8th Grade Math Curriculum Bundle # 3

Title	Suggested Dates
Multiple Representations, Arithmetic Sequences, and Proportions	October 5 – October 23 (14 days)

Big Idea/Enduring Understanding	Guiding Questions
Patterns can be identified in sequences of numbers found in real life situations that can be used to predict values for any position in the sequence. (Examples: the amount of food left in a bird feeder at any given time when supply is being depleted at a constant rate, how much money is earned when paid at an hourly rate, etc…)	1. How do we determine the terms of a sequence? 2. What strategies can be used to determine relationship between independent and dependent variables?
Patterns in a sequence of numbers can be seen in graphs, tables and equations.	1. How can representing data in multiple ways be useful? 2. How can we use multiple representations of data to make predictions? 3. How can we determine different representations given one representation?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the district curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See Note Above)	
8.5 Patterns, relationships, and algebraic thinking. The student uses graphs, tables, and algebraic representations to make predictions and solve problems. 8.5A predict, find, and justify solutions to application problems using appropriate tables, graphs, and algebraic equations	• make predictions using data in a table or graph • distance problems d=rt • real-world situations in which both an equation and the dependent variable are given and students solve for the independent variable • Ex. C=20+0.07m where c=27 or • C=20+0.07m where m=27	**Continued from Bundle 2** **CMP2 Moving Straight Ahead** Pearson Investigation 1 All, 2.1, 2.2, 2.4, 3.1	**Region IV Closing the Distance** Lesson 5 Rates Pg 67-83 **A.I.R.R.** Activity 118- What Is The Best Prediction? Activity 119-Graph and Predict

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8.4 Patterns, relationships, and algebraic thinking. The student makes connections among various representations of a numerical relationship. 8.4 The student is expected to generate a different representation of data given another representation of data (such as a table, graph, equation, or verbal description).	• using multiple representations of data within a single context of a problem including the 4 corners model		**Share Drive- Math** 4 Corners Power Point and Template **Region IV Accelerated Curriculum** Unit 4 Lesson 2- Sequences **Region IV TAKS Math Prep. Book 8th Grade** Patterns and Sequences Pg. 93-110 **TexTeams Algebraic Reasoning** Stretching Sequences
8.5 Patterns, relationships, and algebraic thinking. The student uses graphs, tables, and algebraic representations to make predictions and solve problems. 8.5B find and evaluate an algebraic expression to determine any term in an arithmetic sequence (with a constant rate of change)	• use expressions in which the constant rate of change is expressed as a fraction or a decimal • determine the nth term in a pattern in a table or list • connect term number with the position in the sequence • use the n^{th} term to find a specific term • generate an expression to describe a sequence • include horizontal & vertical tables • selecting a sequence or table that matches a given algebraic expression		**Region IV Closing the Distance** Lesson 9 Sequences Pg 133-149
8.3 Patterns, relationships, and algebraic thinking. The student identifies proportional or non-proportional linear relationships in problem situations and solves problems. 8.3B estimate and find solutions to application problems involving percents and other proportional relationships such as similarity and rates Note: **Focus on proportional relationships**. Repeated in bundle 4 for focus on percent applications and similarity.	• include real world situations such as speed, recipes, and price		**Kamico- TAKS Connection: Developmental Series Math 8 Book 1** It's Time for Jeopardy