**4th Grade Common Core Math Standards**

**NUMBERS AND OPERATIONS IN BASE 10**

***Generalize place value understanding for multi-digit whole numbers.***

***Use place value understanding and properties of operations to perform multi-digit arithmetic.***

* I understand that each place value is 10 times larger than the one to its right.
* I can read, write, and compare numbers up to 1,000,000.
* I can round numbers up to 1,000,000.
* I can add and subtract numbers up to 1,000,000.
* I can multiply large numbers using various strategies. I can illustrate and explain my work.
* I can divide large numbers using various strategies. I can illustrate anf explain my work.

**NUMBERS AND OPERATIONS – FRACTIONS**

***Extend understanding of fraction equivalence and ordering.***

***Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.***

***Understand decimal notation for fractions and compare decimal fractions.***

* I can recognize and form equivalent fractions.
* I can compare two fractions with different numerators and denominators.
* I understand the relationship between numerators and denominators. I understand that a fraction is made up of equal units.
* I understand how to add and subtract fractions that are parts of the same whole.
* I can break apart a fraction into the sum of smaller fractions with like denominators. I can write number sentences to show that fractions can be separated in more than one way.
* I can use various strategies to add and subtract mixed numbers with like denominators.
* I can solve word problems by adding and subtracting fractions with like denominators.
* I can multiply a fraction by a whole number.
* I can use my knowledge of fraction multiples to multiply a fraction by a whole number.
* I understand that fractions with like denominators are multiples of the fraction with the same denominator and a numerator of 1.
* I can solve word problems by multiplying a fraction by a whole number.
* I can add fractions with denominators of 10 and 100 by converting them into equivalent fractions.
* I can change a fraction with a denominator of 10 or 100 into an equivalent decimal.
* I can compare two decimals to the hundredths place.

**MEASUREMENT AND DATA**

***Solve problems involving measurement and conversions of measurements from a larger unit to a smaller unit.***

***Represent and interpret data.***

***Geometric measurement: understand concepts of angles and measure angle.***

* I understand the different sizes within a system of measurement. I can find equivalent measurements.
* I can solve measurement word problems and represent amounts using scale drawings.
* I can use formulas to find the area and the perimeter of rectangles.
* I can create line plots displaying fractions and use them to solve problems.
* I understand that angles are formed by two rays with the same endpoint. I can measure angles.
* I understand that an angle’s measure is related to the fraction of the circle it represents and that the unit is degrees.
* I understand that an angle is measured in degrees of a circle.
* I can measure and draw angles using a protractor.
* I understand that the sum of an angle’s parts is equal to the whole angle. I can solve addition and subtraction problems with unknown angles.

**GEOMETRY**

***Draw and identify lines and angles and classify shapes by properties of their lines and angles.***

* I can draw and identify points, lines, line segments, rays, angles and perpendicular and parallel lines.
* I can classify polygons, such as right triangle, by the types of angles and lines used to form the polygons.
* I understand that lines of symmetry divide a shape into matching parts. I can identify symmetrical shapes and draw lines of symmetry.

**OPERATIONS AND ALGABRAIC THINKING**

***Use the four operations with whole numbers to solve problems.***

***Gain familiarity with factors and multiples.***

***Generate and analyze patterns.***

* I understand that multiplication shows how many times a number is multiplied to get another number. I can write multiplication equations.
* I can use mathematical operations and variables to solve word problems with and without remainders. I can use mental math and estimation to decide if my answer makes sense.
* I can factor numbers from 1 to 100. I understand that numbers are multiples of their factors. I can figure out if a number is a multiple of another number and whether it is prime or composite.
* I can create and describe patterns that follow a rule.