

8th Grade Mathematics Teaching & Learning Framework

Semester 1				Semester 2			
Unit 1 6 weeks	Unit 2A 2 weeks	Unit 2B 7 weeks	Unit 3 3 weeks	Unit 4 5 weeks	Unit 5 5 weeks	Unit 6 3 weeks	Unit 7 3 weeks
Investigating Linear Expressions, Equations, and Inequalities in One Variable 8.PAR.3	Modeling Linear Relationships and Functions 8.FGR.5	Modeling Linear Relationships and Functions 8.PAR.4 8.FGR.5	Investigating Data & Statistical Reasoning 8.FGR.6	Real-Life Phenomena Explored Through Systems of Linear Equations 8.FGR.7	Irrationals, Integer Exponents and Scientific Notation 8.NR.1-2	Exploring Geometric Relationships 8.GSR.8	Culminating Capstone Unit
8.PAR.3.6 (Literal equations) 8.PAR.3.1 (Expressions) 8.PAR.3.2 (Solving equations) 8.PAR.3.3 (Create and solve equations and inequalities including compound) 8.PAR.3.4 (Justify solving equations with properties) 8.PAR.3.5 (Solve equations and inequalities with coefficients as letters)	8.FGR.5.1 (Functions) 8.FGR.5.2 (Linear and non-linear functions)	8.PAR.4.1 ($y = mx + b$ and $y = mx$) 8.PAR.4.2 (Graphing lines) 8.FGR.5.3 (Domain) 8.FGR.5.4 (Compare properties) 8.FGR.5.5 (Equation forms) 8.FGR.5.6 (Equivalent forms) 8.FGR.5.7 (Construct a linear function) 8.FGR.5.8 (Rate of change and initial value) 8.FGR.5.9 (Characteristics)	8.FGR.6.1 (Line of best fit) 8.FGR.6.2 (Solving problems using linear model equation) 8.FGR.6.3 (Meaning of predicted slope and intercept of linear model) 8.FGR.6.4 (Line of best fit questions and inferences)	8.FGR.7.1 (Interpret and solve problems with two equations and two variables) 8.FGR.7.2 (Intersection points of linear equations) 8.FGR.7.3 (Solve systems by graphing) 8.FGR.7.4 (Solve systems algebraically) 8.FGR.7.5 (Parallel and perpendicular line equations)	8.NR.1.1 (Rational and irrational numbers) 8.NR.1.2 (Locate irrational numbers on number line) 8.NR.2.1 (Integer exponents) 8.NR.2.2 (Square roots and cube roots) 8.NR.2.3 (Scientific notation) 8.NR.2.4 (Add, subtract, multiply, and divide with scientific notation numbers)	8.GSR.8.1 (Proof and converse of Pythagorean Theorem) 8.GSR.8.2 (Apply Pythagorean Theorem) 8.GSR.8.3 (Distance between two points on graph) 8.GSR.8.4 (Volume of cone, cylinder, and sphere)	All Standards
Units contain tasks that depend upon the concepts addressed in earlier units. Mathematical standards are interwoven and should be addressed throughout the year in as many different units and tasks as possible in order to stress the natural connections that exist among mathematical topics.							
The Framework for Statistical Reasoning , Mathematical Modeling Framework , and the K-12 Mathematical Practices should be taught throughout the units.							
Key for Course Standards: PAR: Patterning & Algebraic Reasoning, FGR: Functional & Graphical Reasoning, GSR: Geometric & Spatial Reasoning, NR: Numerical Reasoning							