



8th GRADE MATH: Linear Algebra and Functions

Curriculum used to complete units _____

Supplements _____ Intervention if applicable _____

****Yearly Overview:** Students should spend the large majority of their time on the major work of the grade (in bold). Supporting and additional work can engage students in the major work of the grade.

LP1		LP2		LP3		LP4	
<p>I can work with radicals and integer exponents. (8.EE.A.1-3)</p> <ul style="list-style-type: none"> I can use the properties of integer exponents to figure out their equivalent numerical expressions. (EE.1) I can use and find the square root and cube root (EE.2) I can estimate very large and very small quantities by using numbers that are shown as a single digit times an integer power of 10. (EE.3) I can perform operations with numbers shown using scientific notation (including problems with decimals). (8.EE.A.4) 		<p>I can understand congruence and similarity using physical models, transparencies, or geometry software. (8.G.A 1-4)</p> <p>I can use informal arguments to create facts about the angle sum and exterior angle of triangles, about angles that are made when parallel lines are cut by a transversal, and about the angle-angle criterion for the similarity of triangles. (8.G.A.5)</p>		<p>I can understand and apply the Pythagorean Theorem. (8.G.B.6-8)</p> <ul style="list-style-type: none"> I can explain a proof of the Pythagorean Theorem and its converse. (G.B.6) I can apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. (G.B.7) I can apply the Pythagorean Theorem to find the distance between two points in a coordinate system. (G.B.8) 		<p>I can understand the connections between proportional relationships, lines, and linear equations. (8.EE.B.5-6)</p> <ul style="list-style-type: none"> I can graph proportional relationships. I can interpret the unit rate as the slope of a graph. I can compare two proportional relationships that are shown in different ways. (B.5) I can use similar triangles to explain why the slope (m) is the same between any two specific points. Create equations for lines that pass through or do not pass through the origin. (B.6) <p>I can solve linear equations in one variable. (8.EE.C.7)</p>	



LP5		LP6		LP7		LP8	
I can analyze and solve pairs of simultaneous linear equations. (8.EE.C.8)		I can define, evaluate, and compare functions. (8.F.A) <ul style="list-style-type: none"> I know that the graph of functions is the set of ordered pairs with an input and its corresponding output. (F.A.1) I can compare properties of two functions that are shown in different ways. (F.A.2) I can tell you that the equation $y=mx+b$ is a linear function whose graph is a straight line. I can name functions that are not linear. (F.A.3) 		I can use functions to model relationships between quantities. (8.F.B) <ul style="list-style-type: none"> I can construct a function to show a linear relationship between two quantities. I can figure out the rate of change and the starting value of the function. (F.B.4) I can describe the relationship between two quantities by looking closely or sketching a graph. (F.B.5) 		Know that there are numbers that are not rational, and approximate them by rational numbers. (8.NS.A)	
				I can investigate patterns of association in bivariate data. (8.SP.A)		I can solve real-world and mathematical problems involving volume of cylinders, cones and spheres. (8.G.C)	

8th Grade Academic Vocabulary: Convert, rational, irrational, approximate, estimate, rational, irrational, base, rotation, reflection, translation, dilation, proof, converse, sides, slope, origin, similar, variable, like term, simultaneous, intersect, system, function, input, output, properties, verbal description, slope, initial value, increasing, decreasing, verbal description, sketch, clustering, positive, negative, variable, slope, intercept, frequency, association, rows, columns