

Course Description: This curriculum has been written to align with the revised MO Learning Standards for Math (approved by the state board of education in April of 2016). Eureka Math continues to be our primary math resource, and this curriculum has been written as a guide for utilizing this resource to teach the revised MO Learning Standards for Math.

Second Grade Math Scope and Sequence

	Module	Timeframe
1	Sums and Differences to 20	2 weeks
2	Addition and Subtraction of Length Units	2 weeks
3	Place Value, Counting and Comparison of Numbers to 1,000	5 weeks
4	Addition and Subtraction within 200 with Word Problems to 100	5 weeks
5	Addition and Subtraction within 1,000 with Word Problems to 100	5 weeks
6	Foundations of Multiplication and Division	5 weeks
7	Problem Solving with Length, Money, and Data	6 weeks
8	Time, Shapes, and Fractions of Equal Parts of Shapes	4 weeks

Module 3 Place Value, Counting and Comparison of Numbers to 1,000
<p>Standards addressed:</p> <p>2.NBT.A Understand the place value of three digit numbers.</p> <p>2.NBT.A.1 Understand three-digit numbers are composed of hundreds, tens and ones.</p> <p>2.NBT.A.2 Understand that 100 can be thought of as 10 tens - called a "hundred".</p> <p>2.NBT.A.3 Count within 1000 by 1s, 10s and 100s starting with any number.</p> <p>2.NBT.A.4 Read and write numbers to 1000 using number names, base-ten numerals and expanded form.</p> <p>2.NBT.A.5 Compare two three-digit numbers using the symbols $>$, $=$ or $<$.</p> <p>2.NBT.B.10 Add or subtract mentally 10 or 100 to or from a given number within 1000.</p> <p>2.NBT.C.11 Write and solve problems involving addition and subtraction within 100.</p>

Supporting standards:		
Essential Questions: How do you know the value of a digit? How can a number be described as hundreds, tens, or ones? How can you show a number in different ways?		
Learning Targets: Students will be able to know the value of a digit in hundreds, tens, or ones. Students will be able to write numbers in multiple ways.		
Content Vocabulary: place value, hundreds, tens, ones, standard form, model form, expanded form, unit form, word/written form		
Standard(s)	Topic	Number of Days
2.NBT.A.1 2.NBT.A.2	Forming Base Ten Units of Ten, a Hundred, and a Thousand	1
2.NBT.A.1 2.NBT.A.2 2.NBT.A.3	Understanding Place Value Units of One, Ten, and a Hundred	2
2.NBT.A.1 2.NBT.A.2 2.NBT.A.3 2.NBT.A.4	Three-Digit Numbers in Unit, Standard, Expanded, and Word Forms	4
2.NBT.A.1 2.NBT.A.2 2.NBT.A.3 2.NBT.A.4 2.NBT.B.10	Modeling Base Ten Numbers Within 1,000 with Money	3
	Mid Module Assessment	2
2.NBT.A	Modeling Numbers Within 1,000 with Place Value Disks	5
2.NBT.A.5	Comparing Two Three-Digit Numbers	3
2.NBT.A.3 2.NBT.A.10 2.NBT.C.11	Finding 1, 10, and 100 More or Less than a Number	3
	End of Module Assessment	2

Module 1
Sums and Differences to 20

Standards addressed:

- 2.NBT.B.6 Demonstrate fluency with addition and subtraction within 100.
2.NBT.C.11 Write and solve problems involving addition and subtraction within 100.
2.RA.A.1 Demonstrate fluency with addition and subtraction within 20.

Supporting Standards:

Essential Questions:

How do we use addition and subtraction to solve problems?

Learning Targets:

Students will use addition and subtraction to solve problems within 100.

Content Vocabulary: addition, subtraction, sum, difference, strategy

Standard(s)	Topic	Number of Days
2.RA.A.1	Foundations for Fluency with Sums and Differences Within 100	2
2.NBT.B.6 2.NBT.C.11	Initiating Fluency with Addition and Subtraction Within 100	6
	End of Module Assessment	2

Module 2
Addition and Subtraction of Length Units

Standards addressed:

- 2.GM.B.4 Measure the length of an object by selecting and using appropriate tools.
2.GM.B.5 Analyze the results of measuring the same object with different units.
2.GM.B.6 Estimate lengths using units of inches, feet, yards, centimeters and meters.
2.GM.B.7 Measure to determine how much longer one object is than another.

Supporting standards:

- 2.GM.C.8 Use addition and subtraction within 100 to solve problems involving lengths that are given in the same units.
2.GM.C.9 Represent whole numbers as lengths on a number line, and represent whole-number sums and differences within 100 on a number line.

Essential Questions:

How do you use metric measurement in the real world?
How do you measure lengths using metric units?
How do you compare metric lengths of objects?

Learning Targets:

Students will be able to measure correctly using standard and nonstandard units.
Students will be able to compare metric lengths of objects.

Content Vocabulary: measure, length, ruler, standard/nonstandard, centimeters, meter, unit, object		
Standard(s)	Topic	Number of Days
2.GM.B.4	Understand Concepts About the Ruler	3
2.GM.B.4 2.GM.B.6	Measure and Estimate Length Using Different Measurement Tools	2
2.GM.B.4 2.GM.B.6 2.GM.B.7	Measure and Compare Lengths Using Different Length Units	2
2.GM.B.4 2.GM.B.6 2.GM.B.7 2.GM.B.8 2.GM.B.9	Relate Addition and Subtraction to Length	3
	End of Module Assessment	2

Module 4 Addition and Subtraction within 200 with Word Problems to 200		
Standards addressed: 2.NBT.B.6 Demonstrate fluency with addition and subtraction within 100. 2.NBT.B.8 Add or subtract within 1000, and justify the solution. 2.NBT.B.9 Use the relationship between addition and subtraction to solve problems.		
Essential Questions: How are addition and subtraction related? When do you regroup in addition and subtraction? How can drawing a diagram help you solve a problem?		
Learning Targets: Students will be able to relate addition to subtraction and vice versa. Students will know when to regroup using addition and subtraction. Students will effectively use a place value chart to solve addition and subtraction problems.		
Content Vocabulary: regroup, addition, subtraction, sum, difference		
2.NBT.B.6 2.NBT.B.8 2.NBT.B.9	Sums and Differences within 100	5 days
2.NBT.B.6	Strategies for Composing a Ten	5 days

2.NBT.B.8		
2.NBT.B.6 2.NBT.B.8	Strategies for Decomposing a Ten	6 days
	Mid-Module Assessment and Rubric	2 days
2.NBT.B.6 2.NBT.B.8	Strategies for Composing Tens and Hundreds	6 days
2.NBT.B.6 2.NBT.B.8	Strategies for Decomposing Tens and Hundreds	6 days
2.NBT.B.6 2.NBT.B.8 2.NBT.B.9	Student Explanations of Written Methods	3 days
	End of Module Assessment	2 days

Module 5		
Addition and Subtraction within 1,000 with Word Problems to 100		
Standards addressed: 2.NBT.B.6 Demonstrate fluency with addition and subtraction within 100. 2.NBT.B.8 Add or subtract within 1000, and justify the solution. 2.NBT.B.9 Use the relationship between addition and subtraction to solve problems.		
Supporting standards:		
Essential Questions: How are addition and subtraction related? When do you regroup in addition and subtraction? How can drawing a diagram help you solve a problem?		
Learning Targets: Students will be able to relate addition to subtraction and vice versa. Students will know when to regroup using addition and subtraction. Students will effectively use a place value chart to solve addition and subtraction problems.		
Content Vocabulary: regroup, addition, subtraction, sum, difference		
Standard(s)	Topic	Number of Days
2.NBT.B.6 2.NBT.B.8 2.NBT.B.9	Strategies for Adding and Subtracting Within 1,000	7
2.NBT.B.6 2.NBT.B.8	Strategies for Composing Tens and Hundreds Within 1,000	5

	Mid Module Assessment	3
2.NBT.B.6 2.NBT.B.8	Strategies for Decomposing Tens and Hundreds Within 1,000	6
2.NBT.B.6 2.NBT.B.8 2.NBT.B.9	Student Explanations for Choice of Solution Methods	2
	End of Module Assessment	2

Module 6 Foundations of Multiplication and Division		
Standards addressed:		
<p>2.GM.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of squares.</p> <p>2.RA.B.2 Determine if a set of objects has an odd or even number of members.</p> <p>a. Count by 2 to 100 starting with any even number.</p> <p>b. Express even numbers as pairings/groups of 2, and write an expression to represent the number using addends of 2.</p> <p>c. Express even numbers as being composed of equal groups and write an expression to represent the number with 2 equal addends.</p> <p>2.RA.B.3 Find the total number of objects arranged in a rectangular array with up to 5 rows and 5 columns, and write an equation to represent the total as a sum of equal addends.</p>		
Supporting Standards:		
<p>2.NBT.A.3 Count within 1000 by 1s, 10s and 100s starting with any number.</p> <p>2.NBT.B.7 Add up to four two-digit numbers.</p>		
Essential Questions:		
<p>What is the difference between a row and a column?</p> <p>How is repeated addition related to multiplication?</p> <p>What is an array?</p> <p>How do you create an equal group?</p>		
Learning Targets:		
<p>Students will be able to differentiate between a row and a column.</p> <p>Students will be able to use repeated addition equations to relate to multiplication.</p> <p>Students will describe and draw arrays.</p> <p>Students will create equal groupings.</p>		
Content Vocabulary: multiply/multiplication, objects, group, rows, columns, equal, array, repeated addition equation		
Standard(s)	Topic	Number of Days
2.RA.B.3 2.NBT.A.3 2.NBT.A.7	Formation of Equal Groups	4
2.RA.B.3	Arrays and Equal Groups	5

2.NBT.A.3		
	Mid Module Assessment	2
2.RA.B.3 2.GM.A.2	Rectangular Arrays as a Foundation for Multiplication and Division	7
2.RA.B.2	The Meaning of Even and Odd Numbers	4
	End of Module Assessment	1

Module 7 Problem Solving with Length, Money and Data

Standards addressed:

- 2.GM.B.4 Measure the length of an object by selecting and using appropriate tools.
- 2.GM.B.5 Analyze the results of measuring the same object with different units.
- 2.GM.B.6 Estimate lengths using units of inches, feet, yards, centimeters and meters.
- 2.GM.B.7 Measure to determine how much longer one object is than another.
- 2.GM.C.8 Use addition and subtraction within 100 to solve problems involving lengths that are given in the same units.
- 2.GM.C.9 Represent whole numbers as lengths on a number line, and represent whole-number sums and differences within 100 on a number line.
- 2.GM.D.12 Find the value of combinations of dollar bills, quarters, dimes, nickels and pennies, using \$ and ¢ appropriately.
- 2.GM.D.13 Find combinations of coins that equal a given amount.
- 2.DS.A.1 Create a line plot to represent a set of numeric data, given a horizontal scale marked in whole numbers.
- 2.DS.A.2 Generate measurement data to the nearest whole unit, and display the data in a line plot.
- 2.DS.A.3 Draw a picture graph or a bar graph to represent a data set with up to four categories.
- 2.DS.A.4 Solve problems using information presented in line plots, picture graphs and bar graphs.
- 2.DS.A.5 Draw conclusions from line plots, picture graphs and bar graphs.

Supporting Standards:

- 2.NBT.A.3 Count within 1000 by 1s, 10s and 100s starting with any number.
- 2.NBT.A.5 Compare two three-digit numbers using the symbols $>$, $=$ or $<$.
- 2.NBT.B.6 Demonstrate fluency with addition and subtraction within 100.
- 2.NBT.B.7 Add up to four two-digit numbers.

Essential Questions:

- How do you use customary measurement in the real world?
- How do you measure customary lengths?
- How do you compare lengths of objects using customary units?
- What are the names and values of coins and bills?
- How do you find the total value of coins and bills?
- What is data and how can it be compared?
- What is the difference between a bar graph, picture graph, and line plot graph?

Learning Targets:

- Students will be able to measure correctly using standard and nonstandard units.
- Students will be able to compare customary lengths of objects.
- Students will be able to identify the names and values of coins and bills.
- Students will be able to count a collection of coins and bills.
- Students will be able to use a bar graph, picture graph, and line plot graph to compare data.

Content Vocabulary: measure/measurement, length, ruler, standard/nonstandard, inches, feet, yards, object, unit; coin, bills, quarter, dime, nickel, penny, dollar, cent; analyze, line plot, pictograph, bar graph, data		
2.GM.D.12 2.GM.D.13 2.NBT.A.3 2.NBT.B.6 2.NBT.B.7	Problem Solving with Coins and Bills	8
	Mid Module Assessment	2
2.GM.B.4	Creating an Inch Ruler	2
2.GM.B.4 2.GM.B.5 2.GM.B.6 2.GM.B.7	Measuring and Estimating Length Using Customary and Metric Units	4
2.GM.C.8 2.GM.C.9 2.NBT.A.3 2.NBT.A.5 2.NBT.B.6	Problem Solving with Customary and Metric Units	3
2.GM.C.9 2.DS.A.1 2.DS.A.2 2.DS.A.4 2.DS.A.5 2.GM.B.4 2.GM.C.8	Displaying Measurement Data	4
	End of Module Assessment	2

Module 8
Time, Shapes, and Fractions as Equal Parts of Shapes
<p>Standards addressed:</p> <p>2.GM.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or sides. Identify triangles, quadrilaterals, pentagons, hexagons, circles and cubes. Identify the faces of three-dimensional objects.</p> <p>2.GM.B.4 Measure the length of an object by selecting and using appropriate tools.</p> <p>2.GM.A.3 Partition circles and rectangles into two, three or four equal shares, and describe the shares and the whole. Demonstrate that equal shares of identical wholes need not have the same shape.</p> <p>2.GM.D.10 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p>

2.GM.D.11 Describe a time shown on a digital clock as representing hours and minutes, and relate a time shown on a digital clock to the same time on an analog clock.

Supporting Standards:

Essential Questions:

How do you tell time on an analog/digital clock to the five minutes?
 How do you show time on an analog/digital clock to the five minutes?
 What are the properties of two-dimensional and three-dimensional shapes?
 How do you partition shapes to show equal shares?
 What are halves, thirds, and fourths of a whole?

Learning Targets:

Students will be able to tell time on an analog/digital clock to the five minutes.
 Students will be able to draw hands on an analog clock to five minutes.
 Students will be able to identify two-dimensional and three-dimensional shapes and describe their properties.
 Students will be able to partition shapes into halves, thirds, and fourths.

Content Vocabulary: shapes, sides, angle, vertices/points, triangle, rectangle, square, rhombus, quadrilateral, pentagon, hexagon, cube; partition, fraction, shade, equal, parts, whole; analog, digital, hour, minute, second, hands, A.M., P.M.

Standard(s)	Topic	Number of Days
2.GM.A.1 2.GM.B.4	Attributes of Geometric Shapes	5
2.GM.A.1 2.GM.A.3	Composite Shapes and Fraction Concepts	3
	Mid Module Assessment	2
2.GM.A.1 2.GM.A.3	Halves, Thirds, and Fourths of Circles and Rectangles	4
2.GM.A.3 2.GM.D.10 2.GM.D.11 2.NBT.A.3 2.NBT.A.6 2.NBT.A.7	Application of Fractions to Tell Time	4
	End of Module Assessment	2