MATHEMATICS
GRADE 7 ENRICHED

ALGEBRAIC EXPRESSIONS AND INTEGERS

- Identify variables, numerical expression, and variable expressions
- Represent, graph, order integers, and find opposites and absolute values
- Name coordinates and quadrants in the coordinate plane

SOLVING EQUAITIONS AND INEQUALITIES

- Utilize properties of numbers
- Name the property used to simplify an expression
- Identify and combine like terms
- Employ Properties of Equality and Properties of Inequality to solve equations and inequalities

DECIMALS AND EQUATIONS

- Apply methods of estimating
- Apply the measures of central tendency
- Make substitutions in a formula
- Demonstrate how to add, subtract, multiply and divide decimals to solve equations
- Make metric conversions
- Translate words into an equation

FACTORS, FRACTIONS AND EXPONENTS

- Explain what is meant by divisible
- Apply the rules of exponents
- Summarize the relationship between prime factorization and GCF
- Determines if fractions are equivalent
- Illustrate the concept of rational numbers
- Describe the relationship between numbers written in scientific notation and standard form

OPERATIONS WITH FRACTIONS

- Write fractions in order from least to greatest
- Transform fractions to decimals and vice versa
- Demonstrate addition, subtraction, multiplication, and division of fractions
- Make conversions in the customary system
- Solving equations with fractions
- Demonstrate the simplification a power of products and quotients

RATIOS, PROPORTIONS AND PERCENTS

- Apply ratios and proportions to solve problems
- Demonstrate an understanding of the rules of probability
- Distinguish between the three types of percent problems and demonstrate the correct procedure to solve each
- Organize data in a table

LINEAR FUNCTIONS AND GRAPHING

- Differentiate between a function and a relation
- Solve two variable relationships
- Utilize the rules for graphing equations and inequalities with two variables
- Extrapolate the solution(s) of a system of equations or inequalities by observing their graph

SPATIAL THINKING

- Define geometric terms
- Identify polygons
- Translate figures on a coordinate plane
- Classify angles
- Construct geometric figures
- Compute circumference and area of circles

AREA AND VOLUME

- Calculate areas, surface areas and volumes using the appropriate formulas
- Construct models to solve problems

RIGHT TRIANGLES IN ALGEBRA

- Extrapolate the square root of a number
- Identify a number as rational or irrational
- Demonstrate the Pythagorean Theorem in solving right triangles
- Recognize that a triangle is right
- Compute distance and find midpoint using formulas
- Formulate proportions using properties of similar triangles
- Generalize trigonometric ratios to solve right triangles

DATA ANALYSIS AND PROBABILITY

- Extrapolate from a set of data and display it as box-and-whisker, histogram, stem-and-leaf, line and bar graph
- Distinguish between experimental and theoretical probability
- Distinguish between permutation and combination
- Give examples of dependent and independent events
- Predict the outcome of surveys using experimental probability

NONLINEAR FUNCTIONS AND POLYNOMIALS

- Represent nonlinear functions graphically
- Employ the rules to add, subtract and multiply polynomials
- Rewrite a polynomial in factored form
- Determine the best strategy for solving a problem