TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
Value and Magnitude of Rational Numbers		
	Introduction to Scientific Notation	
		Convert very small or very large numbers between scientific notation and standard notation.
		Order and estimate products and quotients of numbers written in scientific notation.
	Operations with Scientific Notation	
		Evaluate products and quotients of scientific notation values.
		Recognize scientific notation answers generated by technology and identify the symbols associated with the value.
		Identify proper units of measurement for quantities written in scientific notation.
	Estimating and Comparing Square Roots	
		Estimate square roots without using technology.
		Plot the estimated values of square roots on a number line.
		Make comparative statements involving square roots.
	Exploring Real Numbers	
		Classify numbers as rational or irrational numbers, and decimals as terminating or repeating.
		Express a repeating decimal with bar notation, and convert it to a fraction.
		Determine sums and products of rational and irrational numbers.
	Unit Test	
Statistics with Univariate Data		
	Sampling Methods	
		Compare a random sample to a biased sample in a variety of real-world contexts to determine validity.
		Identify and explain the process for choosing a random sample.

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Variation in Predictions and Estimates	
		Analyze the results of multiple samples by comparing the means of samples and populations.
		Describe variations in estimates or predictions of multiple samples.
	Mean Absolute Deviation	
		Calculate the mean absolute deviation for a set of data.
		Interpret the mean absolute deviation of a set of data.
		Describe the impact of outliers on the mean absolute deviation.
	Unit Test	
One-Variable Equations, Inequalities, and their Applications		
	Modeling with Variables on Both Sides	
		Use algebra tiles to model one-variable equations with variables on both sides.
		Use algebra tiles to solve one-variable equations with variables on both sides.
	Solving with Variables on Both Sides	
		Determine and apply the steps needed to isolate a variable in a linear equation with variables on both sides.
		Solve equations with variables on both sides and verify the solutions.
	Solving Multistep Equations with Variables on Both Sides	
		Build a process for solving multistep linear equations with variables on both sides.
		Solve multistep linear equations with variables on both sides and verify the solutions.
	Modeling Real-World Multistep Equations	
		Write multistep linear equations from mathematical problems.
		Write multistep linear equations from real-world scenarios.
	Solving Real-World Multistep Equations	

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Write and solve multistep linear equations that represent real-world problems.
		Verify the solution to real-world linear equations.
	Analyzing Solutions	
		Solve equations that have one solution, infinitely many solutions, and no solution.
		Identify equations that have one solution, infinitely many solutions, and no solution.
		Write equations that have infinitely many solutions and no solution.
	Unit Test	
Developing an Understanding of Slope and y-Intercept		
	Rate of Change and Introduction to Slope	
		Determine the positive slope of a line from a table and a graph.
		Compare positive slopes in a real-world situation.
	Exploring Slope	
		Recognize the difference between positive slope, negative slope, no slope, and zero slope.
		Determine the value of the slope of a line from a table or a graph.
	Slope-Intercept Form	
		Analyze a graph to determine slope and y-intercept.
		Graph a linear function using the slope and y-intercept.
		Write a linear equation in slope-intercept form given the slope and y-intercept.
	Unit Test	
Proportional and Non-Proportional Functions: Part One		
	Graphing Proportional Relationships	
		Graph a proportional relationship from tables and verbal descriptions.

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Identify the meanings of points on the graph of a proportional relationship and determine the characteristics of the graph of a proportional relationship.
	Introduction to Functions	
		Identify functions from tables, graphs, and equations.
		Determine if a real-world situation describes a functional relationship.
	Constructing Linear Functions	
		Analyze linear functions to find the rate of change and initial value.
		Interpret the rate of change and initial value of a linear function in terms of the situation it models.
	Proportional Relationships	
		Determine whether a linear function is a direct variation.
		Solve problems involving direct variation.
		Compare proportional and nonproportional linear functions in the form of a table, graph, and equation.
	Writing Linear Functions	
		Write a linear equation in slope-intercept form given the slope and a point other than the y-intercept.
		Compare and contrast using point-slope form and the slope-intercept form to get an equation to slope-intercept form.
	Writing Linear Equations Given Two Points	
		Write a linear equation in slope-intercept form given two points.
	Applying Linear Functions	
		Determine what the slope and y-intercept are and what they represent in real-world functional relationships.
		Use real-world scenarios of linear functions to write an equation in slope-intercept form.
		Evaluate inputs and outputs for linear equations in slope-intercept form.
	Performance Task: A Child's Growth and	

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Prosperity	
	Unit Test	
Proportional and Non-Proportional Functions: Part Two		
	Exploring Systems of Linear Equations	
		Determine if a given coordinate point is a solution to a system of linear equations.
		Identify the unique solution of a system of two linear equations from a graph.
	Using Graphs to Determine the Number of Solutions	
		Determine the number of solutions of a system of linear equations from a graph or by inspection.
		Create a system of linear equations that has no solution, one solution, or infinitely many solutions.
	Using Graphs to Solve Systems	
		Rewrite a system of linear equations in slope-intercept form.
		Graph linear systems on the coordinate plane.
		Determine the solution of a linear system from the graph.
	Estimating Solutions of Systems	
		Estimate solutions of linear systems graphically.
		Use intercepts to graph a system of equations given in standard form.
	Writing and Solving Systems	
		Create systems of equations from mathematical problems.
		Solve systems of two linear equations.
	Using Technology to Solve Systems	
		Use a graphing utility to explore and solve systems of two linear equations.
	Unit Test	

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
Statistics with Bivariate Data		
	Linear vs. Nonlinear Functions	
		Interpret the rate of change from a graph or table.
		Differentiate functions as either linear or nonlinear.
	Constructing Scatterplots	
		Create a scatterplot using a table of values.
		Analyze a scatterplot.
		Classify dependent and independent variables.
	Exploring Association	
		Analyze the correlation and association in scatterplots.
	Drawing Trend Lines	
		Use a graphing calculator to graph scatterplots and draw the trend line.
		Draw a line of best fit in scatterplots and identify its purpose.
	Using Equations to Represent Trend Lines	
		Find and interpret the slope of a trend line.
		Create the linear equation of the trend line.
	Making Predictions	
		Use a calculator to graph a scatterplot and create line of best fit.
		Substitute x- and y-values into the data to create predictions of a real-world scenario.
		Analyze data to determine interpolations and extrapolations.
	Unit Test	
Cumulative Exam		

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Cumulative Exam Review	
	Cumulative Exam	
Transformational Geometry		
	Translations	
		Identify and describe a translation on the coordinate plane.
		Translate figures on the coordinate plane given as an ordered pair and verbal expression.
		Describe a translation using coordinates.
	Reflections	
		Identify and describe a reflection on the coordinate plane.
		Reflect figures on the coordinate plane given the line of reflection.
		Describe a reflected figure using the line of reflection and coordinates.
	Rotations in the Coordinate Plane	
		Rotate figures on the coordinate plane given the degree and direction.
		Describe the rotation of a figure using coordinates.
	Congruence and Transformations	
		Describe a sequence of transformations that shows that a given pre-image is congruent to a transformed figure.
	Dilations	
		Use proportional reasoning to determine if one figure is a dilation of another.
		Determine the scale factor of a dilation.
		Determine the result of a dilation given a center of dilation and the scale factor.
	Dilations in the Coordinate Plane	
		Use the scale factor to graph dilations on the coordinate plane.

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Describe the dilation of a figure on the coordinate plane by the scale factor.
	Similarity and Transformations	
		Determine the similarity of figures by comparing corresponding side lengths and angle measures.
		Apply scale factor to find unknown side lengths of an image or pre-image after a dilation or sequence of transformations.
		Describe a sequence of transformations that result in a similar figure.
	Effects of Changing the Dimensions of a Figure	
		Identify the effect on other measurements when the dimensions of a shape are changed proportionally.
		Calculate perimeter, area, or volume when the dimensions of a shape are changed proportionally.
	Unit Test	
Angle and Triangle Relationships Involving Real Numbers: Part One		
	Angle Relationships	
		Name an angle.
		Identify vertical, adjacent, complementary, and supplementary angles.
		Determine congruence in vertical angle relationships.
		Find missing angle measures using angle relationships.
	Transversals	
		Determine angle relationships created by a transversal line intersecting two nonparallel lines.
		Find unknown angle measures created by a transversal intersecting two or more nonparallel lines.
	Parallel Lines Cut by a Transversal	
		Identify interior angles, exterior angles, alternate interior angles, and alternate exterior angles when a transversal crosses parallel lines.
		Find missing measurements using angle relationships in a diagram of a transversal crossing parallel lines.

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Determine if two lines cut by a transversal are parallel.
	Sum of Interior Angles of a Triangle	
		Explain that the sum of the interior angles of a triangle is 180 degrees by rearranging the angles to create a straight line.
		Use angle relationships formed from parallel lines cut by transversals to establish facts about the interior angles of a triangle.
		Determine the angle measures of interior angles of a triangle.
	Exterior Angles of a Triangle	
		Identify exterior, adjacent interior, and remote interior angles of a triangle.
		Use angle relationships to establish facts about exterior angles of a triangle.
		Determine angle measures of exterior angles of a triangle and the sum of exterior angles of a triangle.
	Similar Triangles	
		Identify proportionality of side lengths to determine triangle similarity.
		Write similarity statements of similar triangles.
		Analyze and apply third angle theorem and angle-angle criterion in similar triangles.
	Similar Triangles and Slope	
		Interpret similar triangles created by intersecting transversal and parallel lines.
		Find unknown measurements of similar triangles.
		Use similar triangles in the coordinate plane to write linear equations.
	Unit Test	
Angle and Triangle Relationships Involving Real Numbers: Part Two		
	Exploring the Pythagorean Theorem	
		Recognize perfect squares.

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Identify sets of Pythagorean triples.
		Apply the Pythagorean theorem using Pythagorean triples as the side lengths.
		Use Pythagorean triples to determine if a triangle is a right triangle.
	Finding the Hypotenuse in Right Triangles	
		Use the Pythagorean theorem to find the length of the hypotenuse of a right triangle.
		Approximate the length of the hypotenuse of a right triangle to solve real-world problems.
	Unknown Leg Lengths in Right Triangles	
		Given the length of one leg and the hypotenuse of a right triangle, use the Pythagorean theorem to find the length of the other leg.
		Approximate the length of a leg of a right triangle to solve real-world problems.
	Converse to the Pythagorean Theorem	
		Determine if a triangle is a right triangle by using the converse of the Pythagorean theorem.
	Finding Distance in the Coordinate Plane	
		Apply the Pythagorean theorem to find the distance between two points on the coordinate plane.
		Generate and use the distance formula to find the distance between two points on the coordinate plane.
	Performance Task: Architectural Works and Wonders	
	Unit Test	
Measurement of Three-Dimensional Figures		
	Introduction to the Volume of a Cylinder	
		Recognize and identify parts of a cylinder.
		Apply the formula to find the volume of a cylinder.
	Applications with the Volume of a	

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Cylinder	
		Find unknown dimensions of a cylinder given its volume.
		Solve real-life problems using the volume of cylinders.
	Introduction to the Volume of a Cone	
		Recognize and identify parts of a cone.
		Connect the volume of a cone to the volume of a cylinder.
		Apply the formula to find the volume of a cone.
	Applications with the Volume of a Cone	
		Find unknown dimensions of a cone given its volume.
		Solve a real-world problem utilizing the formula for volume of a cone.
	Introduction to the Volume of a Sphere	
		Identify the parts of a sphere.
		Connect the volume of a sphere to the volume of a cylinder.
		Apply the formula to find the volume of a sphere.
	Spherical and Cubic Volume Applications	
		Apply volume formulas, including those that evaluate perfect cubes, to find unknown measurements.
		Recognize perfect cubes.
		Solve a real-world problem utilizing the formula for volume of a sphere.
	Surface Area of Prisms	
		Calculate surface areas of rectangular and triangular prisms.
	Surface Area and Volume of Cylinders	
		Solve mathematical and real-world problems involving the volume and surface area of cylinders.

TX-Math 8		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Unit Test	
Financial Planning		
	The Cost of Credit	
		Identify and compare types of credit.
		Calculate the total cost of repaying a loan.
		Analyze the impact of interest rate and loan length on the cost of credit.
	Investing	
		Calculate simple interest and compound interest earnings.
		Apply the rule of 72.
		Compare different investment options for saving money.
	Financial Responsibility	
		Describe the advantages and disadvantages of different payment options.
		Identify factors that determine if one is creditworthy.
		Analyze situations to determine if they represent financially responsible decisions.
	Planning for the Cost of College	
		Estimate the total cost and family contribution needed to attend two and four year colleges.
		Determine a savings plan to meet the estimated cost for one year of college.
	Unit Test	
Cumulative Exam		
	Cumulative Exam Review	
	Cumulative Exam	