Trimester 1	Trimester 2	Trimester 3
Unit 1: Integer Exponents and Scientific Notation **Pacing:** 10 days **Power Cluster:** ● Work with radicals and integer exponents. **Supporting Standards:** 8.NS.1 & 2 **Standards for Mathematical Practice:** MP.2 | MP.3 | MP.6 | MP.7 | MP.8 **Unit Focus:** The year begins with students extending the properties of exponents to integer exponents. They use the number line model to support their understanding of the rational numbers and the number system. The number system is revisited at the end of the year to develop the real number line through a detailed study of irrational numbers. **Cross Curricular Standards:**	**Unit 3: Similarity (continued)** **Pacing:** 20 days **Power Clusters:** ● Understand congruence and similarity using physical models, transparencies, or geometry software. ● Understand and apply the Pythagorean Theorem. **Supporting Standards:** 8.NS.1 & 2, 8.EE. 1, 3 & 4, 8.G.9 **Standards for Mathematical Practice:** MP.3 | MP.4 | MP.8 **Unit Focus:** Students work to understanding the effects of dilations on geometrical figures in their study of similarity. They work on analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem. **Cross Curricular Standards:** Islam (WHI.1)	**Unit 5: Examples of Functions from Geometry (continued)** **Pacing:** 15 days **Power Clusters:** ● Define, evaluate, and compare functions. **Supporting Standards:** 8.G.9 **Standards for Mathematical Practice:** MP.2 | MP.6 | MP.8 **Unit Focus:** Students are introduced to functions in the context of linear equations and area/volume formulas. They work to grasp the concept of a function and using functions to describe quantitative relationships. **Cross Curricular Standards:**

Trimester 1	Trimester 2	Trimester 3
Unit 2: The Concept of Congruence **Pacing:** 20 days **Power Clusters:** • Understand congruence and similarity using physical models, transparencies, or geometry software. • Understand and apply the Pythagorean Theorem. **Supporting Standards:** 8.NS.1 & 2, 8.EE. 1, 3 & 4 **Standards for Mathematical Practice:** MP.2 | MP.3 | MP.5 | MP.6 **Unit Focus:** Students study congruence by experimenting with rotations, reflections, and translations of geometrical figures. Their study of congruence culminates with an introduction to the Pythagorean theorem in which students work through the "square-within-a-square" proof of the theorem. Students practice the theorem in real-world applications and mathematical problems throughout the year. **Cross Curricular Standards:**	**Unit 4: Linear Equations** **Pacing:** 30 days **Power Clusters:** • Understand the connections between proportional relationships, lines, and linear equations. • Analyze and solve linear equations and pairs of simultaneous linear equations. **Supporting Standards:** 8.EE.1, 3 & 4 **Standards for Mathematical Practice:** MP.1 | MP.2 | MP.3 | MP.4 | MP.7 **Unit Focus:** Students use similar triangles learned in Module 3 to explain why the slope of a line is well-defined. Students learn the connection between proportional relationships, lines, and linear equations as they develop ways to represent a line by different equations (e.g., $y = mx + b$, $y - y_1 = m (x - x_1)$). They analyze and solve linear equations and pairs of simultaneous linear equations. They work on formulating and reasoning about expressions and equations and solving linear equations and systems of linear equations. **Cross Curricular Standards:**	**Unit 6: Linear Functions** **Pacing:** 20 days **Power Clusters:** • Investigate patterns of association in bivariate data. • Use functions to model relationships between quantities. **Supporting Standards:** 8.F.1, 2 & 3 **Standards for Mathematical Practice:** MP.2 | MP.4 | MP.7 **Unit Focus:** Students return to linear functions in the context of statistics and probability as bivariate data provides support in the use of linear functions. They work to grasp the concept of a function and using functions to describe quantitative relationships. Modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations **Cross Curricular Standards:**

Trimester 1	**Trimester 2**	**Trimester 3**
Unit 3: Similarity **Pacing:** 20 days **Power Clusters:** • Understand congruence and similarity using physical models, transparencies, or geometry software. • Understand and apply the Pythagorean Theorem. **Supporting Standards:** 8.NS.1 & 2, 8.EE. 1, 3 & 4, 8.G.9 **Standards for Mathematical Practice:** MP.3 | MP.4 | MP.8 **Unit Focus:** Students work to understanding the effects of dilations on geometrical figures in their study of similarity. They work on analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem. **Cross Curricular Standards:**	**Unit 5: Examples of Functions from Geometry** **Pacing:** 15 days **Power Clusters:** • Define, evaluate, and compare functions. **Supporting Standards:** 8.G.9 **Standards for Mathematical Practice:** MP.2 | MP.6 | MP.8 **Unit Focus:** Students are introduced to functions in the context of linear equations and area/volume formulas. They work to grasp the concept of a function and using functions to describe quantitative relationships. **Cross Curricular Standards:**	**Unit 7: Introduction to Irrational Numbers Using Geometry** **Pacing:** 25 days **Power Standards:** • Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. **Supporting Standards:** 8.NS.1 & 2, 8.G.6, 7 & 8, 8.EE.2 **Standards for Mathematical Practice:** MP.7 | MP.8 **Unit Focus:** As the year began with looking at the number system, so it concludes with students understanding irrational numbers and ways to represent them (radicals, non-repeating decimal expansions) on the real number line. To know that there are numbers that are not rational, and approximate them by rational numbers. **Cross Curricular Standards:**