Darul Arqam North

Scope and Sequence
7th Grade Pre-Algebra

1st Quarter			
Resources: Mc Graw Hill Mathematics,			
Week	**Unit/Lesson**	**Learning Objectives**	**Reporting Categories**
1st:	- **Welcome** - **Survey – getting to know you** - **Collect & log Supplies received** - **Classroom Rules** - **Curriculum overview**	7.2) Number and operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms. 7.3) Number and operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. 7.4) Proportionality. The student applies mathematical process standards to represent and solve problems involving proportional relationships. 7.5) Proportionality. The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships. 7.6) Proportionality. The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships. 7.7) Expressions, equations, and relationships. The student applies mathematical process standards to represent linear relationships using multiple representations. 7.8) Expressions, equations, and relationships. The student applies mathematical process standards to develop geometric relationships with volume. 7.9) Expressions, equations, and relationships. The student applies mathematical process standards to solve geometric problems. 7.10) Expressions, equations, and relationships. The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. 7.11) Expressions, equations, and relationships. The student applies mathematical process standards to solve one-variable equations and inequalities. 7.12) Measurement and data. The student applies mathematical process standards to use statistical representations to analyze data. 7.13) Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor.	Readiness Standard(s)
2nd:	**Introduction and Review** **Real Numbers** **Section(s) 1.4, 1.5, 1.6**	Convert between standard decimal notation and scientific notation for numbers both greater than and less than 1. (8.2C) Compare the value of numbers in both standard decimal and scientific notation. (8.2C) Explain why an irrational number cannot be written in the form of a/b. (It is a non-terminating, non-repeating decimal.) (8.2B) Approximate the value of π. (8.2B) Approximate the value of square roots of numbers less than 225.	Readiness Standard(s) 8.2D Order a set of real numbers arising from mathematical and real-world contexts Supporting Standard(s) 8.2A Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers 8.2B Approximate the value of an irrational number, including π and square roots of numbers less than 225, and locate that rational number

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Week	**Unit/Lesson**	**Learning Objectives**	**Reporting Categories**
		(8.2B) Locate rational number approximations on a number line. (8.2B)	approximation on a number line 8.2C Convert between standard decimal notation and scientific notation
3rd:	**Real Numbers Cont'd.** **Section(s) 1.7, 1.8**	Extend previous knowledge of sets and subsets using a visual representation such as a Venn diagram to demonstrate their relationship. (8.2A) Clarify the relationships between sets of real numbers using the terms always, sometimes and never. (8.2A) Compare the value of real numbers, including integers, percent, positive and negative fractions and decimals, square roots. (8.2D) Order a set of real numbers arising from mathematical contexts. (8.2D) Order a set of real numbers arising from real-world contexts. (8.2D) Place real numbers on a number line. (8.2D)	Readiness Standard(s) 8.2D Order a set of real numbers arising from mathematical and real-world contexts Supporting Standard(s) 8.2A Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers
4th:	**Solving Equations and Inequalities** **Section(s) 6.1, 6.2, 6.3,**	Write one-variable equations with variables on both sides that represent real-world problems involving rational numbers. (8.8A) Write a real-world problem given an equation with variables on both sides that contains rational numbers. (8.8B) Determine if a given situation should be represented by an equation or an inequality. (8.8A) Write one-variable inequalities with variables on both sides that represent real-world problems involving rational numbers. (8.8A) Write a real-world problem given an inequality with variables on both sides that contains rational numbers. (8.8B) Solve equations with rational numbers and variables on both sides using models, such as algebra tiles. (8.8C) Connect models of operations to the corresponding standard algorithms (algebraic method). (8.8C)	Readiness Standard(s) 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants Supporting Standard(s) 8.8A Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants 8.8B Write a corresponding real world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants 8.9A Identify and verify the values of x and y that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations6.4(G) generate equivalent forms of fractions, decimals, and percent using real-world problems, including problems that involve money.
5th:	**Solving Equations and Inequalities Cont'd.** **Section(s) 6.4, 6.5, 6.6**	Differentiate between a coefficient and a constant. (8.8A) Solve equations with rational numbers and variables on both sides that represent mathematical and real-world problems. (8.8C) Identify between one solution, no solution, or infinitely many solutions in one-variable equations in mathematical and real world problems. (8.8A) Determine the solution as the intersection of two lines. (8.9A) Identify and verify from the intersection of two graphed linear	Readiness Standard(s) 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants Supporting Standard(s) 8.8A Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants

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1st Quarter			
Resources: Mc Graw Hill Mathematics,			
Week	**Unit/Lesson**	**Learning Objectives**	**Reporting Categories**
		equations the solution as an ordered pair (x, y) that simultaneously satisfy the two linear equations. (8.9A) Interpret the numbers in the ordered pair of the solution to their meaning in the problem situation. (8.9A)	8.9A Identify and verify the values of x and y that simultaneously satisfy two linear equations in the form *y = mx + b* from the intersections of the graphed equations
6th:	**Chapter Review and Reflect**		
7th:	**Similarity and Dilations** **Section(s) 2.1, 2.2**	Find the ratio of corresponding sides. (8.3A) Determine if corresponding sides are proportional, including similar shapes on a coordinate plane. (8.3A) Solve to find the measure of missing sides using proportional reasoning. (8.3A) Identify corresponding sides and angles of polygons using appropriate notation. (8.8D) Investigate the Triangle Sum Theorem and draw conclusions using inductive reasoning. (8.8D) Investigate similar triangles and draw conclusions about the angle-angle criterion for similar triangles. (8.8D) Solve to find the measure of missing angles using deductive reasoning. (8.8D)	Readiness Standard(s) 8.3C Use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation Supporting Standard(s) 8.3A Generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation 8.3B Compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane 8.8D Use informal arguments to establish facts about the angle sum of triangles and the angle-angle criterion for similarity of triangles 8.10D Model the effect on linear and area measurements of dilated two-dimensional shapes
8th:	**Chapter Review & Reflect**		
9th:	**Similarity and Dilations Cont'd.** **Section(s) 2.3, 2.4**	Compare and contrast the attributes of a shape and its dilations on a coordinate plane. (8.3B) Represent the effect of a positive rational scale factor using algebraic notation (x, y) → (kx, ky). (8.3C) Determine if a dilation is enlarged ($k > 1$) or reduced ($k < 1$). (8.3B) Define perimeter and circumference as linear measurements. (8.10D) Model the effect a scale factor has on linear measurements of dilated two-dimensional shapes. (8.10D) Describe the effect a scale factor has on the perimeter of an image and its dilation. (8.10D) Model the effect a scale factor has on area measurements of dilated two-dimensional shapes. (8.10D) Explain why a scale factor must be squared to calculate the area of a dilated figure. (8.10D)	Readiness Standard(s) 8.3C Use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation Supporting Standard(s) 8.3B Compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane 8.10D Model the effect on linear and area measurements of dilated two-dimensional shapes

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2nd Quarter			
Resources:			
Week	**Unit/Lesson**	**Learning Objectives**	**Reporting Categories**
1st:	**Functions / Rate of Change** **Section(s) 3.1, 4.1, 4.2, 4.3**	Determine whether a relation is a function by using ordered pairs, tables, maps, and graphs. (8.5G) Match and/or describe multiple representations of functions. (8.5G) Connect the meaning of a point to be a (*x, y*) solution as found in an ordered pair, table, graph, and in an equation. (8.5G) Determine whether or not the $\frac{\text{change in y}}{\text{change in x}}$ is constant using data from a table. (8.4C) Interpret data from a table to determine the rate of change in mathematical and real-world problems. (8.4C) Interpret the unit rate as the slope of the line. (8.4B) Relate rate of change, unit rate and slope to each other. (8.4B)	Readiness Standard(s) 8.4B Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship 8.4C Use data from a table or graph to determine the rate of change or slope and y-intercept in mathematical and real-world problems 8.5G Identify functions using sets of ordered pairs, tables, mappings, and graphs Supporting Standard(s)
2nd:	**Algebraic Connections to Slope** **Section(s) 3.2, 3.3**	Find the slope from a table or graph. (8.4C) Interpret data from a table to determine the rate of change or slope in real-world problems. (8.4C) Draw similar right triangles on a coordinate plane. (8.4A) Relate slope to the hypotenuse of similar right triangles (8.4A) Develop an understanding that slope, m, given as the rate comparing the change in y-values to the change in x-values, $\frac{y_2 - y_1}{x_2 - x_1}$ is the same for any two points (x_1, y_1) and (x_2, y_2) on the same line. (8.4A) Connect rate of change $\frac{\Delta y}{\Delta x}$ from a table to slope $\frac{rise}{run}$ on a graph. (8.4C) Relate the steepness of a line to the slope of a line. (8.4A)	Readiness Standard(s) 8.4C Use data from a table or graph to determine the rate of change or slope and y-intercept in mathematical and real-world problems Supporting Standard(s) 8.4A Use similar right triangles to develop an understanding that slope, m, given as the rate comparing the change in y-values to the change in x-values, $\frac{y_2 - y_1}{x_2 - x_1}$, is the same for any two points (x_1 ,y_1) and (x_2, y_2) on the same line.
3rd:	**Algebraic Connections to Slope Cont'd**	Relate slope to *k* in proportional situations. (8.5A) Relate slope to *m* in non-proportional situations. (8.5B) Find the y-intercept from a table or graph. (8.4C) Interpret data from a table to determine the y-intercept in real-world problems. (8.4C)	Readiness Standard(s) 8.4C Use data from a table or graph to determine the rate of change or slope and y-intercept in mathematical and real-world problems Supporting Standard(s) 8.5A Represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$ 8.5B Represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$, where $b \neq 0$

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2nd Quarter			
Resources:			
Week	**Unit/Lesson**	**Learning Objectives**	**Reporting Categories**
4th:	**Chapter Review and Reflect**		
4th:	. **Proportional vs. Non-Proportional Relationships** **Section(s) 4.1, 4.2, 4.3**	Determine if a given graph is proportional or non-proportional. (8.4B) Graph proportional relationships on a coordinate plane, with and without a calculator. (8.4B) Create tables and graphs that represent linear proportional situations. (8.5A) Create tables and graphs that represent linear non-proportional situations. (8.5B) Write equations in the form of $y = kx$ of linear proportional situations. 8.5A) Write equations in the form of $y = mx + b$ of linear non-proportional situations. (8.5B)	Readiness Standard(s) 8.4B Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship Supporting Standard(s) 8.5A Represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$ 8.5B Represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$, where b ≠ 0
5th:	**Proportional vs. Non-Proportional Relationships Cont'd.** **Section(s) 4.4, 4.5**	Create connections between being the coefficient *m* and *k* being the constant in linear equations written in $y = mx + b$ format. (8.4C) Identify the slope and the y-intercept from real world situations involving proportional and non-proportional relationships. (8.5H) Compare and contrast tables, graphs, and equations of linear proportional and linear non-proportional situations. (8.5F) Move fluidly between multiple representations of linear proportional and non-proportional situations. (8.5H) Find the value of k in a given situation, using the equation $k = \frac{y}{x}$. (8.5E) Define k as slope, rate of change, unit rate, and constant of proportionality. (8.5F) Solve real-world problems involving direct variation. (8.5E) Relate dependent and independent quantities using tables, graphs, diagrams. (8.5I)	Readiness Standard(s) 8.4C Use data from a table or graph to determine the rate of change or slope and y-intercept in mathematical and real-world problems Supporting Standard(s) 8.5F Distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form y = kx or y = mx + b, where b ≠ 0 8.5H Identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems
6th:	**Fall Break** **Chapter Review and Reflect**		
7th:	**Writing Linear Equations** **Section(s) 3.6, 3.7**	Represent proportional relationships as direct variation problems. (8.5E) Interpret the significance of the intercept in direct variation situations. (8.5E) Relate slope, *m*, to constant rate of change, *k*. (8.5B)	Readiness Standard(s) 8.5I Write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using

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2nd Quarter			
Resources:			
Week	**Unit/Lesson**	**Learning Objectives**	**Reporting Categories**
		Find the value of k in a given situation, using the equation $k = \frac{y}{x}$. (8.5E) Define k as slope, rate of change, unit rate, and constant of proportionality. (8.5F) Solve real-world problems involving direct variation. (8.5E) Relate dependent and independent quantities using tables, graphs, diagrams. (8.5I)	rational number coefficients and constants Supporting Standard(s) 8.5B Represent linear non-proportional situations with tables, graphs, and equations in the form of *y = mx + b*, where $b \neq 0$ 8.5E Solve problems involving direct variation 8.5F Distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form *y = kx* or *y = mx + b*, where $b \neq 0$
8th:	**Writing Linear Equations Cont'd.** **Section(s) 3.8**	Determine the slope (m) and y-intercept (b) from a verbal, numerical, table, and graphical representation in order to write the equation in the form of *y = mx + b* . (8.5I) Identify *b* as the y-intercept in slope intercept form, *y = mx + b*. (8.5B) Write a linear equation to model the rate of change in a pattern, table of values, expression, and/or situation to the slope of a graph. (8.5I) Write equations in the form of $y = mx + b$, where $b \neq 0$ of linear non-proportional situations. (8.5B) Solve one variable equations that represent mathematical and real world linear situations. (8.8C) Move fluidly between multiple representations of linear functions. (8.5H) Determine whether a given situation is proportional or non-proportional from a table, graph or equation. (8.5F)	Readiness Standard(s) 8.5I Write an equation in the form *y = mx + b* to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants Supporting Standard(s) 8.5B Represent linear non-proportional situations with tables, graphs, and equations in the form of *y = mx + b*, where $b \neq 0$ 8.5F Distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form *y = kx* or *y = mx + b*, where $b \neq 0$ 8.5H Identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems
9th:	**Chapter Review & Reflect Hands-On Labs & Project Bench Mark**		

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Scope and Sequence
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3rd Quarter			
Resources:			
Week	**Unit/Lesson**	Learning Objectives	Reporting Categories
1st:	**Line and Angle Relationships** **Section(s) 5.1**	Construct parallel lines and a transversal to examine the relationships between the created angles. (8.8D) Identify pairs of congruent angles. (i.e. vertical, adjacent, complementary, supplementary, corresponding, alternate exterior, alternate interior) (8.8D) Investigate the angles created by parallel lines cut by a transversal and draw conclusions using inductive reasoning. (8.8D) Solve equations with rational numbers and variables on both sides that represent angle relationships. (8.8C) Solve to find the measure of missing angles using deductive reasoning. (8.8D) Construct various triangles and find the measures of the interior and exterior angles. (8.8D)	Readiness Standard(s) 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants Supporting Standard(s) 8.8D Use informal arguments to establish facts about the angle sum and exterior angle of triangles, the angles created when parallel lines are cut by a transversal.
2nd:	**Line and Angle Relationships Cont'd.** **Section(s) 5.2**	Investigate the Triangle Sum Theorem and draw conclusions using inductive reasoning. (8.8D) Investigate the Exterior Angle Theorem and draw conclusions using inductive reasoning. (8.8D) Make connections about the relationship between the measure of an exterior angle and the other two angles of a triangle and the sum. (8.8D)	Readiness Standard(s) Supporting Standard(s) 8.8D Use informal arguments to establish facts about the angle sum and exterior angle of triangles, the angles created when parallel lines are cut by a transversal
3rd:	**Chapter Review & Reflect**		
4th:	**Pythagorean Theorem** **Section(s) 5.3, 5.4**	Identify the hypotenuse and legs of a right triangle. (8.7C) Determine the length of the legs of a right triangle on a coordinate grid by counting the units. (8.7D) Model Pythagorean Theorem on a coordinate grid. (8.6C) Explain the relationship between the legs of a right triangle and its hypotenuse. (8.6C) Justify the Pythagorean Theorem using a model. (8.6C) Relate Pythagorean Theorem to the areas of the squares with side lengths a, b, and c from any given right triangle. (8.6C) Explain why the Pythagorean Theorem only works for right triangles by including non-examples. (8.6C) Calculate the missing side of a right triangle using the Pythagorean Theorem or its converse. (8.7C)	Readiness Standard(s) 8.7C Use the Pythagorean Theorem and its converse to solve problems Supporting Standard(s) 8.6C Use models and diagrams to explain the Pythagorean Theorem 8.7D Determine the distance between two points on a coordinate plane using the Pythagorean Theorem

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3rd Quarter			
Resources:			
Week	**Unit/Lesson**	Learning Objectives	Reporting Categories
5th:	**Surface Area** **Section(s) 7.4, 7.5**	Determine surface area using nets and three-dimensional models. (8.7B) Make connections between the nets of three-dimensional figures to the formulas for lateral and total surface area. (8.7B) Compare formulas for lateral surface area to total surface area. (8.7B) Calculate the lateral and total surface area of rectangular prisms, triangular prisms, and cylinders from real world problems. (8.7B)	Readiness Standard(s) 8.7B Use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants Supporting Standard(s)
6th:	**Surface Area Cont'd.**	Solve for the missing measurement given the surface area of a three dimensional figure. (8.8C) Determine reasonableness of solutions to problems involving surface area. (8.7B) Explain how to calculate P and B for any given three-dimensional figure. (8.7B) Determine whether a real-world problem is asking for total surface area, lateral surface area. (8.7B)	Readiness Standard(s) 8.7B Use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants Supporting Standard(s)
7th:	**Volume** **Section(s) 7.1, 7.2**	Connect the *B* in the volume formula of a cylinder and cone to the formula for the area of a circle. (8.6A) Explain the significance of the area of the base in the formula $V = Bh$. (8.6A) Develop the formula for volume of a cylinder using a model. (8.6A) Model the relationship between the volume of a cylinder and a cone, having congruent bases and heights. (8.6B) Connect the relationship between the volume of a cylinder and a cone to their formulas, ie: The volume of a cone is $\frac{1}{3}$ the volume of a cylinder, and the volume of a cylinder is three times the	Readiness Standard(s) 8.7A Solve problems involving the volume of cylinders, cones, and spheres 8.7B Use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants Supporting Standard(s)

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3rd Quarter			
Resources:			
Week	**Unit/Lesson**	Learning Objectives	Reporting Categories
		volume of a cone. (8.6B) Estimate before computing to evaluate the reasonableness of the solution. (8.7A)	8.6A Describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height 8.6B Model the relationship between the volume of a cylinder and a cone having both congruent bases and heights and connect that relationship to the formulas
8th:	**Volume Cont'd.** **Section(s) 7.3**	Calculate the volume of cylinders, cones, and spheres with using 3.14 or $\frac{22}{7}$ as pi as well as leaving the solution in terms of π. (8.7A) Solve for the missing measurement given the volume of a three dimensional figure. (8.8C) Determine whether a real-world problem is asking for total surface area, lateral surface area, or volume. (8.7B) Solve real-world problems involving the volume of cylinders, cones and spheres. (8.7A)	Readiness Standard(s) 8.7A Solve problems involving the volume of cylinders, cones, and spheres 8.7B Use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders 8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants Supporting Standard(s)
9th:	**Transformations and Congruence** **Section(s) 8.1, 8.2, 8.3**	Generalize the properties of translations of two-dimensional shapes on a coordinate plane. (8.10A) Describe the effect of translations of two-dimensional shapes on a coordinate plane using an algebraic representation. (8.10C) Generalize the properties of reflections of two-dimensional shapes on a coordinate plane. (8.10A) Describe the effect of reflections over the x- or y-axis of two-dimensional shapes on a coordinate plane using an algebraic representation. (8.10C) Generalize the properties of rotations of two-dimensional shapes on a coordinate plane. (8.10A) Explain the effect of 90°, 180°, 270°, and 360° rotations of two-dimensional shapes on a coordinate plane using an algebraic representation. (8.10C)	Readiness Standard(s) 8.10C Explain the effect of translations, reflections over the x- or y-axis, and rotations limited to 90°, 180°, 270°, and 360° as applied to two-dimensional shapes on a coordinate plane using an algebraic representation Supporting Standard(s) 8.10A Generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane

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4th Quarter			
Resources:			
Week	Unit/Lesson	Learning Objectives	Reporting Categories
1st:	**Transformations and Congruence Cont'd.** **Section(s) 8.4, 8.5**	Describe the properties of orientation of two-dimensional shapes on a coordinate plane. (8.10A) Generalize the properties of dilations of two-dimensional shapes on a coordinate plane. (8.10A) Differentiate between transformations that preserve congruence and those that do not. (8.10B) Determine whether or not a given transformation preserves congruence. (8.10B) Explain why congruence is preserved in a dilation only if the scale factor is 1. (8.10B) Explain why congruence is preserved in rotations, reflections and translations but not in most dilations. (8.10B)	Readiness Standard(s) Supporting Standard(s) 8.10A Generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane 8.10B Differentiate between transformations that preserve congruence and those that do not
2nd:	**Data Analysis** **Section(s) 9.1, 9.2, 9.3, 9.4, 9.5, 9.6**	Construct and interpret a scatterplot using bivariate data on a coordinate grid, with and without a calculator. (8.11A) Describe the observed data in a scatterplot to address questions of association such as linear, non-linear, and no association between bivariate data. (8.11A) Interpret types of correlation as positive, negative, none. (8.5C) Interpret types of association (linear, non-linear, and variable) and other patterns, such as outlier and cluster. (8.5C) Construct a trend line given a set of data on a coordinate plane. (8.5D) Make predictions using the trend line. (8.5D) Write an equation in slope intercept form for the trend line to make predictions using the calculator. (8.5D) Determine the mean absolute deviation. (8.11B) Use the mean absolute deviation as a measure of the average distance data are from the mean using a data set of no more than 10 data points. (8.11B) Make inferences from a real-world situation based on the mean absolute deviation. (8.11B) Distinguish between "mean" and "mean absolute deviation". (8.11B) Determine whether or not a given random sample is representative of a population. (8.11C) Explain how a random sample is representative of the population from which it was selected. (8.11C) Generate a random sample of the same size from a population with given characteristics. (8.11C)	Readiness Standard(s) 8.5D Use a trend line that approximates the linear relationship between bivariate sets of data to make predictions Supporting Standard(s) 8.5C Contrast bivariate sets of data that suggest a linear relationship with bivariate sets of data that do not suggest a linear relationship from a graphical representation 8.11A Construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data 8.11B Determine the mean absolute deviation and use this quantity as a measure of the average distance data are from the mean using a data set of no more than 10 data points 8.11C Simulate generating random samples of the same size from a population with known characteristics to develop the notion of a random sample being representative of the population from which it was selected

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4th Quarter			
Resources:			
Week	Unit/Lesson	Learning Objectives	Reporting Categories
3rd:	**Personal Financial Literacy** **Section(s) 10.1, 10.2, 10.5**	Calculate interest on loans using several different interest rates. (8.12A) Compare how interest rate and loan length affect the cost of credit. (8.12A) Solve real-world problems involving loans. (8.12A) Calculate simple interest. (8.12D) Calculate compound interest. (8.12D) Compare simple interest and compound interest. (8.12D) Solve real-world problems involving simple and compound interest. (8.12D) Describe how small amounts of money invested regularly grow over time. (8.12C) Show the principle balance grows as interest is earned over time. (8.12C) Estimate the cost of a two-year and four-year college education, including family contribution. (8.12G) Devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college. (8.12G)	Readiness Standard(s) 8.12D Calculate and compare simple interest and compound interest earnings Supporting Standard(s) 8.12A Solve real-world problems comparing how interest rate and loan length affect the cost of credit 8.12C Explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time 8.12G Estimate the cost of a two-year and four-year college education, including family contribution, and devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college
4th:	**Personal Financial Literacy in Depth** **Section(s) 10.3, 10.4**	Calculate the total cost of repaying a loan, including credit cards and easy access loans, under various rates of interest using an online calculator. (8.12B) Calculate the total cost of repaying a loan over different periods using an online calculator. (8.12B) Calculate the remaining principle of the loan after a period of time and show that principle decreases over time. (8.12B) Compare various payment methods. (8.12E) Identify the advantages and disadvantages of different payment methods. (8.12E) Explain the advantages and disadvantages of different payment methods. (8.12E) Determine which payment method is most appropriate for a given situation. (8.12E) Analyze situations to determine if they represent financially responsible decisions. (8.12F) Identify the benefits of financial responsibility. (8.12F) Identify the costs of financial irresponsibility. (8.12F)	Readiness Standard(s) Supporting Standard(s) 8.12B Calculate the total cost of repaying a loan, including credit cards and easy access loans, under various rates of interest and over different periods using an online calculator 8.12E Identify and explain the advantages and disadvantages of different payment methods 8.12F Analyze situations to determine if they represent financially responsible decisions and identify the benefits of financial responsibility and the costs of financial irresponsibility
5th:	**Chapter Review & Reflect**		

Darul Arqam North

Scope and Sequence
7th Grade Pre-Algebra

4th Quarter			
Resources:			
Week	Unit/Lesson	Learning Objectives	Reporting Categories
6th:	**Step Up to Algebra 1: Solving Multi-Step Equations and Equations involving Absolute Value**	Solve equations with one variable Solve equations with two variables Evaluate absolute value expressions Solve absolute value equations	Readiness Standard(s) A.5 solve linear equations in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides Supporting Standard(s)
7th:	**End of Year Review**		
8th:	**End of Year Project**		
9th:	**STAAR Testing / Year End Activities & Awards**		