Math

Grades 6 - 8

Project SUCCESS

Number Sense		
Grade 6	**Grade 7**	**Grade 8**
MA.6.NS.1.a.1: Understand the difference between a positive or negative number.	**MA.7.NS.3.a.1**: Understand the definition of rational and irrational numbers.	**MA.8.NS.1.a.1**: Identify rational and irrational numbers. **MA.8.NS.1.a.2**: Round numbers to the hundredths place.
MA.6.NS.2.a.1: Locate positive and negative numbers on a number line.	**MA.7.NS.3.a.2**: Order and compare rational and irrational numbers using a number line.	
MA.6.NS.3.a.1: Plot positive and negative integers on a number line. **MA.6.NS.3.a.2**: Compare and order a given set of integers.		**MA.8.NS.2.a.1**: Use the estimate of irrational numbers to locate them on a number line.
MA.6.NS.4.a.1: Find the absolute value of a number using the distance from zero on a number line.		
MA.6.NS.5.a.1: Identify the decimal and percent equivalents for halves, fourths, fifths, and tenths.		
MA.6.NS.6.a.1: Identify a prime and composite number.	**MA.7.NS.1.a.1**: Determine the prime factorization of whole numbers.	**MA.8.NS.3.a.1**: Use properties of integer exponents to produce equivalent expressions.
MA.6.NS.7.a.1: Find the least common multiple. **MA.6.NS.7.a.2**: Find the greatest common factor of two whole numbers.		
MA.6.NS.8.a.1: Describe the ratio relationship between two quantities.		
MA.6.NS.9.a.1: Understand the concept of a unit rate.		
MA.6.NS.10.a.1: Solve one-step real-world problems involving unit rates with ratios of whole numbers when given the unit rate (e.g., 3 inches of snow falls per hour, how much in 6 hours).		
	MA.7.NS.2.a.1: Identify perfect squares.	**MA.8.NS.4.a.1**: Solve equations using properties of square roots.

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Project SUCCESS

Computation		
Grade 6	**Grade 7**	**Grade 8**
MA.6.C.1.a.1: Divide multi-digit whole numbers.		
MA.6.C.2.a.1: Solve one-step addition or subtraction problems with decimals. **MA.6.C.2.a.2**: Solve one-step addition or subtraction problems with fractions.	**MA.7.C.1.a.1**: Add a positive and negative integer. **MA.7.C.2.a.1**: Subtract positive and negative integers. **MA.7.C.2.a.2**: Find the distance between two rational numbers on a number line using absolute value. **MA.7.C.3.a.1**: Solve multiplication problems with positive and negative integers. **MA.7.C.4.a.1**: Solve division problems with positive and negative integers. **MA.7.C.7.a.1**: Compute with rational numbers.	
MA.6.C.3.a.1: Solve one-step real-world addition or subtraction problems with decimals or fractions.	**MA.7.C.6.a.1**: Use proportions to solve ratio problems. **MA.7.C.6.a.2**: Solve word problems involving ratios. **MA.7.C.6.a.3**: Use proportional relationships to solve multi-step percent problems. **MA.7.C.8.a.1**: Using one operation, solve real-world problems involving rational numbers.	**MA.8.C.1.a.1**: Solve real-world problems with rational numbers by using two operations.
MA.6.C.4.a.1: Solve one-step division problems with fractions.	**MA.7.C.5.a.1**: Determine unit rates given a ratio of lengths, areas, and other quantities measured in like units.	
MA.6.C.5.a.1: Demonstrate what an exponent represents (e.g., $8^3 = 8 \times 8 \times 8$) and evaluate. **MA.6.C.6.a.1**: Apply the order of operations.		**MA.8.C.2.a.1**: Perform operations with numbers expressed in scientific notation.

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Algebra and Functions		
Grade 6	**Grade 7**	**Grade 8**
MA.6.AF.1.a.1: Given a real-world problem, evaluate the expressions for specific values of their variables.		
MA.6.AF.2.a.1: Use properties of operations to produce equivalent expressions.	**MA.7.AF.1.a.1**: Use properties of operations to produce equivalent linear expressions.	
MA.6.AF.3.a.1: Write and evaluate variable expressions.		
MA.6.AF.4.a.1: Use substitution to determine validity of an equation or inequality.		**MA.8.AF.2.a.1**: Recognize when a linear equation has one solution, infinitely many solutions, or no solutions.
MA.6.AF.5.a.1: Solve real-world one-step linear equations.	**MA.7.AF.2.a.1**: Solve equations with up to two steps based on real-world problems. **MA.7.AF.2.a.2**: Use variables to represent quantities in a real-world or mathematical problem to solve linear equations.	**MA.8.AF.1.a.1**: Solve linear equations with two steps based on real world problems.
MA.6.AF.6.a.1: Given a real-world problem, write an inequality.	**MA.7.AF.3.a.1**: Solve inequalities with up to two variables based on real-world problems. **MA.7.AF.3.a.2**: Use variables to represent quantities in a real-world or mathematical problem to solve linear inequalities. **MA.7.AF.3.a.3**: Determine the graph of an inequality.	
MA.6.AF.7.a.1: Graph a point on a coordinate plane.		
MA.6.AF.8.a.1: Given a coordinate plane, plot and find the distance between two points with the same first coordinate or the same second coordinate.		

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Project SUCCESS

Algebra and Functions		
Grade 6	**Grade 7**	**Grade 8**
MA.6.AF.9.a.1: Analyze a table to find missing values of ordered pairs. **MA.6.AF.9.a.2**: Plot pairs of values from a table onto a coordinate plane.	**MA.7.AF.4.a.1**: Relate slope to rate of change between two variables. **MA.7.AF.4.a.2**: Using real-world examples, recognize the graph that shows the correct slope between two variables.	
	MA.7.AF.5.a.1: Graph a line using slope and a point on the line. **MA.7.AF.5.a.2**: Understand how to calculate the slope of a line.	
	MA.7.AF.6.a.1: Identify if the relationship is proportional between two quantities in a table. **MA.7.AF.6.a.2**: Determine if two quantities are in a proportional relationship using points graphed on a coordinate plane.	
	MA.7.AF.7.a.1: Given a table or a graph of a line, identify the unit rate.	
	MA.7.AF.8.a.1: Given a proportional relationship, explain the meaning of the coordinates on the graph.	
MA.6.AF.10.a.1: Given a real-world problem representing a proportional relationship, analyze the relationships between the dependent and independent variables.	**MA.7.AF.9.a.1**: Represent proportional relationships as an equation and as a graph.	**MA.8.AF.6.a.1**: Identify the rate of change (slope) and initial value (y-intercept) from graphs.
		MA.8.AF.7.a.1: Given a table or a graph, compare two linear functions to answer a question about rates.
		MA.8.AF.3.a.1: Distinguish between functions and non-functions in graphs, or tables.
		MA.8.AF.4.a.1: Given a graph, describe the defining features of a function. **MA.8.AF.4.a.2**: Given a verbal situation, identify its corresponding graph. **MA.8.AF.4.a.3**: Given a line graph of a situation, describe or select its qualitative features.

	MA.8.AF.5.a.1: Given multiple representations, describe a function as linear and not linear.
	MA.8.AF.8.a.1: Given a graph, identify the solution to a system of linear equations.

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Geometry and Measurement		
Grade 6	**Grade 7**	**Grade 8**
MA.6.GM.1.a.1: Convert between English and metric measurement systems.		
MA.6.GM.2.a.1: Given a real-world situation, use the sum of the interior angles of a triangle which totals 180 degrees.		
MA.6.GM.3.a.1: Given a polygon in a coordinate plane, find the length of each side.	**7.GM.1:** Draw triangles (freehand, with ruler and protractor, and using technology) with given conditions from three measures of angles or sides, and notice when the conditions determine a unique triangle, more than one triangle, or no triangle.	
MA.6.GM.4.a.1: Find area of quadrilaterals.	**MA.7.GM.5.a.1**: Understand the formulas to calculate the area and circumference of a circle.	
MA.6.GM.5.a.1: Find the volume of right rectangular prisms. **MA.6.GM.5.a.2**: Understand the concept of volume and how it fills space.	**MA.7.GM.6.a.1**: Given a model and an equation with all variables given, find the volume of a cylinder.	**MA.8.GM.2.a.1**: Apply the formula to find the volume of three-dimensional shapes (e.g., cubes, spheres, and cylinders).
MA.6.GM.6.a.1: Identify the net of a three-dimensional shape.	**MA.7.GM.7.a.1**: Understand surface area and identify it in a real-world situation.	**MA.8.GM.1.a.1**: Identify and describe attributes of three-dimensional geometric objects.
	MA.7.GM.3.a.1: When given a real-world situation, determine the appropriate scale.	
	MA.7.GM.4.a.1: Identify various angles in a real-world situation.	
		MA.8.GM.3.a.1: Recognize a rotation, reflection, or translation of a figure.
		MA.8.GM.4.a.1: Describe a sequence of transformations between two congruent figures.

	MA.7.GM.2.a.1: Identify similar polygons.	**MA.8.GM.5.a.1**: Describe a sequence of transformations between two similar figures.
		MA.8.GM.6.a.1: Describe the effects of transformations on the coordinates of a figure.
		MA.8.GM.7.a.1: Given the lengths of the sides of a right triangle, determine which one must be the hypotenuse
		MA.8.GM.8.a.1: Apply the Pythagorean Theorem to determine lengths/distances in real-world situations. **MA.8.GM.8.a.2**: Find the hypotenuse of a right triangle using the Pythagorean Theorem.
		MA.8.GM.9.a.1: Apply the Pythagorean Theorem to determine lengths/distances on a coordinate plane.

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Project SUCCESS

Data Analysis, Statistics (and Probability for Gr.7-8)		
Grade 6	**Grade 7**	**Grade 8**
MA.6.DS.1.a.1: Identify statistical questions and the data that corresponds.	**MA.7.DSP.1.a.1**: Determine sample size to answer a given question.	
	MA.7.DSP.2.a.1: Interpret data to draw conclusions.	
MA.6.DS.2.a.1: Name different graphical representations of data.	**MA.7.DSP.4.a.1**: Make or select a statement to compare the distribution of two data sets.	
MA.6.DS.3.a.1: Collect and graph data using bar graphs and line plots.		
MA.6.DS.4.a.1: Select a statement that matches mean, mode, and spread of data for 1 measure of central tendency for a given data set.	**MA.7.DSP.3.a.1**: Identify the range, median, mean, or mode of a given data set. **MA.7.DSP.3.a.2**: Compare two similar populations/models to draw a conclusion. **MA.7.DSP.3.a.3**: Make or select an appropriate statement based on two unequal data sets using measure of central tendency and shape.	
	MA.7.DSP.5.a.1: Describe the probability of events as being certain or impossible.	**MA.8.DSP.4.a.1**: Determine the probability of simple events.
	MA.7.DSP.6.a.1: Make a prediction regarding the probability of an event occurring; conduct simple probability experiments.	**MA.8.DSP.5.a.1**: Determine the theoretical probability of multi-stage probability experiments (2 coins, 2 dice).
	MA.7.DSP.7.a.1: Compare actual results of simple experiments with theoretical probabilities.	**MA.8.DSP.6.a.1**: Use the multiplication counting principle to determine the total number of outcomes.
		MA.8.DSP.1.a.1: Graph bivariate data using scatter plots and identify possible associations between the variables. **MA.8.DSP.1.a.2**: Using scatter plots, identify data points that appear to be outliers.
		MA.8.DSP.2.a.1: Identify a linear association when analyzing bivariate data on a scatter plot.

MA.8.DSP.3.a.1: Use the line of best fit to find a point that answers a question about the data.

Color Code
Purple – High Priority
Blue – Medium Priority
Gray – Lesser Priority