7th Grade- Math 4 Quarter Plans

Quarter 1- August, September, Mid-October

Focus Areas: Ratios, quantities, percent, scale drawings

7.RP.1	I can compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	**Resources Used:** -SMARTBoard -Chromebooks -MyMath online curriculum -MyMath student workbooks
7.RP.2	I can recognize and represent proportional relationships between quantities.	
7.RP.3	I can use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	**Summary:** In Q1, students will build upon their knowledge mastered in 6th grade. Students will explore proportional relationships and apply this knowledge to real life situations. Students will also explore how to solve problems that involve scale drawings of geometric figures.
7.G.1	I can solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	

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Quarter 2- Mid-October, November, December

Focus Areas: Rational numbers and linear expressions

7.NS.A.1	I can apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	**Resources Used:** -SMARTBoard -Chromebooks -MyMath online curriculum -MyMath student workbooks
7.NS.A.2	I can apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	**Summary:** In Q2, students will build upon prior knowledge and apply it to rational numbers. Students will solve real-world mathematical problems and rewrite expressions in order to relate quantities.
7.NS.A.3	I can solve real-world and mathematical problems involving the four operations with rational numbers.	
7.EE.A.1	I can apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	
7.EE.A.2	I can understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	

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Quarter 3- January, February, Mid-March

Focus Areas: Positive and negative rational numbers, area and circumference of a circle, data analysis

7.EE.B.3	I can solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically and apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	**Resources Used:** -SMARTBoard -Chromebooks -MyMath online curriculum -MyMath student workbooks
7.EE.B.4	I can use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	
7.G.B.4	I know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	
7.SP.A.1	I understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population and understand that random sampling tends to produce representative samples and support valid inferences.	
7.SP.A.2	I can use data from a random sample to draw inferences about a population with an unknown characteristic of interest and generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.	**Summary:** In Q3, students will continue to use variables in equations and solve multi-step real life mathematical problems using positive and negative rational numbers in any form. Students
7.SP.B.3	I can informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.	

7.SP.B.4	I can use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.	will learn the formulas for the area and circumference of a circle. Students will also increase their understanding of data and statistics in order to gain information and analyze to understand make inferences.

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Quarter 4- Mid-March, April, May

Focus Areas: Probability and geometry

7.SP.C.5	I can understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	**Resources Used:** -SMARTBoard -Chromebooks -MyMath online curriculum -MyMath student workbooks
7.SP.C.6	I can approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.	
7.SP.C.7	I can develop a probability model and use it to find probabilities of events and compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.	
7.SP.C.8	I can find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	**Summary:** In Q4, students will heavily focus on probability and understanding how to develop a probability model. Students will be able to represent probability in many different forms. Students will also draw geometric shapes using
7.G.A.2	I can draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions and focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	
7.G.A.3	I can describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	

7.G.B.5	I can use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	available resources, including technology. Students will also write and solve equations to find unknown angles and use their knowledge of area and volume to solve real-world problems.
7.G.B.6	I can solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	

Note: Plans are subject to change due to what the teacher deems as appropriate pacing for the group of students being taught in that current year. Resources are also subject to change due to availability.
***NS=The Number System**
***RP= Ratios & Proportional Relationships**
***EE= Expressions & Equations**
***G= Geometry**
***SP= Statistics & Probability**