5th Grade Math Curriculum Bundle # 4

Title	Suggested Dates
Problem Solving / Reasonableness / Estimation	October 26 - November 13 (14 days)

Big Idea/Enduring Understanding	Guiding Questions
There are a variety of methods to solve a problem and evaluate the reasonableness of a solution.	What strategies can be used to solve this problem? Is there another way to solve this problem? How will the solution look? How can you justify the reasonableness of the solution?

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.	
5.3 The student adds, subtracts, multiplies, and divides to solve meaningful problems. 5.3D Identify common factors of a set of whole numbers TEACHER NOTES: Review vocabulary of prime and composite numbers from Bundle 1	Including but not limited to • demonstrate and explain methods or strategies for finding common factors of the set such as a Venn diagram • demonstrate and explain a method for determining the prime factorization of each number (factor trees) and display answer as an expression (20=2x2x5)	**Math Investigations** **Number Puzzles and Multiple Towers** **Unit 1** Investigation 1 Sessions 5 – 7 pages 52 – 64	**Whole Group Lessons** Envision Topic 8 Lessons 5 & 7 **Small Group Lessons/Centers** Fifth Sense Objective 1 Lesson 5.3 D Region IV Prep Factors Lesson pages 62 – 70 A.I.R.R What's the Factorization? #71 Make a List, #73

			Rolling Factors, #70 Kamico Factor Fiction page 96
5.5 The student makes generalizations based on observed patterns and relationships. 5.5B Identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs.	Including but not limited to • describe the definition of prime number (recognize that 1 is not prime) • describe the definition of a composite number (recognize that 2 is the only even prime number) • identify and classify numbers as prime or composite using concrete or pictorial models • use a variety of strategies to represent factors • recognize prime and composite numbers in a set of numbers • emphasize not all odd numbers are prime		**Whole Group Lessons** Envisions Topic 8 Lesson 6 **Small Group Lessons/Centers** Kamico Prime Time page 139
5.4 The student estimates to determine reasonable results. 5.4A Use strategies including rounding and compatible numbers to estimate solutions to multiplication, division, addition and subtraction problems	Including but not limited to • use various strategies to estimate solutions to multiplication and division problems • emphasize estimating before solving problem situations • estimate solutions by using rounding in multiplication and division such as rounding to the largest place value for each number (do not round single digit numbers) or benchmarking the numbers (10's, 100's, 1000's) o Ex: 56 x 82 = 60 x 80 o Ex: 84 x 7 = 80 x 7 o Ex: 362 ÷ 8 = 400 ÷ 8 • estimate solutions by using compatible numbers in multiplication and division such as numbers that are easy to compute mentally (do not always end in 0) o Ex. 92 x 12 could be 92 x 10 or 90 x 10 or 90 x 12 o Ex. 429 ÷ 8 could be 400 ÷ 8 or 400 ÷ 10	**Math Investigations** **Number Puzzles and Multiple Towers** **Unit 1** Investigation 1 Session 4 pages 48 – 51	**Whole Group Lessons** Envision Topic 2 Lessons 2 – 3 Fifth Sense Objective 1, (Lesson 2 of 2) Lesson 5.4 A and 5.4 B **Small Group Lessons/Centers** A.I.R.R. What's Your Rounding Strategy, #81 Let's Take Turns Rounding, #82 Fifth Sense Objective 1, (Lesson 1 of 2: Shop Around Activity) Lesson 5.4 A and 5.4 B

			Kamico Beyond a Reasonable Doubt page 115 That's About Right! page 129 Integrated Math/Science Lessons – District web page School Store Reasonableness
5.14 The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school. 5.14C Select or develop an appropriate problem-solving plan or strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.	Including but not limited to • use various strategies to estimate solutions to multiplication and division problems • emphasize estimating before solving problem		**Whole Group Lessons** Envision Topic 2 Lesson 4 **Small Group Lessons/Centers** A.I.R.R Find the Strategy Cards, #186 Use a Strategy, #187
5.14 The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school. 5.14B Solve problems that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.	Including but not limited to • use the strategy of compatible numbers in addition and subtraction		**Whole Group Lessons** Envisions Topic 3 Lesson 4 **Small Group Lessons/Centers** Kamico Express Yourself page 364 A.I.R.R. Make a Plan, #184 Check for Reasonableness, #185
5.16 Underlying processes and mathematical tools. 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.	Including but not limited to • Identify number sequences and determine rules for such		**Small Group Lessons/Centers** A.I.R.R. Describing Patterns, #193

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5.16 Underlying processes and mathematical tools. The student uses logical reasoning to make sense of his or her world 5.16B Justify why an answer is reasonable and explain the solution process.	Including but not limited to • Rounding: When it is appropriate to round up or down? • Estimating: to solve and to check for reasonableness		