

Math Curriculum Map
Grade 8
Subject: Math
Textbook: Holt Middle School Math

Month	Content	Skills	Assessments	Standards
August September	Pre-Algebra	<ul style="list-style-type: none"> ● Evaluate algebraic expressions ● Write algebraic expressions ● Solve equations ● Determine if a number is a solution of an equation ● Solve inequalities ● Graph inequalities on a number line 		<p>8.A.2.1 (Application) Write and solve two-step degree equations, with one variable, and one-step inequalities, with one variable, using the et of integers.</p> <p>8.A.1.1. (Application) use properties to expand, combine, and simplify 1st degree algebraic expressions with the et of integers.</p> <p>8.A.3.1. (Comprehension) Describe and determine linear relationships.</p>
October	Integers and Exponents	<ul style="list-style-type: none"> ● Simplify integer expressions ● Solve equations with integers ● Solve inequalities with integers ● Evaluate powers ● Write expressions in exponential form ● Simplify expressions with exponents ● Apply rules of exponents 		<p>8.N.1.1. (Comprehension) Represent numbers in a variety of forms and identify the subsets of rational numbers.</p> <p>8.N.2.1. (Application) Read, write, and compute within any subset of rational numbers.</p>
November	Real and Rational Numbers	<ul style="list-style-type: none"> ● Define rational numbers ● Simplify rational expression <ul style="list-style-type: none"> --like denominators --unlike denominators ● Write decimals as fractions ● Write fractions as decimals ● Distinguish between terminating and repeating decimals ● Solve equations and inequalities with rational numbers ● Identify subsets of real numbers 		<p>8.N.1.1. (Comprehension) Represent numbers in a variety of forms and identify the subsets of rational numbers.</p> <p>8.N.2.1.(Application) Read, write, and compute within any subset of rational numbers.</p> <p>8.N.3.1.(Application) Use various strategies to solve multi-step problems involving rational numbers.</p>

November/ December	Probability and Statistics	<ul style="list-style-type: none"> ● Read and interpret stem-leaf plot ● Create stem-leaf plot ● Define and calculate measures of central tendency ● Calculate measures of central tendency ● Create a box-whisker plot ● Find the measure of variability in a box-whisker plot ● Identify misleading graphs and statistics 		<p>8.S.1.1. (Comprehension) Find the mean, median, mode, and range of a data set from a stem-and-leaf plot and a line plot.</p> <p>8.S.1.2. (Application) Use a variety of visual representations to display data to make comparisons and predictions.</p>
December/ January	Plane Geometry	<ul style="list-style-type: none"> ● Naming points, lines, segments, planes, and angles ● Classifying angles ● Determine the slope of a line using coordinates ● Use congruence relationships to determine unknown values 		<p>8.G.1.2. (Application) Given any two sides of an illustrated right triangle, use the Pythagorean Theorem to find the third side.</p> <p>8.A.3.1. (Comprehension) Describe and determine linear relationships.</p>
January	Perimeter, Area, and Volume	<p>Given a formula determine:</p> <ul style="list-style-type: none"> ● The perimeter and area of parallelograms and rectangles ● The perimeter and area of triangles and trapezoids ● The circumference and area of circles, both in terms of π and as a decimal ● Volume of Prisms and Cylinders ● Volume of Cones and Pyramids ● Surface Area of Prisms and Cylinders <p>Use the Pythagorean Theorem to determine the unknown length of a side of a right triangle.</p> <p>Find the area of composite shapes.</p>		<p>8.G.1.1. (Application) Describe and classify prisms, pyramids, cylinders, and cones.</p> <p>8.G.1.2. (Application) Given any two sides of an illustrated right triangle, use the Pythagorean Theorem to find the third side.</p> <p>8.M.1.2. (Comprehension) Find area, volume, and surface area with whole number measurements.</p>

February	Proportions	Finding equivalent ratios Determine unit rates Convert between and within measurement systems Solve Proportions Apply proportional thinking to real-life situations <ul style="list-style-type: none"> • Scale distances • Percent problems • Similar Figures 		8.M.1.1. (Application) Apply proportional reasoning to solve measurement problems with rational number measurements. 8.A.2.1. (Write and solve two-step 1 st degree equations, with one variable, and one-step inequalities, with one variable, using the set of integers.
February	Percents	<ul style="list-style-type: none"> • Compare decimals, fractions, and percents • Finding percents • Determine percent increase/decrease • Utilize percents to determine commission, sales tax, etc. • Determine amount of interest, interest rate, or time for simple interest problems 		8.S.2.1. (Comprehension) Find the sample space and compute probability for two simultaneous independent events. 8.N.2.1. (Application) Read, write, and compute within any subset of rational numbers.
February/ March	Probability	<ul style="list-style-type: none"> • Find probability of events • Estimate probabilities • Determine experimental probability of an event • Simulate experiments • Calculate theoretical probability • Apply the Fundamental Counting Principle • Classify events as independent or dependent 		8.S.2.1. (Comprehension) Find the sample space and compute probability for two simultaneous independent events.
March/ April	Linear Equations	<ul style="list-style-type: none"> • Graph linear equations • Find the slope of a line when <ol style="list-style-type: none"> a) given a graph b) given 2 points c) given the equation • Determine if lines intersect, are parallel, or are perpendicular • Graph a line using the slope and a point • Use intercepts to graph an equation • Identify the x-and y- intercepts of a line • Determine if data vary directly • Draw lines of best fit 		8.A.4.2. (Analysis) Describe and represent relations using tables, graphs, and rules. 8.A.3.1. ((Comprehension) Describe and determine linear relationships. 8.A.4.1. ((Synthesis) Create rules to explain the relationship between numbers when a change in the first variable affects the second variable.

				8.S.1.2. (Application) Use a variety of visual representations to display data to make comparisons and predictions.
May	Solving Equations	<ul style="list-style-type: none"> • Solving 2-step equations • Solving multi-step equations • Solving equations with the variable on both sides • Solving and graphing multi-step inequalities 		