ALLEN ACADEMY

7th Grade Mathematics 2017-2018		
First Trimester Objectives:	**Second Trimester Objectives:**	**Third Trimester Objectives:**
- Arithmetic properties and number operations - Factors and multiples - Reading and interpreting data - Study of measurement - Understanding fractions conceptually	- Fractions and decimals: The study of parts from a whole - Negative numbers and the coordinate plane - Ratios, rates and proportions - Equations, expressions and inequalities	- Exponents, radicals and scientific notation - Studying numbers and operations further in depth - Solving equations with one and two unknowns - Linear equations and functions - Systems of equations
Topics Covered:	Topics Covered:	Topics Covered:
- Solve equations using add, subtract, multiply, divide - Model addition, subtraction, division, and multiplication equations - Explore prime factorization, greatest common factor, least common multiple - Representing data through stem and leaf plots, picture graphs, bar graphs and histograms - Frequency tables and dot plots - Number patterns and data - Area and perimeter of various shapes - The study of volume and space	- Fractions on the number line and equivalent fractions - Comparing fractions and using common denominators - Decomposing fractions; adding and subtracting fractions - Mixed numbers and fraction operations without common denominators - Word problems with fractions - Multiplication as scaling - Multiplying with parts of a whole - Fractions as division and dividing fractions word problems - Decimals on the number line, rounding decimals and comparing decimals - Adding decimals and subtracting decimals, word problems with decimals - Multiplying and dividing decimals - Understanding the coordinate plane - Fully conceptualizing absolute distance from 0 - Ratio word problems and introduction to rates - Percent word problems	- Repeating decimals, square roots and cube roots - Irrational numbers and approximation - Properties of exponents and working with powers of ten - Scientific notation word problems - Equations with variables on both sides - Equations with parentheses and fully conceptualizing the distributive property in algebraic expressions - Equations and geometry - Equations and word problems - Number of solutions to a given equation - Solutions to linear equations - Slope-intercept form and graphing functions - Intercepts (in general) - Writing slope-intercept equations - Comparing linear functions and using linear functions as a way to model real life experiences - Non-linear functions - Systems of equations overview - Intro to systems of equations - Systems of equations with graphing

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	- Converting between parts of a whole (fractions, decimals, percents) - Identifying proportional relationships - Writing and solving proportions - Working with variables - Evaluating expressions through word problems - Writing algebraic expressions and word problems - Substitution and evaluating expressions - One and two step equations intuition - Inequalities and understanding inequalities through variables	- Solving systems with elimination and substitution - Number of solutions to systems of equations - Systems of equations word problems

Instructional Resources:

- Online Learning Platform: Khan Academy