3rd Grade Math Curriculum Bundle # 8

Title	Suggested Dates
Division/ Patterned Tables / 2-Digit Multiplication/ Reasonableness	February 1 – February 19 (13 days)

Big Idea/Enduring Understanding	Guiding Questions
Explore the relationship between patterns in multiplication and division.	How are multiplication and division related? How can multiplication and division improve your life? How can finding patterns in numbers help in solving problems?

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 resources.** District resources are listed and categorized to indicate suggested uses. Any additional resources must be aligned with the TEKS.	
3.4 The student recognizes and solves problems in multiplication and division situations. 3.4C Use models to solve division problems and use number sentences to record the solutions. Note: Division continues in next bundle.	Including but not limited to • understands that division represents sharing equally or forming equal groups • use various strategies to solve problems involving division((1 digit divisor and 2 digit dividends) using various strategies • create number sentences that represent their models	**Math Investigations** Equal Groups Unit 5 Investigation 4 Session 1 pages 116 – 143	**Whole Group Lesson** Envision Topic 10 Lessons 1 – 3 **Small Group Lessons/Centers** AIRR Understanding the Operations #50 How are Multiplication Division Related #51 Sharing Counters #52 Relate Multiplication Division #53 Kamico 3-D Vision Page 99 Domino Dividends Page 104 Navigating Through Algebra Hundred Board Wonders pg 3-4

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3.6 The student uses patterns to solve problems. 3.6A Identify and extend whole-number and geometric patterns to make predictions and solve problems.	Including but not limited to • identify patterns that increase or decrease using concrete objects, pictorials, geometric shapes, sequence, tables, and real-life situations • investigate even and odd patterns using addition, subtraction, multiplication and division • whole-number patterns and geometric patterns o make sure students can express patterns with letters of the alphabet to see the relationship between them. o predict the missing number in the sequence or pattern o solve problems involving whole number patterns • Have them continue the pattern by drawing the picture.	**Math Investigations** Stories, Fables and Graphs Unit 6 Investigation 2 Sessions 1 - 3 pages 56 – 72	**Whole Group Lesson** Envision Topic 12 Lessons 1, 2, and 5 **Small Group Lessons/Centers** AIRR Creating Geometric Patterns with Overhead Pieces #64 Follow My Pattern #66 What's the Pattern #67 Kamico Mystery PatternsPage 129 Region IV Prep Page 54 – 60
3.7 The student uses lists, tables, and charts to express patterns and relationships. 3.7A Generate a table of paired numbers based on a real-life situation such as insects and legs	Including but not limited to • generate a table of paired numbers based on real life applications • demonstrate work with tables (horizontal or vertical) of related number pairs that may not begin with one and/or may not be sequential • use appropriate labels for the table • give students many opportunities to determine the rule for the input/output.		**Whole Group Lesson** Envision Topic 12 Lesson 3 **Small Group Lessons/Centers** AIRR Make a Table #74 Pairing Numbers #75 Kamico Table of W Page 152 Region IV Prep Page 62 – 66
3.7 The student uses lists, tables, and charts to express patterns and relationships. 3.7B Identify and describe patterns in a table of related number pairs based on a meaningful problem	Including but not limited to • identify patterns in a table (vertical or horizontal) of related number pairs based on a meaningful problem		**Whole Group Lesson** Envision Topic 12 Lesson 4

and extend the table.	• investigates the relationship between the related pair numbers • describe the pattern "What's the rule?" using mathematical words, numbers and symbols • complete pattern (missing data may be at beginning, middle or end) • extend the pattern based upon the relationship observed • use reasonableness to verify solution		**Small Group Lessons/Centers** AIRR Follow the Rules #76 Follow the Rules Two #77 Related Numbers #78 Table Patterns #79 Kamico What's Missing Page 161
3.14 The student applies Grade 3 mathematics to solve problems connected to everyday experiences and activities in and outside of school. 3.14B Solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.	Including but not limited to • use problems solving to identify math in everyday situations		**Small Group Lessons/Centers** AIRR Every Day Situations #127 Keep It Real #128 Find All the Reasonable Answers #129 What's the Plan? #130 Kamico Estimation Contest Page 312 Counter Attack Page 313
3.14 The student applies Grade 3 mathematics to solve problems connected to everyday experiences and activities in and outside of school. 3.14C 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 • acting out and using logical reasoning to solve problems.		**Whole Group Lesson** Envision Topic 12 Lesson 6 **Small Group Lessons/Centers** AIRR Find the Strategy #131 Use a Strategy #132 Kamico Logical Gifts Page 327 Strut Your Strategy Stuff Page 329
3.16 The student uses logical reasoning. 3.16A Make generalizations from patterns or sets of examples and non-examples .	Including but not limited to • understanding problems that can be solved by making a table and looking for a pattern		**Whole Group Lesson** Envision Topic 16 Lesson 6

			Small Group Lessons/Centers Kamico Pop-Up Patterns page 352 E is for Example page 357
3.16 The student uses logical reasoning. 3.16B Justify why an answer is reasonable and explain the solution process.	Including but not limited to • Use reasonableness to choose the correct solution to a word problem.		**Whole Group Lesson** Envision Topic 4 Lesson 5
3.4 The student recognizes and solves problems in multiplication and division situations. 3.4B Solve and record multiplication problems (up to 2 digits by 1 digit).	Including but not limited to • apply various multiplication strategies to problem solve • extract necessary information needed to solve multi-step problems (ignoring extraneous information) and recognizes the operation(s) needed to solve and checks for reasonableness create various pictorial representations to model problems		**Whole Group Lesson** Envision Topic 9 Lessons 1, 4, 5 and 6 Envision Topic 7 Lesson 5 Envision Topic 8 Lesson 6 **Small Group Lessons/Centers** AIRR Cups and Counters #46 Groups Of #47 Say It With A Picture #48 Region IV Prep Page 35 – 39