Math 8 Curriculum 2013-14

	Unit Name	Content	Skills	Standards: Performance Indicators
September	**Exponents**	**Simplify integers using Exponents using Exponent rules** **Scientific Notation**	• **Multiply exponents of the same base.** • **Divide Exponents of the same base.** • **Use and apply negative and zero exponent rules.** • **Use all the exponent rules to simplify integers with exponents.** • **Multiply & Divide in Scientific Notation** • **Add & Subtract in Scientific Notation** • **Compare Numbers in Scientific Notation**	**8.EE.1** **8.EE.3** **8.EE.4**
October	**Expressions and Equations**	**Solve multi-step equations.** **Use equations to solve real-world problems.**	• **Solve equations that involve distributing, combining like terms, and/or variables on both sides.** • **Solve equations that have decimals and/or fractions.** • **Solve equations that have decimals and/or fractions as a solution.** • **Solve equations that have infinite or no solutions.** • **Interpret a word problem in to an equation and solve it.**	**8.EE.7**
November	**Linear Functions**	**Recognize Slope as a Rate of Change**	• **Be able to compute slope from two points, a table, and a graph.** • **Be able to give the units of slope.** • **Recognize that if a function has a**	**8.F.1** **8.F.3** **8.F.5** **8.F.6**

			rate of change then it is a linear function.	
		Graph Functions	• Graph lines in y=mx +b form. • Graph lines in standard form.	8.EE.5 8.F.2
		Write Equations of Lines	• Write the equation of a line from two points including real-world situations. • Write the equation of a line from a graph. • Write the equation of a line from a table.	8.EE.6 8.F.4
December	Systems of Equations	Solve a system of linear equations graphically	• Graph two linear functions and know that the solution is the intersection. • Graph two parallel linear functions and know that there is no solution because they will never intersect. • Graph two linear functions that are the same and know that there are infinite solutions.	8.EE.8
		Solve a system of linear equations algebraically	• Use substitution to solve systems of linear functions. • Use elimination to solve systems of linear functions. • Use systems of equations to solve real-world problems.	
January	Geometry	Parallel Lines Cut by a Transversal	• Know and apply properties of alternate interior angles. • Know and apply properties of vertical angles.	8.G.5
		Properties of Triangles	• Know and apply that the angles of a triangle add up to 180 degrees.	8.G.5

		Compute Volumes of Cones, Spheres, & Cylinders.	• **Know and apply the properties of exterior angles of a triangle.** • **Compute the volume of cone, cylinders, and spheres.** • **Know the formula to find the volume of cone, cylinders, and spheres.**	**8.G.9**
February	**Transformations**	**Perform translations, reflections, rotations, and dilations.** **Similar and Congruent Triangles**	• **Be able to perform translations, rotations, reflections, and dilations on the coordinate plane.** • **Know that a combination of translations, rotations, and reflections creates similar figures.** • **Know that if you perform a dilation on two-dimensional figures they are similar figures.** • **Know that congruent figures have corresponding congruent sides and angles.** • **Know that similar figures have proportional sides.**	**8.G.3** **8.G.2** **8.G.3** **8.G.4**
March	**Statistics**	**Construct Scatterplots** **Two-Tables and Frequencies**	• **Be able to make a scatterplot with an appropriate scale.** • **Find a line of best fit for a scatterplot.** • **Be able to state outliers for a scatterplot.** • **Be able to state if a scatterplot has a positive or negative association.** • **Be able to construct two-way tables.** • **Be able to find various frequencies from a two-way table to find**	**8.SP.1** **8.SP.2** **8.SP.3** **8.SP.4**

			possible associations.	
April	**Review**			
May & June	**Pre-Algebra**	**Irrational Numbers** **Pythagorean Theorem** **Factoring**	• **Understand that irrational numbers never end and do not repeat.** • **Be able to compare size of irrational and rational numbers.** • **Be able to explain where the Pythagorean Theorem came from.** • **Apply the Pythagorean Theorem to various real-world problems in 2 and 3 dimensions.** • **Factor polynomials using the greatest common factor.** • **Factor polynomials using the difference of two squares.** • **Factor polynomials into two binomials.**	**8.NS.1** **8.NS.2** **8.EE.2** **8.G.6** **8.G.7** **8.G.8** **A.SSE.3a**