2nd Grade Math Curriculum Bundle # 7

Title	Suggested Dates
Problem Solving Using 2-Digit Addition and Subtraction	January 5- January 29 (18 days)

Big Idea/Enduring Understanding	Guiding Questions
Problems can be solved using a variety of strategies	How can you prove your answer? How do you select an appropriate problem solving strategy? What are some ways that you can explain and record your problem solving strategy?

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.	
2.3 The student adds and subtracts whole numbers to solve problems. 2.3B Model addition and subtraction of two-digit numbers with objects, pictures, words, and numbers Very Important Note: It is very important that the students understand and practice adding and subtracting 2 digit numbers with multiple strategies BEFORE the algorithm is introduced. Concrete models need to be used over and over again to establish a firm understanding at a conceptual level.	Including but not limited to • use multiple strategies (ex: base-10 blocks, tally marks, pictures, adding tens and ones separately and then adding the final ten and one together) to solve addition and subtraction problems • represent and use whole numbers in flexible ways by joining and separating numbers (expanded notation 523 = 500 + 20 + 3) • describe in words an explanation of strategy • model real situations when start (beginning), change (middle), or result (end) is unknown • use equation (number sentence) to represent addition or subtraction situations • use 2 or more addends	**How Many Tens? How Many Ones?** **Unit 6** Investigation 2 Session 2, pages 62-68 Investigation 3 Session 1,pages 100-104 Session 4, pages 115-118 Session 6, pages 123-126 **Partners, Teams, and Paper Clips** **Unit 8** Investigation 4 Sessions 1-5, pages 110-149 Note: Do this investigation	**Whole Group Lessons** Envision Topic 8 Lessons 1 – 7 Note: Do these only after you have modeled, modeled, modeled!
2.3 The student adds and subtracts whole numbers to solve problems	Including but not limited to • use multiple strategies (ex: base-10 blocks,		

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2.3C Select addition or subtraction to solve problems using two-digit numbers, whether or not regrouping is necessary. Very Important Note: It is very important that the students understand and practice adding and subtracting 2 digit numbers with multiple strategies BEFORE the algorithm is introduced. Concrete models need to be used over and over again to establish a firm understanding at a conceptual level.	adding tens and ones separately then adding the final ten and one together, tally marks) with and without regrouping • model and explain addition or subtraction problems using concrete materials in contextual situations • model real situations when start (beginning), change (middle), or result (end) is unknown use story problems and/or story mats.	first. Investigation 3 Sessions 1-5, pages 70-108 Note: In these investigations, addition and subtraction strategies are mixed together. There are more addition and subtraction strategies listed in Bundles 6 and 8 as well.	
2.12 The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school. 2.12A Identify the mathematics in everyday situations. Note: These will carry over into Bundle 8.	Including but not limited to • Process skill to be addressed with relevant content. • Solving 2 digit addition and subtraction story problems		**<u>Small Group Lessons/Centers</u>** <u>A.I.R.R.</u> What Information is Needed? # 228 How do you Solve the Problem? # 229 Understand the Problem # 230 Is the Solution Reasonable? # 231 Draw a Picture # 232 Look for Patterns in a Calendar # 233 Guess and Check # 234 Act it Out # 235 <u>Kamico</u> Outdoor Activities Pages 340-365 Indoor Activities Pages 366-376 Around the World Pages 380-396 <u>Region IV Prep</u> Addition/Subtraction Lesson Pages 26-36
2.12 The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school. 2.12B Solve problems with guidance that incorporates the processes of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness. Note: These will carry over into Bundle 8.	Including but not limited to • Process skill to be addressed with relevant content. • Solving 2 digit addition and subtraction story problems		
2.12 The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school. 2.12C Select or develop an appropriate problem-solving plan or strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve a problem. Note: These will carry over into Bundle 8.	Including but not limited to • Process skill to be addressed with relevant content. • Solving 2 digit addition and subtraction story problems		
2.12 The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school.	Including but not limited to • Process skill to be addressed with relevant content.		

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2.12D Use tools such as real objects, manipulatives, and technology to solve problems. Note: These will carry over into Bundle 8.	• Solving 2 digit addition and subtraction story problems		
2.13 The student communicates about Grade 2 mathematics using informal language. 2.13A Explain and record observations using objects, words, pictures, numbers, and technology. Note: These will carry over into Bundle 8.	Including but not limited to • Process skill to be addressed with relevant content. • Solving 2 digit addition and subtraction story problems		
2.13 The student communicates about Grade 2 mathematics using informal language. 2.13B Relate informal language to mathematical language and symbols. Note: These will carry over into Bundle 8.	Including but not limited to • Process skill to be addressed with relevant content. • Solving 2 digit addition and subtraction story problems		
2.14 The student is expected to justify his or her thinking using objects, words, pictures, numbers, and technology. 2.14A Justify his or her thinking using objects, words, pictures, numbers, and technology Note: These will carry over into Bundle 8.	Including but not limited to • Process skill to be addressed with relevant content. • Solving 2 digit addition and subtraction story problems		