Students will be able to… *NUMBER SENSE AND OPERATIONS*

- Demonstrate an understanding of positive exponents by evaluating and writing them. *(using exponents when writing the prime factorization of a number)*
- Multiply whole numbers and decimals by powers of ten.
- Demonstrate place value to billions and thousandths using standard, number-word notation, and expanded notation.
- Estimate with reasonableness computations with whole numbers, positive fractions, mixed numbers, decimals, and percents.
- Accurately add, subtract multiply, and divide (including double digit divisors) whole numbers, fractions, positive mixed numbers, and decimals and express the results as simplified fractions.
- Compare and order integers, fractions, mixed numbers, and decimals and place on a number line.
- Apply Order of Operations when simplifying expressions.
- Add and subtract integers using a number line, and understand inverse relationships (with the exception of subtracting negative integers).
- Apply number theory concepts. (*divisibility rules (2,3,4,5,6,9,10), GCF, LCM, prime factorization, prime/composite numbers*)
- Demonstrate an understanding of how fractions, decimals, and percentages relate using various models and strategies.
- Convert any fractions to decimals, any terminating decimal to fraction, and simple fractions to percents. *(fractions with a denominator is a factor of 100)*

Students will be able to… *PATTERNS, RELATIONS, AND ALGEBRA*

- Replace variables in expressions with given values and evaluate/simplify.
- Solve one step linear equations using various methods.
- Analyze and determine rules for patterns/progressions and write rule in words, symbols.
- Represent simple relationships using input/output tables expressing rules with words or symbols, and/or graphs.
- Create and interpret graphs that represent the relationship between two variables in everyday situations.

Students will be able to… *GEOMETRY*

- Identify relationships among points, lines, line segments, and planes. *(intersecting, parallel, and perpendicular)*
- Identify/classify interior angles, parallel and perpendicular lines, congruency of sides as related to squares, rectangles, rhombuses, parallelograms, trapezoids and triangles.
- Classify (based on their properties) three dimensional solids with accurate vocabulary. *(edges, faces, vertices as it relates to cubes, prisms, spheres, cones, and pyramids)*
- Graph points on Cartesian coordinate plane. *(all four quadrants)*
- Perform transformations on two dimensional shapes. *(translations, rotations, reflections)*
- Determine congruency by measuring or moving two dimensional shapes.
- Use nets, projections, and drawings to match three dimensional objects and their two dimensional representations.
- Identify types of symmetry of basic figures, including line and rotational.

Students will be able to… *MEASUREMENT*

- Use appropriate metric and standard units and tools to estimate, measure, and solve problems involving length, area, volume, weight, time, and temperature.
- Convert units within the same system using proportional relationships.
- Find the distance between two horizontal or vertical points in a coordinate plane.
- Identify, measure, describe, classify, and construct various angles, triangles and quadrilaterals
- Find the sum of the angles in simple polygons.
- Accurately use the definitions of radius and diameter, and apply the formulas for circumference and areas, as related to circles, in order to solve problems.
- Use formulas for perimeter (all shapes), area (square, rectangle, and parallelograms), surface area and volume of rectangular prisms.

Students will be able to… *DATA ANALYSIS, STATISTICS, AND PROBABILITY*

- Given a set of data, determine mean, median, mode, range, maximum and minimum.
- Construct and interpret stem-and-leaf plots, line plots, frequency tables, bar, line, and circle graphs.
- Make a tree diagram and a list to show and analyze all possible outcomes of simple experiments.
- Predict the probability of simple experiments using a ratio of 0-1 to evaluate the likelihood of an event.