

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.

Fourth Grade Scope and Sequence

	Module	Timeframe
1	Place Value, Rounding, and Algorithms for Addition and Subtraction	7 weeks
2	Unit Conversions	7 days
3	Multi-Digit Multiplication and Division	7 weeks
4	Angle Measure and Plane Figures	4 weeks
5	Fraction Equivalence, Ordering and Operations	6 weeks
6	Decimal Fractions	3 weeks
7	Graphing	2 weeks

Module 1 Place Value, Rounding, and Algorithms for Addition and Subtraction
<p>Standards addressed:</p> <p>4.NBT.A.1 Round multi-digit whole numbers to any place.</p> <p>4.RA.A.2 Solve multi-step whole number problems involving the four operations and variables and using estimation to interpret the reasonableness of the answer.</p> <p>4.NBT.A.2 Read, write and identify multi-digit whole numbers up to one million using number names, base ten numerals and expanded form.</p> <p>4.NBT.A.3 Compare two multi-digit numbers using the symbols $>$, $=$ or $<$, and justify the solution.</p> <p>4.NBT.A.4 Understand that in a multi-digit whole number, a digit represents 10 times what it would represent in the place to its right.</p> <p>4.NBT.A.5 Demonstrate fluency with addition and subtraction of whole numbers.</p> <p>Supporting Standards:</p>
<p>Essential Questions:</p> <p>How do we use place value rules to show an understanding of multi-digit numbers through 1,000,000?</p>

How does understanding the place value system help with rounding and comparing whole numbers?
How does the place value system help with solving multi-step addition and subtraction problems?

Learning Targets:

I can use four operations with whole numbers to solve problems.
I understand the value of numbers in a multi-digit whole number.

Content Vocabulary:

Ten thousands, hundred thousands, millions, ten millions, hundred millions, =, <, >, algorithm, regrouping, trading, decompose, digit, equation, estimate, expanded form, place value, rounding, standard form, sum, tape diagram, word form

Standard(s)	Topic	Number of Days
4.NBT.A.2 4.NBT.A.4	Place Value of Multi-Digit Whole Numbers	5
4.NBT.A.3	Comparing Multi-Digit Whole Numbers	2
4.NBT.A.1	Rounding Multi-Digit Whole Numbers	4
	Mid-Module Assessment	2
4.RA.A.2 4.NBT.A.5	Multi-Digit Whole Number Addition	3
4.RA.A.2 4.NBT.A.5	Multi-Digit Whole Number Subtraction	3
4.RA.A.2 4.NBT.A.5	Addition and Subtraction Word Problems	3
	End of Module Assessment	3

Module 2 Unit Conversions

Standards addressed:

4.GM.C.6 Know relative sizes of measurement units within one system of units.

a. Convert measurements in a larger unit in terms of a smaller unit.

4.GM.C.7 Use the four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects and money.

Supporting Standards:

Essential Questions:

How can place value knowledge be used to convert between units? How can conversion of measurement be used to solve problems?

How do we compare & convert units of measurement using the metric system?

Learning Targets:

I can convert measurements into different units.

Content Vocabulary:

Balance scale, centimeter ruler, meter stick, convert, kilometer, mass, milliliter, mixed units, capacity, distance, equivalent, kilogram, length, liter, measurement, meter, weight,

Standard(s)	Topic	Number of Days
4.GM.C.6 4.GM.C.7	Metric Unit Conversions	3
4.GM.C.6 4.GM.C.7	Application of Metric Unit Conversions	2
	End of Module Assessment	2

Module 3

Multi-Digit Multiplication and Division

Standards addressed:

- 4.RA.A.1** Multiply or divide to solve problems involving a multiplicative comparison.
- 4.RA.A.2** Solve multi-step whole number problems involving the four operations and variables and using estimation to interpret the reasonableness of the answer.
- 4.RA.A.3** Solve whole number division problems involving variables in which remainders need to be interpreted, and justify the solution.
- 4.RA.B.4** Recognize that a whole number is a multiple of each of its factors and find the multiples for a given whole number.
- 4.RA.B.5** Determine if a whole number within 100 is composite or prime, and find all factor pairs for whole numbers within 100.
- 4.NBT.A.4** Understand that in a multi-digit whole number, a digit represents 10 times what it would represent in the place to its right.
- 4.NBT.A.6** Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, and justify the solution.
- 4.NBT.A.7** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, and justify the solution.
- 4.GM.C.8** Apply the area and perimeter formulas for rectangles to solve problems.

Supporting Standards:**Essential Questions:**

How can we use place value understanding and visual representation to solve multiplication and division problems?

What is an efficient strategy for multiplying numbers?

What is an efficient strategy for dividing numbers?

Learning Targets:

I can use the four operations to solve problems.

I can determine the factors of whole numbers.

I can perform multi-digit arithmetic.

Content Vocabulary: Associative Property, Composite number, distributive property, Divisible, Divisor, Long division, partial product, prime number, remainder, product, quotient, factors, area, area model, array, multiple

Standard(s)	Topic	Number of Days
4.RA.A.1 4.GM.C.8	Multiplicative Comparison Word Problems	5
4.RA.A.1 4.NBT.A.4 4.NBT.A.6	Multiplication by 10, 100, and 1,000	3
4.RA.A.1 4.NBT.A.6	Multiplication of up to Four Digits by Single-Digit Numbers	5
4.RA.A.1 4.RA.A.2 4.NBT.A.6	Multiplication Word Problems	2
	Mid Module Assessment	2
4.RA.A.2 4.RA.A.3 4.NBT.A.7	Division of Tens and Ones with Successive Remainders	10
4.RA.B.4 4.RA.B.5	Reasoning with Divisibility	4
4.NBT.A.6 4.RA.A.2	Multiplication of Two-Digit by Two-Digit Numbers	2
	End of Module Assessment	2

<p align="center">Module 4 Angle Measure and Plane Figures</p>
<p>Standards addressed:</p> <p>4.GM.A.1 Draw and identify points, lines, line segments, rays, angles, perpendicular lines and parallel lines.</p> <p>4.GM.A.2 Classify two-dimensional shapes by their sides and/or angles.</p> <p>4.GM.A.3 Construct lines of symmetry for a two-dimensional figure.</p> <p>4.GM.B.4 Identify and estimate angles and their measure.</p> <p>4.GM.B.5 Draw and measure angles in whole-number degrees using a protractor.</p> <p>4.GM.B.6 Know relative sizes of measurement units within one system of units. a. Convert measurements in a larger unit in terms of a smaller unit.</p> <p>Supporting Standards:</p>
<p>Essential Questions:</p> <p>How can we use points, lines, line segments, rays, angles, perpendicular lines, and parallel lines to classify lines, figures and solve problems?</p> <p>How do we use our knowledge of angle measures, to create and solve equations to find unknown angle measures?</p> <p>How can an understanding of angles be used to explore relationships between lines (intersecting,</p>

perpendicular, and parallel)?

Learning Targets:

I can measure angles using a protractor.

I can determine the angle measurement of a missing angle.

I can classify two-dimensional figures based on parallel and perpendicular lines.

I can determine lines of symmetry.

Content Vocabulary:

Acute angle, acute triangle, adjacent angle, angle, degree, diagonal, equilateral triangle, figure, intersecting lines, isosceles triangle, line, line of symmetry, line segment, obtuse angle, obtuse triangle, parallel, perpendicular, point, protractor, ray, right angle, right triangle, scalene triangle, straight angle, supplementary angles, triangle, vertex, vertical angles, parallelogram, polygon, quadrilateral, rectangle, rhombus, square, sum, trapezoid

Standard(s)	Topic	Number of Days
4.GM.A.1	Lines and Angles	5
4.GM.B.5 4.GM.B.6	Angle Measurement	4
	Mid Module Assessment	3
4.GM.A.1 4.GM.A.2 4.GM.A.3	Two-Dimensional Figures and Symmetry	3
4.GM.A.2	Defining Polygons	1
	End of Module Assessment	1

Module 5
Fraction Equivalence, Ordering and Operations

Standards addressed:

4.NF.A.1 Explain and/or illustrate why two fractions are equivalent.

4.NF.A.2 Recognize and generate equivalent fractions.

4.NF.A.3 Compare two fractions using the symbols $>$, $=$ or $<$, and justify the solution.

4.NF.B.4 Understand addition and subtraction of fractions as joining/composing and separating/decomposing parts referring to the same whole.

4.NF.B.5 Decompose a fraction into a sum of fractions with the same denominator and record each decomposition with an equation and justification.

4.NF.B.6 Solve problems involving adding and subtracting fractions and mixed numbers with like denominators.

4.NF.B.7 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

4.NF.B.8 Solve problems involving multiplication of a fraction by a whole number.

4.DS.A.1 Create a frequency table and/or line plot to display measurement data.

4.DS.A.3 Analyze the data in a frequency table, line plot, bar graph or picture graph.

Supporting standards:

Essential Questions: How do we use our knowledge of fractions to compare, order, and show equivalence and our knowledge of math operations to add, subtract, and multiply fractions?
 How can looking at patterns help us find equivalent fractions?
 What do equivalent fractions have to do with adding and subtracting fractions?
 How can fractions with different denominators be added together?
 How is repeated addition of fractions related to multiplication? Why is the unit fraction an essential concept in understanding fractions?

Learning Targets:

I can determine equivalent fractions and put the fractions in order..
 I can compare fractions with different denominators.

Content Vocabulary:

Common denominator, denominator, fraction, line plot, mixed number, numerator, compose, decompose, equivalent fractions, whole, mixed number, unit fraction

Standard(s)	Topic	Number of Days
4.NF.B.4 4.NF.B.5 4.NF.B.7 4.NF.B.8	Decomposition and Fraction Equivalence	3
4.NF.A.1 4.NF.A.2 4.NF.B.7	Fraction Equivalence Using Multiplication and Division	7
4.NF.A.3	Fraction Comparison	4
4.NF.B.4 4.NF.B.5	Fraction Addition and Subtraction	4
	Mid Module Assessment	2
4.DS.A.1 4.DS.A.3	Extending Fraction Equivalence to Fractions Greater Than 1	1
4.NF.B.4 4.NF.B.5 4.NF.B.6	Addition and Subtraction of Fractions by Decomposition	4
4.NF.B.7	Repeated Addition of Fractions as Multiplication	3
	End of Module Assessment	2

Module 6 Decimal Fractions

Standards addressed:

- 4.NF.A.1** Explain and/or illustrate why two fractions are equivalent.
4.NF.A.2 Recognize and generate equivalent fractions.
4.NF.C.9 Use decimal notation for fractions with denominators of 10 or 100.

- 4.NF.C.10** Understand that fractions and decimals are equivalent representations of the same quantity.
- 4.NF.C.11** Read, write and identify decimals to the hundredths place using number names, base ten numerals and expanded form.
- 4.NF.C.12** Compare two decimals to the hundredths place using the symbols $>$, $=$ or $<$, and justify the solution.
- 4.NBT.A.4** Understand that in a multi-digit whole number, a digit represents 10 times what it would represent the place to its right.
- 4.GM.C.6** Know relative sizes of measurement units within one system of units.
a. Convert measurements in a larger unit in terms of a smaller unit.
- 4.GM.C.7** Use the four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects and money.

Supporting Standards:

Essential Questions: How do we relate decimal notation to fractions, and compare decimal fractions?
How can an understanding of fractions help when exploring and representing tenths, or hundredths?
How can I use my understanding of decimals to compare decimals?
How can an understanding of decimal fractions help when solving real-world problems with money, distance, intervals of time, liquid volume, and weight of objects.

Learning Targets:

I can compare decimal fractions.
I can use decimal notation for fractions.

Content Vocabulary:

Decimal expanded form, decimal fraction, decimal number, decimal point, fraction expanded form, hundredth, tenth

Standard(s)	Topic	Number of Days
4.NF.C.9 4.NBT.A.4 4.GM.C.6	Exploration of Tenths	3
4.NF.A.1 4.NF.A.2 4.NF.C.9 4.NF.C.10 4.NF.C.11 4.NBT.A.4 4.GM.C.6	Tenths and Hundredths	3
4.NF.C.12 4.GM.C.6	Decimal Comparison	2
4.NF.C.10	Addition with Tenths and Hundredths	3
4.GM.C.7	Money Amounts as Decimal Numbers (if time)	2
	End of Module Assessment	2

Module 7

Exploring Measurement with Multiplication

Standards addressed:

4.RA.C.6 Generate a number pattern that follows a given rule.

4.RA.C.7 Use words or mathematical symbols to express a rule for a given pattern.

4.DS.A.1 Create a frequency table and/or line plot to display measurement data.

4.DS.A.3 Analyze the data in a frequency table, line plot, bar graph or picture graph.

Supporting Standards:

Essential Questions: How can we use our knowledge of multiplication to convert measurement units and find the number pattern that follows a given rule?

How can frequency tables and/or line plots be used to display measurement data?

How can we use frequency tables, line plots, bar graphs or picture graphs to understand and compare data being displayed?

Learning Targets:

I can solve multi-step word problems.

I can represent measurement quantities using diagrams.

Content Vocabulary:

Customary system of measurement, yard, pound, gallon, customary unit, foot, ounce, quart, cup, metric system of measurement, meter, kilogram, liter, metric unit, kilometer, gram, milliliter, pint, capacity, convert, distance, equivalent, hour, inch, dimensions, quantity, minute

Standard(s)	Topic	Number of Days
4.DS.A.1 4.DS.A.2 4.DS.A.3	Graphing	5
4.RA.C.6 4.RA.C.7	Patterns	6