Area: Operations and Algebraic Thinking

Big Idea: Represent and solve problems involving addition and subtraction.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).					
• 1.OA.1		• addition, subtraction, equation	• Unit 1 Lesson 2-8, Unit 2 Lesson 1-4, 10-16, Unit 3 Lesson 2,4-12, Unit 4 Lesson 5, Unit 5 Lesson 1-5, 11, Unit 6 Lesson 1-9	• • Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expressions Assessments
Objective: 2: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).					
• 1.OA.2		• addition, subtraction, equation	• 1.5, 1.6, 1.13, 2.3, 2.7, 2.11, 2.13, 3.6, 3.8, 3.9, 3.10, 3.11, 3.14, 4.1, 4.7, 4.8, 4.9, 4.11, 4.12, 5.1, 5.3, 5.6, 5.7, 5.8, 5.9, 5.12, 5.13, 8.4, 8.5, 9.4, 10.2, 10.3, 10.4, 10.6	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expressions Assessment

Area: Operations and Algebraic Thinking

Big Idea: Understand and apply properties of operations and the relationship between addition and subtraction.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Apply properties of operations as strategies to add and subtract. (Note: Students need not use formal terms for these properties.). Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)					
• 1.OA.3 • 1.OA.4		• addition, subraction, equations	• Unit 1 Lesson 3-9, Unit 2 Lesson 7, Unit 4 Lesson 5, Unit 5 Lesson 6	• • Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expressions Assessments
Objective: 2: Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.					
• 1.OA.4		• subtraction, addition, equations	• Unit 3 Lesson 6-10, 12, Unit 5 Lesson 1,2,5	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expressions Assessments

Area: Operations and Algebraic Thinking

Big Idea: Add and subtract within 20.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).					
• 1.0A.5		• addition, subtraction, equation	• Unit 1 Lesson 1-9, Unit 2 Lesson 5-9, Unit 3 Lesson 1,3,4,6,7,11, Unit 4 Lesson 1,4,5,7,15,16, Unit 5 Lesson 1,2,4	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments
Objective: 2: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.					
• 1.OA.6		• addition, subtraction, equation,	• Unit 1 Lesson 3-9, Unit 2 Lesson 1-3, 5-12,14-16, Unit 3 Lesson 1,3-7,11,12, Unit 4 Lesson 4-6, 10,11, Unit 5 Lesson 1-5,11	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessment
Objective: 3: Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.					
• 1.OA.7		• addition, subtraction, equation	• Unit 2 Lesson 1-4, 11 -13,16 Unit 3 Lesson 12	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expresssions Assessment
Objective: 4: Determine the unknown whole number in an addition or subtraction equation relating to 3 whole numbers.					
• 1.OA.8		• addition, subtraction, equation	• Unit 1 Lesson 3-8, Unit 2 Lesson 5-10,12,13,16, Unit 3 Lesson 3,4,6,7,9,11,12, Unit 4 Lesson 4,5,10,11, Unit 5 Lesson 1-5	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessment

Area: Number and Operations in Base Ten

Big Idea: Extend the counting sequence.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.					
• 1.NBT.1		• addition, subtraction, equation	• Unit 4 Lesson 1,2,7-11, 15,16,18, Unit 5 Lesson 7-9	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments

Area: Number and Operations in Base Ten

Big Idea: Understand place value.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Understand that the two digits of a two-digit number represent amounts of tens and ones.					
• 1.NBT.2		• addition, subtraction, equation	• Unit 4 Lesson 1-4, 7-14,16 -18, Unit 5 7-9	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments
Objective: 2: 10 can be thought of as a bundle of ten ones — called a "ten."					
• 1.NBT.2a		• addition, subtraction, equations	• Unit 4 Lesson 1-4, 9,10,16,18	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments
Objective: 3: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.					
• 1.NBT.2b		• addition, subtraction, equation	• Unit 4 Lesson 2-5,8,10	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments
Objective: 4: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).					
• 1.NBT.2c		• addition, subtraction, equation	• Unit 4 Lesson 1,7-9, 13,14,18 Unit 5 Lesson 10	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments

Area: Number and Operations in Base Ten

Big Idea: Understand place value.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 5: Compare 2 two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols <, >, or =.					
• 1.NBT.3		• addition, subtraction, equation • equal	• Unit 4 Lesson 3,12,16,18, Unit 8 Lesson 6	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments

Area: Number and Operations in Base Ten

Big Idea: Use place value understanding and properties of operations to add and subtract.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Add within 100, including adding a 2-digit number and a 1-digit number, and adding a 2-digit number and a multiple of 10, using concrete models/drawings/strategies. Relate the strategy to a written method and explain the reasoning used. Understand that in adding 2-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.					
• 1.NBT.4	• addition, subtraction, equation • one digit • place value	• Unit 4 Lesson 9-11,13-18 Unit 5 Lesson 9-11, Unit 8 Lesson 1-6	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments	
Objective: 2: Given a 2-digit number, mentally find 10 more or 10 less than the number, without having to count. Explain the reasoning used.					
• 1.NBT.5	• addition, subtraction, equation	• Unit 4 Lesson 1 Unit 5 Lesson 8,9	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments	
Objective: 3: Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models/drawings/strategies. Relate the strategy to a written method and explain the reasoning used.					
• 1.NBT.6	• addition, subtraction, equation	• Unit 5 Lesson 9-11, Unit 8 Lesson 6	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments	

Area: Measurement and Data

Big Idea: Measure lengths indirectly and by iterating length units.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Order three objects by length. Compare the lengths of two objects indirectly by using a third object.					
• 1.MD.1 • 1.MD.3		• addition, subtraction, equation	• Unit 7 Lesson 12,14	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments
Objective: 2: Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end. Understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.					
• 1.MD.2		• addition, subtraction, equation	• Unit 7 Lesson 13,14	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments

Area: Measurement and Data

Big Idea: Tell and write time.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Tell and write time in hours and half-hours using analog and digital clocks.					
• 1.MD.3		• hour, half-hour	• Unit 7 Lesson 1-5, 14	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments

Area: Measurement and Data

Big Idea: Represent and interpret data.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Organize, represent, and interpret data with up to three categories. Ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.					
• 1.MD.4		• data	• Unit 6 Lesson 1-5,9	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments

Area: Geometry

Big Idea: Reason with shapes and their attributes.

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size). Build and draw shapes to possess defining attributes.					
• 1.G.1		• shapes	• Unit 7 Lesson 6-11	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments
Objective: 2: Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Note: Students do not need to learn formal names such as "right rectangular prism.")					
• 1.G.2		• shape names	• Unit 7 Lesson 9-11	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments
Objective: 3: Partition circles and rectangles into two and four equal shares; describe the shares using the words halves, fourths, and quarters; and use the phrases half of, fourth of, and quarter of. Describe the whole as two of or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.					
• 1.G.3		• equal, equal shares, halves, quarters	• Unit 7 Lesson 8,9,14	• Math Expressions Teacher Manual, Math Expressions Student Activity Book, Student Homework and Remembering	• Math Expression Assessments