.NF.B.3 5.MD.1		Students solve problems by applying their understanding of operations with whole numbers, decimals, and fractions including mixed numbers. Sudents seek the meaning of a problem and look for efficient ways to represent and solve it.
Number Sense and Operations in Base Ten			
Demonstrates understanding of place value	5.NBT.1 5.NBT.2 5.NBT.3 5.NBT.4		-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 **Vocabulary:** powers of 10, tenth, hundreth, thousandth, decimal, expanded form, standard form *place, value, round*
Performs four operations with multi-digit whol numbers and decimals	5.NBT.5 5.NBT.B.5 5.NBT.6 5.NBT.7		-Add, subtract, multiply, and divide decimal to hundredths using manipulatives and drawings -Fluently multiply multi-digit wholes 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 **Vocabulary:**decimal, decimal point, tenth, hundredth, thousandth, *array, area model*
Number Sense and Operations-Fractions			

Adds and subtracts fractions with unlike denominators	5.NF.1 5.NF.2		-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 **Vocabulary**: *fraction, numerator, denominator*, equivalent fraction, common denominator
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 fractio.
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 concecpts 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 relationalships 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 nmber 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 5.G.4		-Classify two-dimensional figures in a hierarchy based on properties. **Vocabulary:** acute triangle, number line, polygon, trapezoid, attribule, obtuse triangle, property, triangle, axis/axes, ordered pair, quadrilateral, two-dimensional figure, coordinate plane, origin, rectangle, x-axis, coordinate system, paralleolo gram, rhombus, x-coordinate, coordinates, pentagon, right triangle, y-axis, hexagon, plane, square, y-coordinate