Grade 1

Course Overview

In **Math Expressions**, teachers create an inquiry based environment and encourage constructive discussion. Students invent, question, model, represent and explore, but also learn and practice important math strategies. Through daily "Math Talk", students explain their methods and, in turn, become more fluent in them. Mathematics content and models connect and build across the grade levels in **Math Expressions** to provide a progression of teaching and learning that aligns precisely with the Common Core State Standards for Mathematics.

Scope and Sequence

Timeframe	Unit	Instructional Topics
19 Day(s)	Unit 1- Partners and Number Patterns Through 10	1.1: Literacy Connection 1.2: Preview and Pre-Assess 1.3: Numbers 1-10 1.4: Patterns with Partners Through 10 1.5: Review and Assess
26 Day(s)	Unit 2- Addition and Subtraction Strategies	2.1: Preview and Pre-Assess 2.2: Represent Addition Situations 2.3: Solve Addition Equations 2.4: Solve Subtraction Equations 2.5: Equation Exploration 2.6: Review and Assess
21 Day(s)	Unit 3- Unknown Numbers in Addition and Subtraction	3.1: Preview and Pre-Assess 3.2: Counting On with Addition Situations 3.3: Counting On with Subtraction Situations 3.4: Mixed Story Problems 3.5: Review and Assess
26 Day(s)	Unit 4- Place Value Concepts	4.1: Preview and Pre-Assess 4.2: Tens and Teens 4.3: Place Value to 100 4.4: Addition Strategies 4.5: Review and Assess
21 Day(s)	Unit 5- Place Value Situations	5.1: Preview and Pre-Assess 5.2: Teen Solution Methods 5.3: Find Patterns and Relationships 5.4: Review and Assess

17 Day(s)	Unit 6- Comparisons and Data	6.1: Preview and Pre-Assess 6.2: Represent and Compare Data 6.3: Compare Problem Types 6.4: Review and Assess
25 Day(s)	Unit 7- Geometry, Measurement, and Equal Shares	7.1: Preview and Pre-Assess 7.2: Tell and Write Time 7.3: Shapes and Equal Shapes 7.4: Measure and Order by Length 7.5: Review and Assess
12 Day(s)	Unit 8- Two Digit Addition	8.1: Preview and Pre-Assess 8.2: Add 2-Digit Numbers 8.3: Review and Assess

UNIT 1: Partners and Number Patterns Through 10

Duration of Unit: 19 Day(s)

Description of Unit: This unit focuses on the 1-more and 1-less pattern, first with counting numbers, then with finding partners, and finally with addition and subtraction.

Essential Questions and/or Enduring Understandings:

- 1.1: Literacy Connection (ongoing)
- 1.2: Preview and Pre-Assess
- 1.3: Numbers 1-10
- 1.4: Patterns with Partners Through 10
- 1.5: Review and Assess

Essential Standards Students will be able to add up to sums of 20,

ESSENTIAL Standards	Topics	Learning Targets
	1.1	Students will participate in collaborative conversations with diverse partners about kindergarten math topics with scaffolded support from adults.
	1.2	Students will demonstrate prior knowledge and application of number patterns through 10.
		Students will demonstrate prior knowledge and application of addition and subtraction within 10.
		Students will demonstrate prior knowledge and application of solving for an unknown.
		Students will demonstrate prior knowledge and application of telling and showing story problems.
	1.3	Students will represent numbers 1-10.
		Students will visualize and represent numbers 1-10.
		Students will complete formative assessment - Quick Quiz 1.

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	1.4	Students will add and subtract within 5.
		Students will add and subtract within 6 .
		Students will add and subtract within 7.
		Students will add and subtract within 8.
		Students will add and subtract within 9.
		Students will add and subtract within 10.
		Students will apply new skills to real-world problem-solving situations.
		Students will complete formative assessment - Quick Quiz 2.
	1.5	Students will find partners of numbers through 10.
		Students will use properties to add and subtract within 10.
		Students will solve addition and subtraction equations with unknowns.
		Students will relate counting to addition and subtraction.
		Students will tell and show addition and subtraction story problems.
NICE TO KNOW Standards		Learning Targets

UNIT 2: Partners and Number Patterns Through 10

Duration of Unit: 19 Day(s)

Description of Unit: Children begin to recognize addition and subtraction problem types and write equations to represent situations. They discuss different types of equations, decide if they are true or false, and develop strategies for adding and subtracting within 10.

Essential Questions and/or Enduring Understandings:

2.1: Preview and Pre-Assess

2.2: Represent Addition Situations

2.3: Solve Addition Equations

2.4: Solve Subtraction Equations

2.5: Equation Exploration

2.6: Review and Assess

Essential Standards Students will be able to add up to sums of 20, Students will be able to subtract from 20

ESSENTIAL Standards	Topics	Learning Targets
	2.1	Students will demonstrate prior knowledge and application of adding and subtracting within 10.
		Students will demonstrate prior knowledge and application of solving for unknowns.
		Students will demonstrate prior knowledge and application of relating addition and subtraction.
		Students will demonstrate prior knowledge and application of the equal sign and determine true/false equations.
		Students will demonstrate prior knowledge and application of addition and subtraction story problems.
	2.2	Students will use addition to solve story problems and visualize equality.

	Students will use = to write addition equations and determine if an equation is true.
	Students will represent and solve addition story problems and determine if addition equations are true.
	Students will complete formative assessment - Quick Quiz 1.
2.3	Students will find the total in addition equations.
	Students will count on from the greater number to add.
	Students will solve addition equations.
	Students will complete formative assessment - Quick Quiz 2.
2.4	Students will solve subtraction problems and equations.
	Students will represent and solve subtraction problems, and write subtraction equations.
	Students will solve subtraction problems and write and solve subtraction equations.
	Students will write and solve subtraction equations and problems.
	Students will complete formative assessment - Quick Quiz 3.
2.5	Students will relate addition and subtraction and solve vertical forms.
	Students will write and solve addition and subtraction equations and vertical forms.
	Students will apply new skills to real-world problem-solving situations.
	Students will complete formative assessment - Quick Quiz 4.
2.6	Students will relate addition and subtraction.
	Students will represent and solve addition and subtraction story problems.
	Students will show the meaning of the equal sign and determine if addition and subtraction equations are true or false.
	Students will solve addition and subtraction equations with unknowns.

	Students will use strategies to add and subtract within 10.
NICE TO KNOW Standards	Learning Targets

UNIT 3: Unknown Numbers in Addition and Subtraction

Duration of Unit: 21 Day(s)

Description of Unit: This unit focuses on unknown partners represented as both addition and subtraction situations. Children adapt strategies for finding an unknown total to finding an unknown partner. They write both equations and answers with labels for story problems.

Essential Questions and/or Enduring Understandings:

- 3.1: Preview and Pre-Assess
- 3.2: Counting On with Addition Situations
- 3.3: Counting On with Subtraction Situations
- 3.4: Mixed Story Problems
- 3.5: Review and Assess

Essential Standards: Students will be able to add up to sums of 20, Students will be able to subtract from 20, Students will demonstrate problem solving strategies in story problems.

ESSENTIAL Standards	Topics	Learning Targets
	3.1	Students will demonstrate prior knowledge and application for use of strategies to add and subtract within 10.
		Students will demonstrate prior knowledge and application of ways to represent and solve subtraction problems and write subtraction equations.
		Students will demonstrate prior knowledge and application of ways to show subtraction as an unknown partner situation.

		Students will demonstrate prior knowledge and application of ways to write and solve addition and subtraction equations with unknowns.
	3.2	Students will relate partners and totals and find unknown partners.
		Students will solve equations with unknown partners.
		Students will identify and solve unknown partners.
		Students will solve for unknown partners or totals in story problems and equations.
	3.3	Students will solve subtraction story problems and solve equations.
		Students will create and solve subtraction stories.
		Students will complete formative assessment - Quick Quiz 2.
	3.4	Students will model and relate addition and subtraction situations.
		Students will solve story problems with unknown partners and totals.
		Students will solve for unknown partners or totals in story problems and equations.
		Students will apply new skills to real-world problem-solving situations.
		Students will complete formative assessment - Quick Quiz 3.
	3.5	Students will use strategies to add and subtract within 10.
		Students will write and solve addition and subtraction equations with unknowns.
		Students will show subtraction as an unknown partner situation.
		Students will represent and solve addition and subtraction story problems.
NICE TO KNOW Standards		Learning Targets

UNIT 4: Place Value Concepts

Duration of Unit: 26 Day(s)

Description of Unit: Children explore tens and ones grouping using physical groupings and math drawings. Activities provide repeated experience in building 2-digit numbers with strong visual support. Children extend place value concepts to add with 1-and 2-digit numbers.

Essential Questions and/or Enduring Understandings:

- 4.1: Preview and Pre-Assess
- 4.2: Tens and Teens
- 4.3: Place Value to 100
- 4.4: Addition Strategies
- 4.5: Review and Assess

Essential Standards: Students will understand place value to the tens place, Students will compare two two-digit numbers, Students will be able to add up to sums of 20, Students will demonstrate problem solving strategies in story problems.

ESSENTIAL Standards	Topics	Learning Targets
	4.1	Students will demonstrate prior knowledge and application of adding tens and ones.
		Students will demonstrate prior knowledge and application of how to compare two 2-digit numbers.
		Students will demonstrate prior knowledge and application of how to use strategies to add within 20.
		Students will demonstrate prior knowledge and application of reading, writing, and representing 2-digit numbers as tens and ones.
		Students will add and solve story problems to find teen totals.

4.2	Students will recognize 10 as a group of ten ones and count decade numbers as groups of ten.
	Students will recognize that teen numbers are composed of ten and extra ones.
	Students will model and compare teen numbers.
	Students will represent teen totals as a group of ten and extra ones.
	Students will add and solve story problems to find teen totals.
	Students will add with doubles.
	Students will complete formative assessment - Quick Quiz 1.
4.3	Students will represent 2-digit numbers as tens and ones.
	Students will identify the tens and ones in 2-digit numbers and read and write numerals and number words.
	Students will add a 1-digit number to a 2-digit number.
	Students will use tens and ones to add.
	Students will identify tens and ones in 2-digit numbers and add with tens and ones.
	Students will compare two 2-digit numbers.
	Students will complete formative assessment - Quick Quiz 2.
4.4	Students will distinguish between adding ones and adding tens, and add 1 to 10 to other numbers.
	Students will add ones or tens to decade numbers.
	Students will add a 1-digit number to a 2-digit number.
	Students will count on into the next decade and compare 2-digit numbers.
	Students will add with tens and ones.
	Students will apply new skills to real-world problem-solving situations.

		Students will complete formative assessment - Quick Quiz 3.
	4.5	Students will read, write, and represent 2-digit numbers as tens and ones.
		Students will compare two 2-digit numbers.
		Students will add tens and ones.
		Students will use strategies to add within 20.
		Students will use addition within 20 to solve story problems.
NICE TO KNOW Standards		Learning Targets

UNIT 5: Place Value Situations

Duration of Unit: 21 Day(s)

Description of Unit: This unit extends the strategies children have gained for unknown partners in addition and subtraction situations. Problem types, models, and drawings are all woven together in this unit so children can access prior knowledge as they work with greater numbers.

Essential Questions and/or Enduring Understandings:

- 5.1: Preview and Pre-Assess
- 5.2: Teen Solution Methods
- 5.3: Find Patterns and Relationships
- 5.4: Review and Assess

Essential Standards: Students will understand place value to the tens place, Students will be able to add up to sums of 20, Students will be able to subtract from 20, Students will demonstrate problem solving strategies in story problems, Students will be able to count to 120 by ones

ESSENTIAL Standards	Topics	Learning Targets
Standards		

5.1	Students will demonstrate prior knowledge and application of how to add and subtract tens
	Students will demonstrate prior knowledge and application of how to add three numbers to solve story problems
	Students will demonstrate prior knowledge and application of how to count, read, and write numerals to 120.
	Students will demonstrate prior knowledge and application of how to use addition and subtraction within 20 to solve story problems.
	Students will demonstrate prior knowledge and application of how to use strategies to add and subtract within 20.
5.2	Students will solve teen addition problems with unknown partners.
	Students will solve teen subtraction.
	Students will solve and write addition and subtraction problems to find teen totals and unknown partners.
	Students will solve teen addition and subtraction problems with various unknowns.
	Students will create and solve story problems to find unknown partners and teen totals.
	Students will solve problems with three addends.
	Students will complete formative assessment - Quick Quiz 1.
5.3	Students will count large quantities of objects by tens and ones.
	Students will count and write numbers to 120 and find 10 more and 10 less than a given number.
	Students will add tens to 2-digit numbers and subtract tens from decade numbers.
	Students will add and subtract decade numbers.
	Students will apply new skills to real-world problem-solving situations.
	Students will complete formative assessment - Quick Quiz 2.

	5.4	Students will count, read, and write numerals to 120.
		Students will add and subtract tens.
		Students will use strategies to add and subtract within 20.
		Students will use addition and subtraction within 20 to solve story problems.
		Students will add three numbers to solve story problems.
NICE TO KNOW Standards		Learning Targets

UNIT 6: Comparisons and Data

Duration of Unit: 17 Day(s)

Description of Unit: Children organize, represent, and interpret data. They build upon what they know about comparing numbers to develop comparison statements for a set of data, and solve comparison story problems.

Essential Questions and/or Enduring Understandings:

6.1: Preview and Pre-Assess

6.2: Represent and Compare Data

6.3: Compare Problem Types

6.4: Review and Assess

Essential Standards: Students will be able to add up to sums of 20, Students will be able to subtract from 20, Students will demonstrate problem solving strategies in story problems, Students will read and interpret a graph.

ESSENTIAL Standards	Topics	Learning Targets
	6.1	Students will demonstrate prior knowledge and application of ways to ask and answer questions about

		data.
		Students will demonstrate prior knowledge and application of ways to organize, represent, and interpret data.
		Students will demonstrate prior knowledge and application of ways to use addition and subtraction within 20 to solve <i>Compare</i> problems.
	6.2	Students will organize and represent categorical data.
		Students will organize, represent, and interpret data.
		Students will organize, represent, and interpret data with three categories.
		Students will collect, organize, represent and interpret data with three categories.
		Students will complete formative assessment - Quick Quiz 1.
	6.3	Students will Solve Compare problems.
		Students will Apply new skills to real-world problem-solving situations.
		Students will complete formative assessment - Quick Quiz 2.
	6.4	Students will organize, represent, and interpret data.
		Students will ask and answer questions about data.
		Students will use addition and subtraction within 20 to solve Compare problems.
NICE TO KNOW Standards		Learning Targets

UNIT 7: Geometry, Measurement, and Equal Shares

Duration of Unit: 25 Day(s)

Description of Unit: Children distinguish between defining and non-defining attributes of shapes and compose shapes. They also learn important basic concepts about length measurement. Measuring time units is also included.

Essential Questions and/or Enduring Understandings:

7.1: Preview and Pre-Assess

7.2: Tell and Write Time

7.3: Shapes and Equal Shapes

7.4: Measure and Order by Length

7.5: Review and Assess

Essential Standards: Identify and compose shapes (circles, rectangles, squares, trapezoids, triangles, half circles, and quarter circles), Students will measure using standard linear units, Students will tell time to the hour and half hour

ESSENTIAL Standards	Topics	Learning Targets
	7.1	Students will demonstrate prior knowledge and application of how to compose shapes to create a composite shape.
		Students will demonstrate prior knowledge and application of how to distinguish between defining attributes and non-defining attributes of shapes.

	Students will demonstrate prior knowledge and application of how to find the length of an object in length units.
	Students will demonstrate prior knowledge and application of how to order three objects by length.
	Students will demonstrate prior knowledge and application of how to partition shapes into two and four equal shares.
	Students will demonstrate prior knowledge and application of how to tell and write time in hours and half-hours.
7.2	Students will tell and write time in hours.
	Students will show, tell, and write time in hours.
	Students will tell and write time in half-hours.
	Students will tell and write time in hours and half-hours.
	Students will complete formative assessment - Quick Quiz 1.
7.3	Students will distinguish between defining and non-defining attributes of squares and other rectangles.
	Students will distinguish between defining and non-defining attributes of triangles and circles.
	Students will partition circles and rectangles into two or four equal shares.
	Students will compose 2-dimensional shapes, and compose new shapes from the composite shape.
	Students will identify attributes of 3-dimensional shapes and compose rectangular prisms.
	Students will compose 3-dimensional shapes, and compose new shapes from the composite shape.
	Students will partition shapes into two and four equal shares.
7.4	Students will apply new skills to real-world problem-solving situations.
	Students will compare and order objects by length.
	Students will measure objects with same-size length units.
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	7.5	Students will order three objects by length.
		Students will find the length of an object in length units.
		Students will tell and write time in hours and half-hours.
		Students will distinguish between defining attributes and non-defining attributes of shapes.
		Students will compose shapes to create a composite shape.
		Students will partition shapes into two and four equal shares.
NICE TO KNOW Standards		Learning Targets

UNIT 8: Two Digit Addition

Duration of Unit: 12 Day(s)

Description of Unit: In this unit, children use modeling skills, place values, and addition concepts to add with 2-digit numbers when grouping a ten is and is not required.

Essential Questions and/or Enduring Understandings:

- 8.1: Preview and Pre-Assess
- 8.2: Add 2-Digit Numbers
- 8.3: Review and Assess

Essential Standards: Students will understand place value to the tens place, Students will be able to add up to sums of 20

ESSENTIAL Standards	Topics	Learning Targets

	8.1	Students will demonstrate prior knowledge and application of how to add 2-digit numbers.
		Students will demonstrate prior knowledge and application of how to add 2-digit numbers in a real world context.
		Students will demonstrate prior knowledge and application of how to add a 2-digit number and a 1-digit number.
		Students will demonstrate prior knowledge and application of how to add a 2-digit number and a multiple of 10.
	8.2	Students will add 2-digit numbers.
		Students will apply new skills to real-world problem-solving situations.
	8.3	Students will add a 2-digit number and a 1-digit number.
		Students will add a 2-digit number and a multiple of 10.
		Students will add 2-digit numbers.
		Students will add 2-digit numbers in a real world context.
NICE TO KNOW Standards		Learning Targets