



8th grade Math PACING GUIDE

*major work of the grade

FIRST QUARTER- 44 school days				
UNIT	PACING	TOPICS	STANDARDS	LEARNING OBJECTIVES
Topic 1-Real Numbers	19 days	1. Rational Numbers as Decimals 2. Understand Irrational Numbers 3. Compare and Order Real Numbers 4. Evaluate Square Roots and Cube Roots 5. Solve Equations Using Square Roots and Cube Roots 6. Use Properties of Integer Exponents 7. More Properties of Exponents 8. Use Powers of 10 to Estimate Quantities 9. Understand Scientific Notation 10. Operations with Numbers in Scientific Notation	<ul style="list-style-type: none"> • 8.NS.A.1 • 8.NS.A.2 • 8.EE.A.2* • 8.EE.A.1* • 8.EE.A.3* • 8.EE.A.4* 	<ul style="list-style-type: none"> • Know that there are numbers that are not rational and approximate them by rational numbers. • Work with radicals and integer exponents. • Estimate and compare very large and very small quantities using powers of 10. • Write very large and very small numbers in scientific notation. • Convert scientific notation to standard form.
Topic 2-Analyze and Solve Linear Equations	15 days	1. Combine Like Terms to Solve Equations 2. Solve Equations with Variables on Both Sides 3. Solve Multistep Equations 4. Equations with No Solutions or Infinitely Many Solutions	<ul style="list-style-type: none"> • 8.EE.C.7.b* • 8.EE.C.7.a* 	<ul style="list-style-type: none"> • Analyze and solve linear equations.

SECOND QUARTER- 42 school days				
UNIT	PACING	TOPICS	STANDARDS	LEARNING OBJECTIVES
Topic 2- Analyze and Solve Linear Equations	16 days	1. Compare Proportional Relationships 2. Connect Proportional Relationships and Slope 3. Analyze Linear Equations: $y = mx$ 4. Understand the y-Intercept of a Line 5. Analyze Linear Equations: $y = mx + b$ 6. Graph the Solution Set of an Inequality on the Coordinate Plane	<ul style="list-style-type: none"> • 8.EE.B.5* • 8.EE.B.6* • 8.EE.C.9 	<ul style="list-style-type: none"> • Understand the connection between proportional relationships, lines, and linear equations.
Topic 3- Use Functions to Model Relationships	19 days	1. Understand Relations and Functions 2. Connect Representations of Functions 3. Compare Linear and Nonlinear Functions 4. Construct Functions to Model Linear Relationships 5. Intervals of Increase and Decrease	<ul style="list-style-type: none"> • 8.F.A.1* • 8.F.A.2* • 8.F.A.3* • 8.F.B.4* • 8.F.B.5* 	<ul style="list-style-type: none"> • Define, evaluate, and compare functions. • Use functions to model relationships between quantities.
Topic 4- Investigate Bivariate Data	7 days	1. Construct and Interpret Scatterplots 2. Analyze Linear Associations 3. Use Linear Models to Make Predictions	<ul style="list-style-type: none"> • 8.SP.A.1 • 8.SP.A.2 • 8.SP.A.3 	<ul style="list-style-type: none"> • Investigate patterns of association in bivariate data.

THIRD QUARTER- 45 school days				
UNIT	PACING	TOPICS	STANDARDS	LEARNING OBJECTIVES
Topic 4- Investigate Bivariate Data	5 days	1. Determine Outcomes of Compound Events 2. Find Probabilities of Compound Events 3. Simulate Compound Events	<ul style="list-style-type: none"> • 8.SP.B.4 • 8.SP.B.4.a • 8.SP.B.4.b 	<ul style="list-style-type: none"> • Determine outcomes of compound events • Find probabilities of compound events • Simulate compound events
Topic 5- Analyze/ Solve Systems of Linear Equations	5 days	1. Estimate Solutions by Inspection 2. Solve Systems by Graphing	<ul style="list-style-type: none"> • 8.EE.C.8 • 8.EE.C.8.a • 8.EE.C.8.b 	<ul style="list-style-type: none"> • Analyze and solve pairs of simultaneous linear equations.
Topic 6- Congruence and Similarity	25 days	1. Analyze Translations 2. Analyze Reflections 3. Analyze Rotations 4. Compose Transformations 5. Understand Congruent Figures 6. Describe Dilations 7. Understand Similar Figures 8. Angles, Lines, Transversals 9. Interior and Exterior Angles of Triangles 10. Angle-Angle Triangle Similarity	<ul style="list-style-type: none"> • 8.G.A.1 • 8.G.A.1.a • 8.G.A.1.b • 8.G.A.1.c • 8.G.A.1.d • 8.G.A.2 	<ul style="list-style-type: none"> • Understand congruence and similarity using physical models, transparencies, or geometry software.
Topic 7- Understand and Apply the Pythagorean Theorem	10 days	1. Understand the Pythagorean Theorem 2. Understand the Converse of the Pythagorean Theorem 3. Apply the Pythagorean Theorem to Solve Problems 4. Find Distance in the Coordinate Plane	<ul style="list-style-type: none"> • 8.G.B.3* • 8.G.B.4* • 8.G.B.5* 	<ul style="list-style-type: none"> • Understand and apply the Pythagorean Theorem

FOURTH QUARTER- 44 school days				
UNIT	PACING	TOPICS	STANDARDS	LEARNING OBJECTIVES
Topic 8- Solve Problems Involving Surface Area and Volume	10 days	1. Find Volume of Cylinders 2. Find Volume of Cones 3. Find Volume of Spheres	<ul style="list-style-type: none"> • 8.G.C.6 	<ul style="list-style-type: none"> • Solve real world and mathematical problems involving volume of cylinders, cones, and spheres
TNREADY REVIEW	20 days	All Major Work for Grade 8 Math		
Algebra 1 Prep	14 days	1. Solving Linear Equations 2. Functions 3. Systems of Linear Equations 4. Exponents	<ul style="list-style-type: none"> • 8.EE.C.7 • 8.F.A.1 • 8.F.A.2 • 8.F.A.3 • 8.F.B.4 • 8.EE.C.8 • 8.EE.A.1 • 8.EE.A.2 	<ul style="list-style-type: none"> • Analyze and solve linear equations and pairs of simultaneous linear equations. • Define, evaluate, and compare functions. • Use functions to model relationships between quantities. • Work with radical and integer exponents.