5th Grade Math Curriculum Bundle # 6

Title	Suggested Dates
Patterns / Algebraic Thinking	December 7 – December 18 (10 days)

Big Idea/Enduring Understanding	Guiding Questions
Finding and representing the mathematical relationship between quantities	What is a variable? How can you use patterns to show relationships? How can a pattern be extended using a mathematical expression that is either given or determined?

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) **Teachers will use Math Investigations as the main instructional resource.** District resources are listed and categorized to indicate suggested uses. Any additional resources must be aligned with the TEKS.	
5.5 The student makes generalizations based on observed patterns and relationships. 5.5A Describe the relationship between sets of data in graphic organizers such as lists, tables, charts, and diagram	Including but not limited to • evaluate numerous data representations (lists, tables, charts, graphic organizers including Venn diagrams and other diagrams) of sets of data • evaluate relationships between sets of related data • generalize patterns including a specified term and/or describe patterns using words or numerical representations in a real-life situation (extend the set of data) • describe the relationship observed in the related data sets within pictorial problems and/or graph like creating possible combinations of a set of circumstances • justify the "rule" of patterns and relationships • use reasonableness to verify solution	**Math Investigations** **Growth Patterns** **Unit 8** Investigations 1 Sessions 1 – 5 pages 26 – 60	**Whole Group Lessons** Envision Topic 11 Lessons 1 – 5

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5. 6 The student describes relationships mathematically.
 	
5.6A Select from and use diagrams and equations such as y = 5 + 3 to represent meaningful problem situations.
	Including but not limited to
	
	• represent equations concretely, pictorially and abstractly
	• extract necessary information needed to solve the problem (ignoring extraneous information)
	• recognizes the operation(s) needed to solve (relationships may be written in words)
	  o Ex: Multiply **x** by 3 to get **y**
	• select and use diagrams to represent meaningful problem situations
	• generate, select from, and use equations (single and multiple step) to represent meaningful problem situations
	• equations may include numerical representation such as creating a number sentence based on a word problem
	• equations may include variable representation such as letter for unknown value
	  o Ex: **x** + 5 = 8
	• use labels of the problem situation when reading the equation to see if it make sense and matches the problem using reasonableness
	• connect diagrams and equations to the problem situation
	• justify equation or selection of equation
			Small Group Lessons/Centers
			
			A.I.R.R
			Show the Operation #103
			Make a Complete Number Sentence #104

5.16 The student uses logical reasoning to make sense of his or her world. 5.16A Make generalizations from patterns or sets of examples and non-examples. Teacher Note: Problem-Solving Strategies—Working backwards to solve a problem and working a simpler problem.	Including but not limited to • some problems can be solved by using objects to act out the actions of the problem • reasoning about the conditions in the problem		**Whole Group Lessons** Envisions Topic 11 Lessons 5 **Small Group Lessons/Centers** A.I.R.R Generalizing Patterns, #192 Describing Patterns, #193 Kamico Who Has my match? page 401 Picture This! page 407