Eureka Math² Level 3 Correlation to Connecticut Model Curriculum

Level 3: Units of Any Number			
Model Unit Name	**Model Unit Standards**	**Lessons**	**Pacing** *Lessons that address concepts in more than one unit are only counted once.*
Understanding Multiplication and Division	**3.OA.A.1**	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic A: Conceptual Understanding of Multiplication Lesson 2: Interpret equal groups as multiplication. Lesson 3: Relate multiplication to the array model. Lesson 4: Interpret the meaning of factors as number of groups or number in each group. **Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic C: Properties of Multiplication Lesson 10: Demonstrate the commutative property of multiplication using a unit of 2 and the array model. Lesson 11: Demonstrate the commutative property of multiplication using a unit of 4 and the array model. Lesson 13: Demonstrate the commutative property of multiplication using a unit of 3 and the array model. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic C: Analysis of Patterns Using Units of 9, 0, and 1 Lesson 15: Reason about and explain patterns of multiplication and division with units of 1 and 0. Lesson 18: Create multiplication and division word problems.	**19 days**

Understanding Multiplication and Division (cont.)	**3.OA.A.2**	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic B: Conceptual Understanding of Division Lesson 6: Explore measurement and partitive division by modeling concretely and drawing. Lesson 7: Model measurement and partitive division by drawing equal groups. Lesson 8: Model measurement and partitive division by drawing arrays. Lesson 9: Represent and solve division word problems using drawings and equations.	
	3.OA.A.2	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic D: Two Interpretations of Division Lesson 15: Model division as an unknown factor problem. Lesson 16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10. Lesson 17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10. Lesson 18: Represent and solve measurement and partitive division word problems. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic C: Analysis of Patterns Using Units of 9, 0, and 1 Lesson 18: Create multiplication and division word problems.	
	3.MD.B.3	**Module 2: Place Value Concepts Through Metric Measurement** Topic C: Simplifying Strategies to Find Sums and Differences Lesson 13: Collect and represent data in a scaled bar graph and solve related problems. **Module 6: Geometry, Measurement, and Data** Topic D: Collecting and Displaying Data Lesson 22: Generate categorical data and represent it by using a scaled picture graph. Lesson 23: Solve word problems by creating scaled picture graphs and scaled bar graphs.	**26 days**
Connecting and Using Multiplication and Division	**3.OA.A.3**	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic A: Conceptual Understanding of Multiplication Lesson 5: Represent and solve multiplication word problems by using drawings and equations. **Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic B: Conceptual Understanding of Division Lesson 8: Model measurement and partitive division by drawing arrays. Lesson 9: Represent and solve division word problems using drawings and equations.	

Connecting and Using Multiplication and Division (cont.)		**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic D: Two Interpretations of Division Lesson 16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10. Lesson 17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10. Lesson 18: Represent and solve measurement and partitive division word problems. **Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic E: Application of Multiplication and Division Concepts Lesson 22: Represent and solve two-step word problems using the properties of multiplication. Lesson 23: Represent and solve two-step word problems using drawings and equations. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic A: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8 Lesson 2: Count by units of 6 to multiply and divide by using arrays. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic B: Multiplication and Division Concepts with an Emphasis on the Unit of 7 Lesson 7: Count by units of 7 to multiply and divide by using arrays and tape diagrams. Lesson 8: Use the break apart and distribute strategy to multiply with units of 7. Lesson 12: Solve one-step word problems involving multiplication and division. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic D: Multiplication with Multiples of 10 and Further Application of Concepts Lesson 25: Apply multiplication and division concepts to complete a multi-part task. (Optional)	
	3.OA.A.4	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic D: Two Interpretations of Division Lesson 15: Model division as an unknown factor problem. Lesson 16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10. Lesson 17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic A: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8 Lesson 2: Count by units of 6 to multiply and divide by using arrays. Lesson 3: Count by units of 8 to multiply and divide by using arrays. Lesson 7: Count by units of 7 to multiply and divide by using arrays and tape diagrams.	

Connecting and Using Multiplication and Division (cont.)	**3.OA.B.5**	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic C: Properties of Multiplication Lesson 10: Demonstrate the commutative property of multiplication using a unit of 2 and the array model. Lesson 11: Demonstrate the commutative property of multiplication using a unit of 4 and the array model. Lesson 12: Demonstrate the distributive property using a unit of 4. Lesson 13: Demonstrate the commutative property of multiplication using a unit of 3 and the array model. Lesson 14: Demonstrate the distributive property using units of 2, 3, 4, 5, and 10. **Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic E: Application of Multiplication and Division Concepts Lesson 19: Use the distributive property to break apart multiplication problems into known facts. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic A: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8 Lesson 1: Organize, count, and represent a collection of objects. Lesson 3: Count by units of 8 to multiply and divide by using arrays. Lesson 4: Decompose pictorial arrays to create expressions with three factors. Lesson 5: Use the break apart and distribute strategy to multiply with units of 6 and 8. Lesson 6: Use the break apart and distribute strategy to divide with units of 6 and 8. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic B: Multiplication and Division with an Emphasis on the Unit of 7 Lesson 8: Use the break apart and distribute strategy to multiply with units of 7. Lesson 9: Model the associative property as a strategy to multiply. Lesson 10: Use parentheses in expressions with different operations. Lesson 11: Use the break apart and distribute strategy to divide with units of 7. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic C: Analysis of Patterns Using Units of 9, 0, and 1 Lesson 14: Apply strategies and identify patterns to multiply with units of 9.	

Connecting and Using Multiplication and Division (cont.)		**Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic D: Multiplication with Multiples of 10 and Further Application of Concepts Lesson 21: Multiply by multiples of 10 by using place value strategies and the associative property. Lesson 23: Identify patterns and apply strategies to multiply with units of 11 and 12. (Optional) Lesson 24: Organize, count, and represent a collection of objects.	
	3.OA.B.6	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic D: Two Interpretations of Division Lesson 15: Model division as an unknown factor problem. Lesson 16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10. Lesson 17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10. **Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic E: Application of Multiplication and Division Concepts Lesson 20: Use the distributive property to break apart division problems into known facts. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic A: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8 Lesson 2: Count by units of 6 to multiply and divide by using arrays. Lesson 7: Count by units of 7 to multiply and divide by using arrays and tape diagrams.	
	3.OA.C.7	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic C: Properties of Multiplication Lesson 12: Demonstrate the distributive property using a unit of 4. Lesson 14: Demonstrate the distributive property using units of 2, 3, 4, 5, and 10. **Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic E: Application of Multiplication and Division Concepts Lesson 19: Use the distributive property to break apart multiplication problems into known facts. Lesson 20: Use the distributive property to break apart division problems into known facts. Lesson 21: Compose and decompose arrays to create expressions with three factors. Lesson 22: Represent and solve two-step word problems using the properties of multiplication. Lesson 23: Represent and solve two-step word problems using drawings and equations.	

Connecting and Using Multiplication and Division (cont.)		**Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic A: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8 Lesson 1: Organize, count, and represent a collection of objects. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic C: Analysis of Patterns Using Units of 9, 0, and 1 Lesson 14: Apply strategies and identify patterns to multiply with units of 9. Lesson 17: Identify and complete patterns with input–output tables. Lesson 24: Organize, count, and represent a collection of objects.	
Computing with Whole Numbers	**3.NBT.A.1**	**Module 2: Place Value Concepts Through Metric Measurement** Topic B: Rounding to the Nearest Ten and Hundred Lesson 8: Read temperatures on a thermometer using number line concepts. Lesson 9: Round two-digit numbers to the nearest ten on the vertical number line. Lesson 10: Round two- and three-digit numbers to the nearest ten on the vertical number line. Lesson 11: Round to the nearest hundred on the vertical number line. Lesson 12: Estimate sums and differences by rounding.	**23 days**
	3.NBT.A.2	**Module 2: Place Value Concepts Through Metric Measurement** Topic B: Rounding to the Nearest Ten and Hundred Lesson 12: Estimate sums and differences by rounding. **Module 2: Place Value Concepts Through Metric Measurement** Topic C: Simplifying Strategies to Find Sums and Differences Lesson 14: Use place value understanding to add and subtract like units. Lesson 15: Use the associative property to make the next ten to add. Lesson 16: Use compensation to add. Lesson 17: Use place value understanding to subtract efficiently using take from a ten. Lesson 18: Use place value understanding to subtract efficiently using take from a hundred. Lesson 19: Use compensation to subtract. **Module 2: Place Value Concepts Through Metric Measurement** Topic D: Two- and Three-Digit Measurement Addition and Subtraction Lesson 20: Add measurements using the standard algorithm to compose larger units once.	

Computing with Whole Numbers (cont.)		Lesson 21: Add measurements using the standard algorithm to compose larger units twice. Lesson 22: Subtract measurements using the standard algorithm to decompose larger units once. Lesson 23: Subtract measurements using the standard algorithm to decompose larger units twice. Lesson 24: Subtract measurements using the standard algorithm to decompose larger units across two place values.	
	3.NBT.A.3	**Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic D: Multiplication with Multiples of 10 and Further Application of Concepts Lesson 20: Multiply by multiples of 10 by using the place value chart. Lesson 21: Add measurements using the standard algorithm to compose larger units twice. Lesson 22: Subtract measurements using the standard algorithm to decompose larger units once.	
	3.OA.C.7	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic C: Properties of Multiplication Lesson 12: Demonstrate the distributive property using a unit of 4. Lesson 14: Demonstrate the distributive property using units of 2, 3, 4, 5, and 10. **Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic E: Application of Multiplication and Division Concepts Lesson 19: Use the distributive property to break apart multiplication problems into known facts. Lesson 20: Use the distributive property to break apart division problems into known facts. Lesson 21: Compose and decompose arrays to create expressions with three factors. Lesson 22: Represent and solve two-step word problems using the properties of multiplication. Lesson 23: Represent and solve two-step word problems using drawings and equations. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic A: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8 Lesson 1: Organize, count, and represent a collection of objects. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic C: Analysis of Patterns Using Units of 9, 0, and 1 Lesson 14: Apply strategies and identify patterns to multiply with units of 9. Lesson 17: Identify and complete patterns with input–output tables. Lesson 24: Organize, count, and represent a collection of objects.	

Computing with Whole Numbers (cont.)	**3.OA.D.8**	**Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10** Topic E: Application of Multiplication and Division Concepts Lesson 22: Represent and solve two-step word problems using the properties of multiplication. Lesson 23: Represent and solve two-step word problems using drawings and equations. **Module 2: Place Value Concepts Through Metric Measurement** Topic D: Two- and Three-Digit Measurement Addition and Subtraction Lesson 25: Solve two-step word problems. **Module 3: Multiplication and Division with of Units 0, 1, 6, 7, 8, and 9** Topic C: Analysis of Patterns Using Units of 9, 0, and 1 Lesson 19: Solve two-step word problems involving all four operations and assess the reasonableness of solutions. **Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic D: Multiplication with Multiples of 10 and Further Application of Concepts Lesson 22: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10. Lesson 25: Apply multiplication and division concepts to complete a multi-part task. (Optional) **Module 6: Geometry, Measurement, and Data** Topic A: Tell Time and Solve Time Interval Problems Lesson 7: Count coins and create money word problems. (Optional)	
	3.OA.D.9	**Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic C: Analysis of Patterns Using Units of 9, 0, and 1 Lesson 13: Count by units of 9 to multiply. Lesson 14: Apply strategies and identify patterns to multiply with units of 9. Lesson 15: Reason about and explain patterns of multiplication and division with units of 1 and 0. Lesson 16: Identify patterns using the multiplication table. Lesson 17: Identify and complete patterns with input-output tables.	

Computing with Whole Numbers (cont.)		**Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9** Topic D: Multiplication with Multiples of 10 and Further Application of Concepts Lesson 23: Identify patterns and apply strategies to multiply units of 11 and 12. (Optional)	
Exploring Measurement and Data	**3.MD.A.1**	**Module 6: Geometry, Measurement, and Data** Topic A: Tell Time and Solve Time Interval Problems Lesson 1: Relate skip-counting by fives on the clock to telling time on the number line. Lesson 2: Count by fives and ones on the number line as a strategy for telling time to the nearest minute on the clock. Lesson 3: Solve time word problems where the end time is unknown. Lesson 4: Solve time word problems where the start time is unknown. Lesson 5: Solve time word problems where the change in time is unknown. Lesson 6: Solve time word problems and use time data to create a line plot.	**16 days**
	3.MD.A.2	**Module 2: Place Value Concepts Through Metric Measurement** Topic A: Understanding Place Value Concepts Through Metric Measurement Lesson 1: Connect the composition of 1 kilogram to the composition of 1 thousand. Lesson 2: Estimate the weight of familiar objects and read scales when weighing objects. Lesson 3: Use all four operations to solve one-step word problems involving weight. Lesson 4: Connect decomposition of 1 liter to the decomposition of 1 thousand. Lesson 5: Estimate and measure liquid volume using a vertical number line and connect composition of 1 liter to composition of 1 thousand. Lesson 6: Use all four operations to solve one-step word problems involving liquid volume. Lesson 7: Solve one-step word problems using metric units.	
	3.MD.B.3	**Module 2: Place Value Concepts Through Metric Measurement** Topic C: Simplifying Strategies to Find Sums and Differences Lesson 13: Collect and represent data in a scaled bar graph and solve related problems. **Module 6: Geometry, Measurement, and Data** Topic D: Collecting and Displaying Data Lesson 22: Generate categorical data and represent it by using a scaled picture graph. Lesson 23: Solve word problems by creating scaled picture graphs and scaled bar graphs.	

Exploring Measurement and Data (cont.)	**3.MD.B.4**	**Module 5: Fractions as Numbers** Topic C: Fractions on the Number Line Lesson 16: Measure lengths and record data on a line plot. **Module 6: Geometry, Measurement, and Data** Topic C: Problem Solving with Perimeter Lesson 20: Record measurement data in a line plot. Lesson 21: Create and analyze a line plot for measurement data to the nearest half unit and quarter unit.	
Understand Area and Perimeter	**3.MD.C.5**	**Module 4: Multiplication and Area** Topic A: Foundations for Understanding Area Lesson 1: Explore attributes of squares, rectangles, and trapezoids. Lesson 2: Recognize area as an attribute of polygons. Lesson 3: Tile polygons to find their areas. Lesson 4: Compose rectangles to compare areas. Lesson 5: Relate side lengths to the number of tiles on a side. **Module 4: Multiplication and Area** Topic D: Applications of Area Lesson 16: Solve historical math problems involving area.	**26 days**
	3.MD.C.6	**Module 4: Multiplication and Area** Topic A: Foundations for Understanding Area Lesson 2: Recognize area as an attribute of polygons. Lesson 3: Tile polygons to find their areas. Lesson 4: Compose rectangles to compare areas. Lesson 5: Relate side lengths to the number of tiles on a side. **Module 4: Multiplication and Area** Topic B: Concepts of Area Measurement Lesson 6: Tile rectangles with squares to make arrays and relate the side lengths to the area. Lesson 7: Draw rows and columns to complete a rectangular array and determine its area.	

Understand Area and Perimeter (cont.)		**Module 4: Multiplication and Area** Topic D: Applications of Area Lesson 16: Solve historical math problems involving area. Lesson 18: Find the area of shapes and represent area data on a line plot.	
	3.MD.C.7	**Module 4: Multiplication and Area** Topic B: Concepts of Area Measurement Lesson 6: Tile rectangles with squares to make arrays and relate the side lengths to the area. Lesson 7: Draw rows and columns to complete a rectangular array and determine its area. Lesson 8: Determine the area of a rectangle by using side lengths. Lesson 9: Multiply side lengths to find the area of a rectangle. **Module 4: Multiplication and Area** Topic C: Applying Properties of Operations to Area Lesson 10: Compose large rectangles and reason about their areas. Lesson 11: Decompose to find the total area of a rectangle. Lesson 12: Find all possible side lengths of rectangles with a given area. **Module 4: Multiplication and Area** Topic D: Applications of Area Lesson 13: Apply area understanding to real-world situations. Lesson 14: Reason to find the area of composite shapes by using grids. Lesson 15: Reason to find the area of composite shapes by using rectangles. Lesson 17: Apply area concepts to a real-world context. Lesson 18: Find the area of shapes and represent area data on a line plot. Lesson 19: Apply area concepts to complete a multi-part task.	
	3.MD.D.8	**Module 6: Geometry, Measurement, and Data** Topic C: Problem Solving with Perimeter Lesson 13: Decompose quadrilaterals to understand perimeter as the boundary of a shape. Lesson 14: Measure side lengths in whole-number units to determine the perimeters of polygons.	

Understand Area and Perimeter (cont.)		Lesson 15: Recognize perimeter as an attribute of shapes and solve problems with unknown measurements. Lesson 16: Solve problems to determine the perimeters of rectangles with the same area. Lesson 17: Solve problems to determine the areas of rectangles with the same perimeter. Lesson 18: Solve real-world problems involving perimeter and unknown measurements by using all four operations. **Module 6: Geometry, Measurement, and Data** Topic D: Collecting and Displaying Data Lesson 19: Measure the perimeter of various circles to the nearest quarter inch by using string.	
Reasoning About Two-dimensional Shapes	**3.MD.D.8**	**Module 6: Geometry, Measurement, and Data** Topic C: Problem Solving with Perimeter Lesson 13: Decompose quadrilaterals to understand perimeter as the boundary of a shape. Lesson 14: Measure side lengths in whole-number units to determine the perimeters of polygons. Lesson 15: Recognize perimeter as an attribute of shapes and solve problems with unknown measurements. Lesson 16: Solve problems to determine the perimeters of rectangles with the same area. Lesson 17: Solve problems to determine the areas of rectangles with the same perimeter. Lesson 18: Solve real-world problems involving perimeter and unknown measurements by using all four operations.	**15 days**
	3.G.A.1	**Module 4: Multiplication and Area** Topic A: Foundations for Understanding Area Lesson 1: Explore attributes of squares, rectangles, and trapezoids. Lesson 5: Relate side lengths to the number of tiles on a side. **Module 6: Geometry, Measurement, and Data** Topic B: Attributes of Two-Dimensional Figures Lesson 8: Compare and classify quadrilaterals. Lesson 9: Compare and classify other polygons. Lesson 10: Draw polygons with specified attributes. Lesson 11: Reason about composing polygons by using tetrominoes. Lesson 12: Reason about composing polygons by using tangrams.	

Reasoning About Two-dimensional Shapes (cont.)	**3.G.A.2**	**Module 5: Fractions as Numbers** Topic A: Partition a Whole into Equal Parts Lesson 1: Partition a whole into equal parts and name the fractional unit. Lesson 2: Partition different wholes into fractional units concretely. Lesson 3: Partition a whole into fractional units by folding fraction strips. Lesson 4: Partition a whole into fractional units pictorially and identify the unit fraction. Lesson 5: Partition a whole into fractional units and write fractions in fraction form. **Module 5: Fractions as Numbers** Topic B: Unit Fractions and Their Relationship to the Whole Lesson 6: Build non-unit fractions less than 1 from unit fractions concretely. Lesson 7: Identify and represent a whole as two parts: a unit fraction and a non-unit fraction. Lesson 8: Identify and represent a whole as two non-unit fractions. Lesson 9: Compare unit fractions by reasoning about their size concretely. Lesson 10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams.	
Understanding Fractions	**3.NF.A.1**	**Module 5: Fractions as Numbers** Topic A: Partition a Whole into Equal Parts Lesson 4: Partition a whole into fractional units pictorially and identify the unit fraction. Lesson 5: Partition a whole into fractional units and write fractions in fraction form. **Module 5: Fractions as Numbers** Topic B: Unit Fractions and Their Relationship to the Whole Lesson 6: Build non-unit fractions less than 1 from unit fractions concretely. Lesson 7: Identify and represent a whole as two parts: a unit fraction and a non-unit fraction. Lesson 8: Identify and represent a whole as two non-unit fractions. **Module 5: Fractions as Numbers** Topic E: Equivalent Fractions Lesson 27: Apply fraction concepts to complete a multi-part task. (Optional)	**6 days**
	3.NF.A.2	**Module 5: Fractions as Numbers** Topic C: Fractions on the Number Line Lesson 11: Locate fractions from 0 to 1 on a number line by using fraction tiles. Lesson 12: Represent fractions from 0 to 1 on a number line. Lesson 15: Identify fractions on a ruler as numbers on a number line.	

Understanding Fractions (cont.)		**Module 5: Fractions as Numbers** Topic D: Comparing Fractions Lesson 18: Compare fractions with like units by using a number line. **Module 5: Fractions as Numbers** Topic E: Equivalent Fractions Lesson 26: Create a ruler with 1-inch, half-inch, and quarter-inch intervals. Lesson 27: Apply fraction concepts to complete a multi-part task. (Optional)	
Reasoning about Fraction Comparisons and Equivalence	**3.NF.A.3**	**Module 5: Fractions as Numbers** Topic B: Unit Fractions and Their Relationship to the Whole Lesson 8: Identify and represent a whole as two non-unit fractions. Lesson 9: Compare unit fractions by reasoning about their size concretely. Lesson 10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams. **Module 5: Fractions as Numbers** Topic C: Fractions on the Number Line Lesson 13: Identify equivalent fractions from 0 to 1 with tape diagrams and on number lines. Lesson 14: Recognize that equivalent fractions share the same location on a number line. Lesson 16: Measure lengths and record data on a line plot. **Module 5: Fractions as Numbers** Topic D: Comparing Fractions Lesson 17: Represent fractions greater than 1 on a number line and identify fractions equivalent to whole numbers. Lesson 18: Compare fractions with like units by using a number line. Lesson 19: Compare fractions with unlike units but the same numerator by using number lines. Lesson 20: Compare fractions with related units by using a number line. Lesson 21: Compare various fractions by representing them on number lines.	**10 days**

Reasoning about Fraction Comparisons and Equivalence (cont.)		**Module 5: Fractions as Numbers** Topic E: Equivalent Fractions Lesson 22: Identify fractions equivalent to whole numbers by using number lines. Lesson 23: Reason to find fractions equivalent to whole numbers by using patterns and number lines. Lesson 24: Generate equivalent fractions greater than 1 by using a number line. Lesson 25: Express whole numbers as fractions with a denominator of 1. Lesson 26: Create a ruler with 1-inch, half-inch, and quarter-inch intervals. Lesson 27: Apply fraction concepts to complete a multi-part task. (Optional)	
	3.G.A.2	**Module 5: Fractions as Numbers** Topic A: Partition a Whole into Equal Parts Lesson 1: Partition a whole into equal parts and name the fractional unit. Lesson 2: Partition different wholes into fractional units concretely. Lesson 3: Partition a whole into fractional units by folding fraction strips. Lesson 4: Partition a whole into fractional units pictorially and identify the unit fraction. Lesson 5: Partition a whole into fractional units and write fractions in fraction form. **Module 5: Fractions as Numbers** Topic B: Unit Fractions and Their Relationship to the Whole Lesson 6: Build non-unit fractions less than 1 from unit fractions concretely. Lesson 7: Identify and represent a whole as two parts: a unit fraction and a non-unit fraction. Lesson 8: Identify and represent a whole as two non-unit fractions. Lesson 9: Compare unit fractions by reasoning about their size concretely. Lesson 10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams.	

Eureka Math² Scope and Sequence: Year at a Glance
Level 3: Units of Any Number

If a district uses this resource to implement the state model curriculum for grade 3, the following scope and sequence should be followed to ensure alignment and attention to the progressions of mathematics.

Module 1 Multiplication and Division with Units of 2, 3, 4, 5, and 10	**Module 2** Place Value Concepts Through Metric Measurement	**Module 3** Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9	**Module 4** Multiplication and Area	**Module 5** Fractions as Numbers	**Module 6** Geometry, Measurement, and Data
Topic A: Conceptual Understanding of Multiplication **Lesson 1:** Organize, count, and represent a collection of objects. **2.NBT.A.2, MP7** **Lesson 2:** Interpret equal groups as multiplication. **3.OA.A.1, MP6, 3.Mod1.AD1** **Lesson 3:** Relate multiplication to the array model. **3.OA.A.1, MP2, 3.Mod1.AD1** **Lesson 4:** Interpret the meaning of factors as number of groups or number in each group. **3.OA.A.1, MP6, 3.Mod1.AD1** **Lesson 5:** Represent and solve multiplication word problems by using drawings and equations. **3.OA.A.3, MP4, 3.Mod1.AD3**	Topic A: Understanding Place Value Concepts Through Metric Measurement **Lesson 1:** Connect the composition of 1 kilogram to the composition of 1 thousand. **3.MD.A.2, MP7, 3.Mod2.AD5** **Lesson 2:** Estimate the weight of familiar objects and read scales when weighing objects. **3.MD.A.2, MP5, 3.Mod2.AD3, 3.Mod2.AD4** **Lesson 3:** Use all four operations to solve one-step word problems involving weight. **3.MD.A.2, MP2, 3.Mod2.AD3, 3.Mod2.AD5**	Topic A: Multiplication and Division Concepts with an Emphasis on Units of 6 and 8 **Lesson 1:** Organize, count, and represent a collection of objects. **3.OA.B.5, 3.OA.C.7, MP3, 3.Mod3.AD5, 3.Mod3.AD8** **Lesson 2:** Count by units of 6 to multiply and divide by using arrays. **3.OA.A.3, 3.OA.A.4 3.OA.B.6, MP2, 3.Mod3.AD3, 3.Mod3.AD4, 3.Mod3.AD7** **Lesson 3:** Count by units of 8 to multiply and divide by using arrays. **3.OA.A.4, 3.OA.B.5, MP2, 3.Mod3.AD4, 3.Mod3.AD5** **Lesson 4:** Decompose pictorial arrays to create expressions with three factors. **3.OA.B.5, MP7, 3.Mod3.AD7**	Topic A: Foundations for Understanding Area **Lesson 1:** Explore attributes of squares, rectangles, and trapezoids. **3.G.A.1, MP6, 3.Mod4.AD1** **Lesson 2:** Recognize area as an attribute of polygons. **3.MD.C.5, 3.MD.C.5.a, 3.MD.C.5.b, 3.MD.C.6, MP5, 3.Mod4.AD2, 3.Mod4.AD3** **Lesson 3:** Tile polygons to find their areas. **3.MD.C.5, 3.MD.C.5.a, 3.MD.5.b, 3.MD.C.6, MP3, 3.Mod4.AD2, 3.Mod4.AD3** **Lesson 4:** Compose rectangles to compare areas. **3.MD.C.5, 3.MD.C.5.a, 3.MD.C.5.b, 3.MD.C.6, MP6, 3.Mod4.AD2, 3.Mod4.AD3**	Topic A: Partition a Whole into Equal Parts **Lesson 1:** Partition a whole into equal parts and name the fractional unit. **3.G.A.2, MP6, 3.Mod5.AD10** **Lesson 2:** Partition different wholes into fractional units concretely. **3.G.A.2, MP2, 3.Mod5.AD10** **Lesson 3:** Partition a whole into fractional units by folding fraction strips. **3.G.A.2, MP6, 3.Mod5.AD10** **Lesson 4:** Partition a whole into fractional units pictorially and identify the unit fraction. **3.NF.A.1, 3.G.A.2, MP7, 3.Mod5.AD1, 3.Mod5.AD10**	Topic A: Tell Time and Solve Time Interval Problems **Lesson 1:** Relate skip-counting by fives on the clock to telling time on the number line. **3.MD.A.1, MP7, 3.Mod6.AD1** **Lesson 2:** Count by fives and ones on the number line as a strategy for telling time to the nearest minute on the clock. **3.MD.A.1, MP3, 3.Mod6.AD1** **Lesson 3:** Solve time word problems where the end time is unknown. **3.MD.A.1, MP4, 3.Mod6.AD2** **Lesson 4:** Solve time word problems where the start time is unknown. **3.MD.A.1, MP5, 3.Mod6.AD2**

Topic B: Conceptual Understanding of Division

Lesson 6: Explore measurement and partitive division by modeling concretely and drawing.
3.OA.A.2, MP1, 3.Mod1.AD2

Lesson 7: Model measurement and partitive division by drawing equal groups.
3.OA.A.2, MP2, 3.Mod1.AD2

Lesson 8: Model measurement and partitive division by drawing arrays.
3.OA.A.2, 3.OA.A.3, MP1, 3.Mod1.AD2, 3.Mod1.AD3

Lesson 9: Represent and solve division word problems using drawings and equations.
3.OA.A.2, 3.OA.A.3, MP5, 3.Mod1.AD2, 3.Mod1.AD3

Topic C: Properties of Multiplication

Lesson 10: Demonstrate the commutative property of multiplication using a unit of 2 and the array model.
3.OA.A.1, 3.OA.B.5, MP3, 3.Mod1.AD1, 3.Mod1.AD5

Lesson 11: Demonstrate the commutative property of multiplication using a unit of 4 and the array model.
3.OA.A.1, 3.OA.B.5, MP7, 3.Mod1.AD1, 3.Mod1.AD5

Lesson 4: Connect decomposition of 1 liter to the decomposition of 1 thousand.
3.MD.A.2, MP7, 3.Mod2.AD4

Lesson 5: Estimate and measure liquid volume using a vertical number line and connect composition of 1 liter to composition of 1 thousand.
3.MD.A.2 MP6, 3.Mod2.AD3, 3.Mod2.AD4

Lesson 6: Use all four operations to solve one-step word problems involving liquid volume.
3.MD.A.2, MP3, 3.Mod2.AD5

Lesson 7: Solve one-step word problems using metric units.
3.MD.A.2, MP1, 3.Mod2.AD5

Topic B: Rounding to the Nearest Ten and Hundred

Lesson 8: Read temperature on a thermometer using number line concepts.
3.NBT.A.1, MP5, 3.Mod2.AD1

Lesson 9: Round two-digit numbers to the nearest ten on the vertical number line.
3.NBT.A.1, MP2, 3.Mod2.AD1

Lesson 10: Round two- and three-digit numbers to the nearest ten on the vertical number line.
3.NBT.A.1, MP8, 3.Mod2.AD1

Lesson 5: Use the break apart and distribute strategy to multiply with units of 6 and 8.
3.OA.B.5, MP6, 3.Mod3.AD5

Lesson 6: Use the break apart and distribute strategy to divide with units of 6 and 8.
3.OA.B.5, MP3, 3.Mod3.AD6

Topic B: Multiplication and Division Concepts with an Emphasis on the Unit of 7

Lesson 7: Count by units of 7 to multiply and divide by using arrays and tape diagrams.
3.OA.A.3, 3.OA.A.4, 3.OA.B.6, MP5, 3.Mod1.AD7, 3.Mod3.AD3, 3.Mod3.AD4

Lesson 8: Use the break apart and distribute strategy to multiply with units of 7.
3.OA.A.3, 3.OA.B.5, MP2, 3.Mod3.AD3, 3.Mod3.AD5

Lesson 9: Model the associative property as a strategy to multiply.
3.OA.B.5, MP7, 3.Mod3.AD7

Lesson 10: Use parentheses in expressions with different operations.
3.OA.B.5, MP6, 3.Mod3.AD7

Lesson 11: Use the break apart and distribute strategy to divide with units of 7.
3.OA.B.5, MP3, 3.Mod3.AD6

Lesson 5: Relate side lengths to the number of tiles on a side.
3.MD.C.5, 3.MD.C.5.a, 3.MD.C.5.b, 3.MD.C.6, MP8, 3.Mod4.AD1, 3.Mod4.AD2, 3.Mod4.AD3

Topic B: Concepts of Area Measurement

Lesson 6: Tile rectangles with squares to make arrays and relate the side lengths to area.
3.MD.C.6, 3.MD.C.7.a, MP3, 3.Mod4.AD3, 3.Mod4.AD4

Lesson 7: Draw rows and columns to complete a rectangular array and determine its area.
3.MD.C.6, 3.MD.C.7.a, MP1, 3.Mod4.AD3, 3.Mod4.AD4

Lesson 8: Determine the area of a rectangle by using side lengths.
3.MD.C.7.a, 3.MD.C.7.b, MP6, 3.Mod4.AD4, 3.Mod4.AD5

Lesson 9: Multiply side lengths to find the area of a rectangle.
3.MD.C.7.b, MP5, 3.Mod4.AD5

Topic C: Applying Properties of Operations to Area

Lesson 10: Compose large rectangles and reason about their areas.
3.MD.C.7.c, 3.MD.C.7.d, MP7, 3.Mod4.AD6, 3.Mod4.AD7, 3.Mod4.AD8

Lesson 5: Partition a whole into fractional units and write fractions in fraction form.
3.NF.A.1, 3.G.A.2, MP6, 3.Mod5.AD1, 3.Mod5.AD10

Topic B: Unit Fractions and Their Relationship to the Whole

Lesson 6: Build non-unit fractions less than 1 from unit fractions concretely.
3.NF.A.1, 3.G.A.2, MP7, 3.Mod5.AD2, 3.Mod5.AD10

Lesson 7: Identify and represent a whole as two parts: a unit fraction and a non-unit fraction.
3.NF.A.1, 3.G.A.2, MP2, 3.Mod5.AD1, 3.Mod5.AD2, 3.Mod5.AD10

Lesson 8: Identify and represent a whole as two non-unit fractions.
3.NF.A.1, 3.NF.A.3.c, 3.G.A.2, MP7, 3.Mod5.AD2, 3.Mod5.AD6, 3.Mod5.AD10

Lesson 9: Compare unit fractions by reasoning about their size concretely.
3.NF.A.3.d, 3.G.A.2, MP3, 3.Mod5.AD7, 3.Mod5.AD8, 3.Mod5.AD10

Lesson 10: Compare non-unit fractions less than 1 with the same numerator by using tape diagrams.
3.NF.A.3.d, 3.G.A.2, MP6, 3.Mod5.AD7, 3.Mod5.AD10

Lesson 5: Solve time word problems where the change in time is unknown.
3.MD.A.1, MP7, 3.Mod6.AD2

Lesson 6: Solve time word problems and use time data to create a line plot.
3.MD.A.1, MP4, 3.Mod6.AD.2

Lesson 7: Count coins and create money word problems. (Optional)
3.OA.D.8, MP2, 3.Mod3.AD9

Topic B: Attributes of Two-Dimensional Figures

Lesson 8: Compare and classify quadrilaterals.
3.G.A.1, MP3, 3.Mod6.AD7

Lesson 9: Compare and classify other polygons.
3.G.A.1, MP6, 3.Mod6.AD7

Lesson 10: Draw polygons with specified attributes.
3.G.A.1, MP5, 3.Mod6.AD7, 3.Mod6.AD8

Lesson 11: Reason about composing polygons by using tetrominoes.
3.G.A.1, MP8, 3.Mod6.AD7, 3.Mod6.AD8

Lesson 12: Reason about composing polygons by using tangrams.
3.G.A.1, MP1, 3.Mod6.AD7, 3.Mod6.AD8

Lesson 12: Demonstrate the distributive property using a unit of 4.
3.OA.B.5, 3.OA.C.7, MP7, 3.Mod1.AD6, 3.Mod1.AD8

Lesson 13: Demonstrate the commutative property of multiplication using a unit of 3 and the array model.
3.OA.A.1, 3.OA.B.5, MP8, 3.Mod1.AD1, 3.Mod1.AD5

Lesson 14: Demonstrate the distributive property using units of 2, 3, 4, 5, and 10.
3.OA.B.5, 3.OA.C.7, MP2, 3.Mod1.AD6, 3.Mod1.AD8

Topic D: Two Interpretations of Division

Lesson 15: Model division as an unknown factor problem.
3.OA.A.2, 3.OA.A.4, 3.OA.B.6, MP4, 3.Mod1.AD2, 3.Mod1.AD4, 3.Mod1.AD7

Lesson 16: Model the quotient as the number of groups using units of 2, 3, 4, 5, and 10.
3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.B.6, MP3, 3.Mod1.AD2, 3.Mod1.AD3, 3.Mod1.AD4, 3.Mod1.AD7

Lesson 17: Model the quotient as the size of each group using units of 2, 3, 4, 5, and 10.
3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.B.6, MP4, 3.Mod1.AD2, 3.Mod1.AD3, 3.Mod1.AD4, 3.Mod1.AD7

Lesson 11: Round to the nearest hundred on the vertical number line.
3.NBT.A.1, MP7, 3.Mod2.AD1

Lesson 12: Estimate sums and differences by rounding.
3.NBT.A.1, 3.NBT.A.2, MP6, 3.Mod2.AD1, 3.Mod2.AD2

Topic C: Simplifying Strategies to Find Sums and Differences

Lesson 13: Collect and represent data in a scaled bar graph and solve related problems.
3.MD.B.3, MP2, 3.Mod2.AD6, 3.Mod2.AD7

Lesson 14: Use place value understanding to add and subtract like units.
3.NBT.A.2, MP7, 3.Mod2.AD2

Lesson 15: Use the associative property to make the next ten to add.
3.NBT.A.2, MP3, 3.Mod2.AD2

Lesson 16: Use compensation to add.
3.NBT.A.2, MP5, 3.Mod2.AD2

Lesson 17: Use place value understanding to subtract efficiently using take from a ten.
3.NBT.A.2, MP6, 3.Mod2.AD2

Lesson 18: Use place value understanding to subtract efficiently using take from a hundred.
3.NBT.A.2, MP7, 3.Mod2.AD2

Lesson 12: Solve one-step word problems involving multiplication and division.
3.OA.A.3, MP1, 3.Mod3.AD3

Topic C: Analysis of Patterns Using Units of 9, 0, and 1

Lesson 13: Count by units of 9 to multiply.
3.OA.D.9, MP7, 3.Mod3.AD10

Lesson 14: Apply strategies and identify patterns to multiply with units of 9.
3.OA.B.5, 3.OA.C.7, 3.OA.D.9, MP7, 3.Mod3.AD5, 3.Mod3.AD8, 3.Mod3.AD10

Lesson 15: Reason about and explain patterns of multiplication and division with units of 1 and 0.
3.OA.A.1, 3.OA.A.2, 3.OA.D.9, MP8, 3.Mod1.AD1, 3.Mod1.AD2, 3.Mod3.AD10

Lesson 16: Identify patterns by using the multiplication table.
3.OA.D.9, MP8, 3.Mod3.AD10

Lesson 17: Identify and complete patterns with input-output tables.
3.OA.C.7, 3.OA.D.9, MP1, 3.Mod3.AD8, 3.Mod3.AD10

Lesson 18: Create multiplication and division word problems.
3.OA.A.1, 3.OA.A.2, MP2, 3.Mod3.AD1, 3.Mod3.AD2

Lesson 11: Decompose to find the total area of a rectangle.
3.MD.C.7.b, 3.MD.C.7.c, 3.MD.C.7.d, MP4, 3.Mod4.AD5, 3.Mod4.AD6, 3.Mod4.AD7

Lesson 12: Find all possible side lengths of rectangles with a given area.
3.MD.C.7.a, 3.MD.C.7.b, MP3, 3.Mod4.AD4, 3.Mod4.AD5

Topic D: Applications of Area

Lesson 13: Apply area understanding to real-world situations.
3.MD.C.7.b, 3.MD.C.7.c, MP5, 3.Mod4.AD5, 3.Mod4.AD6

Lesson 14: Reason to find the area of composite shapes by using grids.
3.MD.C.7.b, 3.MD.C.7.d, MP2, 3.Mod4.AD5, 3.Mod4.AD7

Lesson 15: Reason to find the area of composite shapes by using rectangles.
3 MD.C.7.b, 3.MD.C.7.d, MP7, 3.Mod4.AD5, 3.Mod4.AD7, 3.Mod4.AD8

Lesson 16: Solve historical math problems involving area.
3.MD.C.5, 3.MD.C.5.a, 3.MD.C.5.b, 3.MD.C.6, MP1, 3.Mod4.AD2, 3.Mod4.AD3

Topic C: Fractions on the Number Line

Lesson 11: Locate fractions from 0 to 1 on a number line by using fraction tiles.
3.NF.A.2.a, 3.NF.A.2.b, MP2, 3.Mod5.AD3, 3.Mod5.AD4

Lesson 12: Represent fractions from 0 to 1 on a number line.
3.NF.A.2.a, 3.NF.A.2.b, MP8, 3.Mod5.AD3, 3.Mod5.AD4

Lesson 13: Identify equivalent fractions from 0 to 1 with tape diagrams and on number lines.
3.NF.A.3.a, 3.NF.A.3.b, MP2, 3.Mod5.AD5

Lesson 14: Recognize that equivalent fractions share the same location on a number line.
3.NF.A.3.a, 3.NF.A.3.b, MP7, 3.Mod5.AD5

Lesson 15: Identify fractions on a ruler as numbers on a number line.
3.NF.A.2.a, 3.NF.A.2.b, MP6, 3.Mod5.AD3, 3.Mod5.AD4

Lesson 16: Measure lengths and record data on a line plot.
3.NF.A.3.a, 3.NF.A.3.b, 3.MD.B.4, MP8, 3.Mod5.AD5, 3.Mod5.AD9

Topic C: Problem Solving with Perimeter

Lesson 13: Decompose quadrilaterals to understand perimeter as the boundary of a shape.
3.MD.D.8, MP5, 3.Mod6.AD5

Lesson 14: Measure side lengths in whole number units to determine the perimeters of polygons.
3.MD.D.8, MP7, 3.Mod6.AD5

Lesson 15: Recognize perimeter as an attribute of shapes and solve problems with unknown measurements.
3.MD.D.8, MP7, 3.Mod6.AD5

Lesson 16: Solve problems to determine the perimeters of rectangles with the same area.
3.MD.D.8, MP2, 3.Mod6.AD5, 3.Mod6.AD6

Lesson 17: Solve problems to determine the areas of rectangles with the same perimeter.
3.MD.D.8, MP8, 3.Mod6.AD5, 3.Mod6.AD6

Lesson 18: Solve real-world problems involving perimeter and unknown measurements by using all four operations.
3.MD.D.8, MP1, 3.Mod6.AD5

Lesson 18: Represent and solve measurement and partitive division word problems.
3.OA.A.2, 3.OA.A.3, MP2, 3.Mod1.AD2, 3.Mod1.AD3

Topic E: Application of Multiplication and Division Concepts

Lesson 19: Use the distributive property to break apart multiplication problems into known facts.
3.OA.B.5, 3.OA.C.7, MP6, 3.Mod1.AD6, 3.Mod1.AD8

Lesson 20: Use the distributive property to break apart division problems into known facts.
3.OA.B.6, 3.OA.C.7, MP3, 3.Mod1.AD7, 3.Mod1.AD8

Lesson 21: Compose and decompose arrays to create expressions with three factors.
3.OA.C.7, MP8, 3.Mod1.AD8

Lesson 22: Represent and solve two-step word problems using the properties of multiplication.
3.OA.A.3, 3.OA.C.7, 3.OA.D.8, MP5, 3.Mod1.AD3, 3.Mod1.AD8, 3.Mod1.AD9

Lesson 23: Represent and solve two-step word problems using drawings and equations.
3.OA.A.3, 3.OA.C.7, 3.OA.D.8, MP5, 3.Mod1.AD3, 3.Mod1.AD8, 3.Mod1.AD9

Lesson 19: Use compensation to subtract.
3.NBT.A.2, MP2, 3.Mod2.AD2

Topic D: Two- and Three-Digit Measurement Addition and Subtraction

Lesson 20: Add measurements using the standard algorithm to compose larger units once.
3.NBT.A.2, MP4, 3.Mod2.AD2

Lesson 21: Add measurements using the standard algorithm to compose larger units twice.
3.NBT.A.2, MP5, 3.Mod2.AD2

Lesson 22: Subtract measurements using the standard algorithm to decompose larger units once.
3.NBT.A.2, MP1, 3.Mod2.AD2

Lesson 23: Subtract measurements using the standard algorithm to decompose larger units twice.
3.NBT.A.2, MP6, 3.Mod2.AD2

Lesson 24: Subtract measurements using the standard algorithm to decompose larger units across two place values.
3.NBT.A.2, MP3, 3.Mod2.AD2

Lesson 25: Solve two-step word problems.
3.OA.D.8, MP1, 3.Mod2.AD9

Lesson 19: Solve two-step word problems by using the four operations and assess the reasonableness of solutions.
3.OA.D.8, MP4, 3.Mod3.AD9

Topic D: Multiplication with Multiples of 10 and Further Application of Concepts

Lesson 20: Multiply by multiples of 10 by using the place value chart.
3.NBT.A.3, MP2, 3.Mod3.AD11

Lesson 21: Multiply by multiples of 10 by using place values strategies and the associative property.
3.OA.B.5, 3.NBT.A.3, MP7, 3.Mod3.AD7, 3.Mod3.AD11

Lesson 22: Solve two-step word problems involving multiplication of single-digit factors and multiples of 10.
3.OA.D.8, 3.NBT.A.3, MP4, 3.Mod3.AD9, 3.Mod3.AD11

Lesson 23: Identify patterns and apply strategies to multiply with units of 11 and 12. (Optional)
3.OA.B.5, 3.OA.D.9, MP5, 3.Mod3.AD5, 3.Mod3.AD7, 3.Mod3.AD10

Lesson 24: Organize, count, and represent a collection of objects.
3.OA.B.5, 3.OA.C.7, MP5, 3.Mod3.AD5, 3.Mod3.AD7, 3.Mod3.AD8

Lesson 17: Apply area concepts to a real-world context.
3.MD.C.7.b, 3.MD.C.7.d, MP4, 3.Mod4.AD5, 3.Mod4.AD7

Lesson 18: Find the area of shapes and represent area data on a line plot.
3.MD.C.6, 3.MD.C.7.b, 3.MD.C.7.d, MP6, 3.Mod4.AD3, 3.Mod4.AD5, 3.Mod4.AD7

Lesson 19: Apply area concepts to complete a multi-part task.
3.MD.C.7.b, 3.MD.C.7.d, MP1, 3.Mod4.AD5, 3.Mod4.AD8

Topic D: Comparing Fractions

Lesson 17: Represent fractions greater than 1 on a number line and identify fractions equivalent to whole numbers.
3.NF.A.3.a, 3.NF.A.3.b, 3.NF.A.3.c, MP7, 3.Mod5.AD5, 3.Mod5.AD6

Lesson 18: Compare fractions with like units by using a number line.
3.NF.A.2.b, 3.NF.A.3.d, MP3, 3.Mod5.AD4, 3.Mod5.AD7

Lesson 19: Compare fractions with unlike units but the same numerator by using number lines.
3.NF.A.3.d, MP1, 3.Mod5.AD7

Lesson 20: Compare fractions with related units by using a number line.
3.NF.A.3.d, MP5, 3.Mod5.AD7

Lesson 21: Compare various fractions by representing them on number lines.
3.NF.A.3.d, MP6, 3.Mod5.AD7

Topic E: Equivalent Fractions

Lesson 22: Identify fractions equivalent to whole numbers by using number lines.
3.NF.A.3.a, 3.NF.A.3.b, 3.NF.A.3.c, MP2, MP8, 3.Mod5.AD5, 3.Mod5.AD6

Topic D: Collecting and Displaying Data

Lesson 19: Measure the perimeter of various circles to the nearest quarter inch by using string.
3.MD.D.8, MP6, 3.Mod6.AD5

Lesson 20: Record measurement data in a line plot.
3.MD.B.4, MP6, 3.Mod6.AD4

Lesson 21: Create and analyze a line plot for measurement data to the nearest half unit and quarter unit.
3.MD.B.4, MP3, 3.Mod6.AD4

Lesson 22: Generate categorical data and represent it by using a scaled picture graph.
3.MD.B.3, MP1, 3.Mod6.AD3

Lesson 23: Solve problems by creating scaled picture graphs and scaled bar graphs.
3.MD.B.3, MP7, 3.Mod2.AD6, 3.Mod2.AD7, 3.Mod6.AD3

Lesson 24: Organize, count, and represent a collection of objects.
MP5

Lesson 25: Name and count numbers greater than 1,000. (Optional)
MP8

Lesson 26: Fluently multiply and divide within 100 and add and subtract within 1,000.
3.OA.C.7, 3.NBT.A.2, MP3

		Lesson 25: Apply multiplication and division concepts to complete a multi-part task. (Optional) **3.OA.A.3, 3.OA.D.8, MP1, 3.Mod3.AD3, 3.Mod3.AD9** ■		**Lesson 23:** Reason to find fractions equivalent to whole numbers by using patterns and number lines. **3.NF.A.3.a, 3.NF.A.3.b, 3.NF.A.3.c, MP5, 3.Mod5.AD5, 3.Mod5.AD6** **Lesson 24:** Generate equivalent fractions greater than 1 by using a number line. **3.NF.A.3.b, 3.NF.A.3.c, MP2, 3.Mod5.AD5, 3.Mod5.AD6** **Lesson 25:** Express whole numbers as fractions with a denominator of 1. **3.NF.A.3.c, MP4, 3.Mod5.AD6** **Lesson 26:** Create a ruler with 1-inch, half-inch, and quarter-inch intervals. **3.NF.A.2.b, 3.NF.A.3.b, MP7 3.Mod5.AD4, 3.Mod5.AD5** **Lesson 27:** Apply fraction concepts to complete a multi-part task. (Optional) **3.NF.A.1, 3.NF.A.2.b, 3.NF.A.3.d, MP4, 3.Mod5.AD2, 3.Mod5.AD4, 3.Mod5.AD7** ■	

Year-Long Curriculum Overview: Levels 3–5 | STORY OF UNITS

Trimester and quarter indicators are provided as a guide for pacing. A few optional lessons in each grade level are included in total number of lessons. About 30 additional days are allotted at each level for assessment and responsive teaching.

Trimester 1 | Trimester 2 | Trimester 3

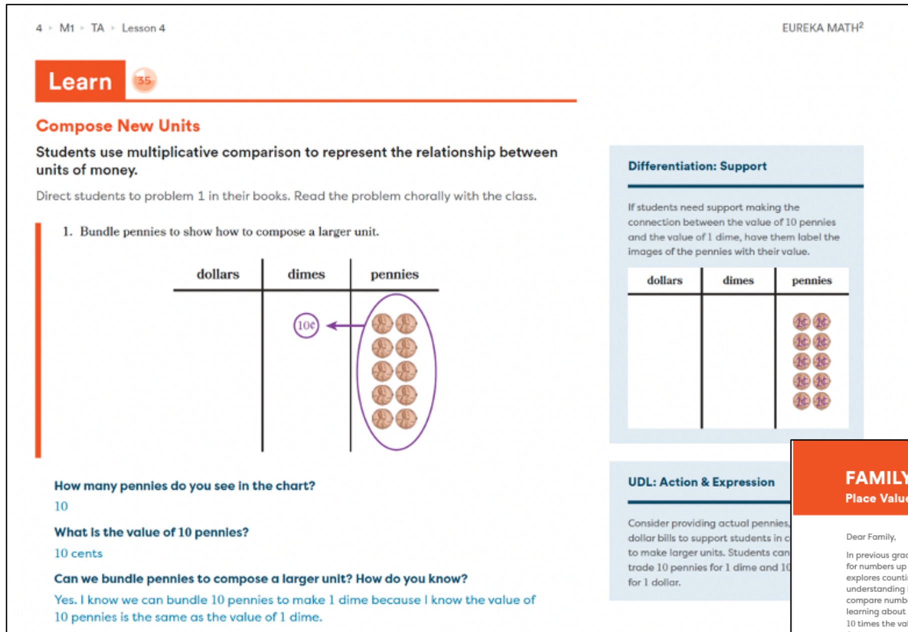
Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4

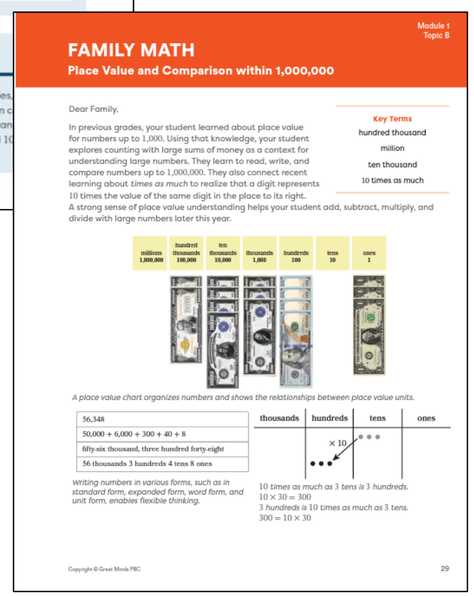
Level 3 Units of Any Number	Level 4 Fractional Units	Level 5 Fractions Are Numbers
Module 1: Multiplication and Division with Units of 2, 3, 4, 5, and 10 5 Topics | 23 Lessons	**Module 1: Place Value Concepts for Addition and Subtraction** 5 Topics | 24 Lessons	**Module 1: Place Value Concepts for Multiplication and Division with Whole Numbers** 4 Topics | 20 Lessons
Module 2: Place Value Concepts through Metric Measurement 4 Topics | 25 Lessons	**Module 2: Place Value Concepts for Multiplication and Division** 5 Topics | 26 Lessons	**Module 2: Addition and Subtraction with Fractions** 4 Topics | 17 Lessons
Module 3: Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9 4 Topics | 25 Lessons	**Module 3: Multiplication and Division of Multi-Digit Numbers** 6 Topics | 24 Lessons	**Module 3: Multiplication and Division with Fractions** 4 Topics | 22 Lessons
Module 4: Multiplication and Area 4 Topics | 19 Lessons	**Module 4: Foundations for Fraction Operations** 6 Topics | 34 Lessons	**Module 4: Place Value Concepts for Decimal Operations** 5 Topics | 30 Lessons
Module 5: Fractions as Numbers 5 Topics | 27 Lessons	**Module 5: Place Value Concepts for Decimal Fractions** 4 Topics | 14 Lessons	**Module 5: Addition and Multiplication with Area and Volume** 4 Topics | 28 Lessons
Module 6: Geometry, Measurement, and Data 4 Topics | 26 Lessons	**Module 6: Angle Measurements and Plane Figures** 4 Topics | 20 Lessons	**Module 6: Foundations to Geometry in the Coordinate Plane** 4 Topics | 20 Lessons
TOTAL: 26 Topics | 145 Lessons	**TOTAL: 30 Topics | 142 Lessons**	**TOTAL: 25 Topics | 137 Lessons**

Supports of Diversity, Equity, and Inclusion

Providing Culturally Responsive Instruction

Eureka Math² values the funds of knowledge that students bring into the classroom and acknowledges that deep learning happens when all students are able to leverage their diverse life experiences while learning mathematics.





One of the ways *Eureka Math²* invites students into mathematics and celebrates the diversity present in every classroom is by highlighting for teachers those specific lesson moments that can be tailored to bring students' experiences from their home and communities into the classroom. For example, a strategically placed Universal Design for Learning (UDL) margin note in grade 4 module 1 lesson 4 suggests that teachers leverage life experiences by using real pennies instead of images of pennies while working with a place value chart.

> **UDL: Engagement**
>
> Consider adjusting the problem to make it more relevant to students in your class. For example, identify items in the school or community with the dimensions and quantity in the problem and change the problem to reflect the more relevant context. When you select a different context, the units of measure could change, but the quantity 5 and the dimensions 6 by 8 should remain the same to maintain the complexity of the problem.

Adjusting questions to make them more meaningful to students provides options for recruiting interest by personalizing and contextualizing the content to learners' lives. In grade 3 module 4 lesson 13, students reason about, represent, and solve a two-step area word problem. A Universal Design for Learning Engagement margin note encourages the teacher to adjust the existing problem context by identifying items in the school or community with the dimensions and quantity in the problem, making the context more relevant and meaningful to students.

Students' experiences from their home and communities are also leveraged through Family Math. Family Math is a letter to families that describes the major concepts in the current topic. Each letter uses words and phrases that should be familiar to the student from the lessons in the topic. It includes visual supports that students can use to explain the concepts or strategies to their family or that can help adults at home understand or unpack a concept. Family Math also includes simple and practical at-home activities to extend learning and help students see mathematics in their world.

Students are diverse, and any one classroom can have students from either an individualist frame of reference or a collectivist frame of reference. The teacher-writers of *Eureka Math²* considered both frames of reference in intentionally balancing activities that build off individualism as well as collectivism.

In her book *Culturally Responsive Teaching and the Brain*, Zaretta Hammond references collectivism as emphasizing relationships, interdependence within a community, and cooperative learning (page 25). In *Eureka Math*^{2}, a collectivist approach to learning mathematics is present in the embedded cooperative learning structures in open-middle and open-ended tasks. Specifically, the instructional routines Numbered Heads and Co-construction are rooted in students working cooperatively in groups to deepen their mathematical conceptual understanding. See grade 3 module 6 lesson 6, in which students work with a partner to create a context that could apply to an elapsed time situation in the routine Co-construction. Also, grade 5 module 3 lesson 3 features the routine Numbered Heads, in which students work in groups of three to describe how to solve one multiplication problem.

Beyond the instructional routines, *Eureka Math*^{2} leverages the power of student relationships and interdependence through frequent partner and group work. For any partner or group work referenced in the instructional materials, teachers may make use of strategic, flexible groupings that build off students' strengths, including home language. A Language Support margin note in the first lesson of every module serves to remind teachers to leverage students' cultural perspectives when strategically placing students in partners.

Language Support

Consider using strategic, flexible grouping throughout the module.

- Pair students who have different levels of mathematical proficiency.
- Pair students who have different levels of English language proficiency.
- Join pairs to form small groups of four.

As applicable, complement any of these groupings by pairing students who speak the same native language.

Hammond references individualism as emphasizing individual achievement and independence (page 25). In *Eureka Math*^{2}, an individualist approach to learning mathematics may be seen in the embedded systems for independent practice in every lesson, such as Exit Tickets and Practice Sets. Additionally, the instructional routines Critique a Flawed Response and Take a Stand both start with students working on a math problem individually before engaging in student discourse. See grade 4 module 3 lesson 3, in which students engage with the Critique a Flawed Response routine by first identifying an error individually before a whole-class discussion. Also, grade 3 module 3 lesson 6 invites students to engage with the Take a Stand routine, in which students first determine how they would decompose a number before engaging in a whole-class discussion about different ways to decompose numbers.

Beyond balancing individualism and collectivism, *Eureka Math*^{2} activities and problems provide students with mirrors in which to see their own cultural perspectives reflected, as well as windows through which to view others' cultural perspectives.

Eureka Math^{2} is an inclusive mathematics curriculum that represents diverse doers of math. The curriculum's images, fine art, and pictures of people represent diversity through problems and exercises related to real-life experiences, perspectives, and contributions of people from various cultures, ethnicities, and gender identities. These representations affirm student identities while rejecting the stereotypes and biases that have excluded many students from mathematical learning in favor of a more robust and inclusive perspective. Representing a diverse array of doers of mathematics in the curriculum inspires all students to think of themselves as mathematicians.

For example, *Eureka Math*^{2} includes various mathematical activities that involve counting on hands or simulating a number line with one's fingers. In images throughout the curriculum, care was taken to include a variety of body types and skin tones.

The names used in word problems and for sample students in the lesson vignettes are intentionally diverse to represent the wide variety of students who use the curriculum. The names in student-facing word problems are also designed for readability to ensure that they are not a barrier to accessing the math.

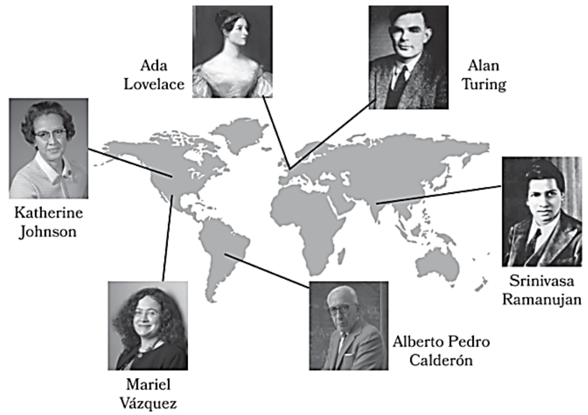
Story of Units®

Tam, Kit, Zan, Ren, Mac, Jon, Baz, Liv, Jade, Ling, Sal, Deepa, Oka, Mia, Gabe, Pablo, Shea, Jayla, Shen, Lacy, Sasha, Yuna, Leo, Adesh, Toby

According to CAST, "individuals are engaged by information and activities that are relevant and valuable to their interests and goals." (UDL Guidelines, Engagement, Checkpoint 7.2) *Eureka Math*^{2} also leverages students' experiences, goals, and interests through Math Pasts (described below), art connections, and wordless context videos.

To honor the diverse contributions to the development of the field of mathematics, to build knowledge about our shared math history, and to empower every child to see themselves as able to do mathematics, nearly every module in *Eureka Math*^{2} includes a feature called Math Past. Each Math Past tells the history of some big ideas in the module, recounting the story of the mathematics through artifacts, discoveries, and other contributions from cultures around the world. Math Past also provides ideas about how to engage students in the history of mathematics.

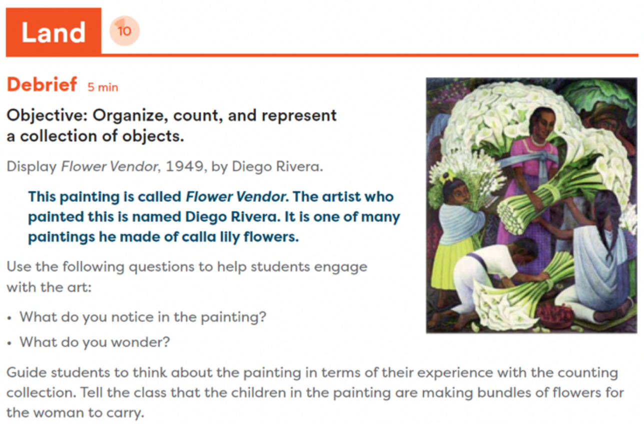
Math Past counters the traditional Eurocentric perspective and celebrates the many contributions of Black, Indigenous, and People of Color communities to the history of mathematics.



Lovelace – "Portrait of Ada Lovelace, 1836/Wikimedia Commons"
Turing – "famouspeople/Alamy Stock Photo"
Vazquez – "University of California Davis. Photo by Gregory Urquiaga"
Calderon – "Photograph Courtesy of the University of Chicago"

For example, students explore large numbers in expanded form by first engaging with Egyptian hieroglyphics in Launch of grade 4 module 1 lesson 8. The Math Past Teacher Resource highlights the specific hieroglyphic numerals and their connection to familiar objects for Egyptians 4,000 years ago. Studying the mathematics used by people thousands of years ago helps students view mathematics as a worthwhile and useful subject that stands the test of time.

In a similar vein, *Eureka Math²* connects works of fine art to the standards of each grade level. Each *Teach* book opens with a stunning work of fine art that has a connection to the math learned in the grade. There is also a wide variety of additional pieces of art embedded in each grade's lessons. For example:


Land 10

Debrief 5 min

Objective: Organize, count, and represent a collection of objects.

Display *Flower Vendor*, 1949, by Diego Rivera.

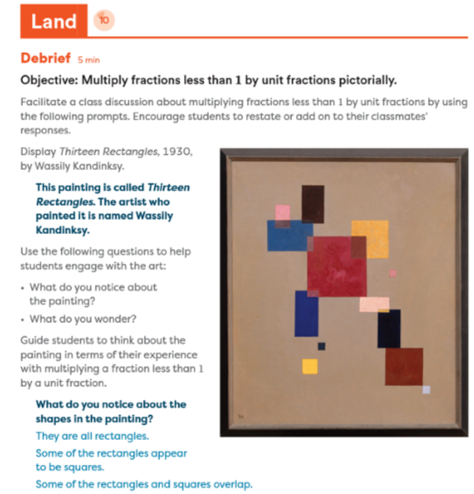
This painting is called *Flower Vendor*. The artist who painted this is named Diego Rivera. It is one of many paintings he made of calla lily flowers.

Use the following questions to help students engage with the art:

- What do you notice in the painting?
- What do you wonder?

Guide students to think about the painting in terms of their experience with the counting collection. Tell the class that the children in the painting are making bundles of flowers for the woman to carry.

- Land (the culminating section of each day's lesson) in grade 3 module 1 lesson 1 relates Diego Rivera's painting *Flower Vendor* to making equal groups to count the total number of objects.
- Land in grade 4 module 2 lesson 19 connects the painting *Composition with Large Red Plane, Yellow, Black, Gray and Blue* by Piet Mondrian to the formulas for area and perimeter of rectangles.
- Land in grade 5 module 3 lesson 7 connects the painting *Thirteen Rectangles* by Wassily Kandinsky to multiplying fractions less than one by unit fractions.


Land 10

Debrief 5 min

Objective: Multiply fractions less than 1 by unit fractions pictorially.

Facilitate a class discussion about multiplying fractions less than 1 by unit fractions by using the following prompts. Encourage students to restate or add on to their classmates' responses.

Display *Thirteen Rectangles*, 1930, by Wassily Kandinksy.

This painting is called *Thirteen Rectangles*. The artist who painted it is named Wassily Kandinksy.

Use the following questions to help students engage with the art:

- What do you notice about the painting?
- What do you wonder?

Guide students to think about the painting in terms of their experience with multiplying a fraction less than 1 by a unit fraction.

What do you notice about the shapes in the painting?

They are all rectangles.

Some of the rectangles appear to be squares.

Some of the rectangles and squares overlap.

Additionally, *Eureka Math²* lessons include more than 190 videos. These wordless context-building videos highlight how we use math to solve problems in our everyday lives and make sense of the world around us. Three types of highly engaging videos may be found in the curriculum: character animation, collage animation, and live action.

Students can identify with the diverse set of actors and characters in the videos, which helps them visualize how math is part of their own lives. Through these videos, students will more readily realize that math surrounds them and that they, too, can engage in mathematical pursuits. The videos allow students to see themselves in the math problems they encounter, which lowers the barrier to engagement and makes the math classroom a more welcoming place.

Wordless videos in lessons serve many other purposes as well, such as the following:

- They make the context for a given problem come alive, putting all students on the same footing by activating or building the requisite background knowledge.
- They remove any language and reading barriers to the written word problem.
- They raise the accessibility of mathematics through accurate and inclusive representation.
- They show the many ways in which we interact with math in the world around us and how these interactions spark curiosity and joy.
- They help students see the delight and wonder associated with being a mathematician.
- They create excitement and buzz in the classroom about the content of the new word problem.
- They invite students to tell the story of the math problem, to notice, to wonder, and to drive the discussion.

Examples include:

- Grade 3 module 6 lesson 12: *Real World Perimeters*
- Grade 4 module 1 lesson 23: *Running Meters and Kilometers*
- Grade 5 module 3 lesson 12: *Julie's Birdhouse*
- Grade 5 module 5 lesson 20: *Cubes in a Cylinder*

Specific instructional prompts, engaging word problems, accessible and engaging tasks, art connections, Math Past connections, and context videos throughout *Eureka Math²* work together to create a powerful curriculum that welcomes all students and invites them to become doers of mathematics.

Addressing Learner Variance

To ensure success of all learners, every *Eureka Math²* lesson includes Universal Design for Learning (UDL) strategies and scaffolds that address learner variance. These suggestions promote flexibility with engagement, representation, and action and expression, the three UDL principles described by CAST. These strategies and scaffolds are complements to the curriculum's overall alignment with the UDL Guidelines and were designed to support educators in effectively teaching students who experience difficulty in mathematics. The strategies are based on research specific to mathematics instruction.

According to *Teaching Mathematics Meaningfully: Solutions for Reaching Struggling Learners, Second Edition*, (page 71) "Students who have learning difficulties that affect their ability to do well in mathematics come from a variety of backgrounds and experiences. Although each of these students is individual and unique, students often demonstrate one or more of the nine learning characteristics…" The nine learning characteristics described include: learned helplessness, passive learning, knowledge and skills gaps, math anxiety, memory disabilities, attention disabilities, metacognitive thinking disabilities, processing disabilities, and reading disabilities. Some of these characteristics can affect all students who may be struggling in math regardless of whether they have learning-related disabilities (learned helplessness, passive learning, knowledge and skills gaps, math anxiety). Other characteristics result from learning-related disabilities (memory disabilities, attention disabilities, metacognitive thinking disabilities, processing disabilities, and reading disabilities). These learning characteristics as well as curriculum factors can result in common mathematics performance traits of students who struggle in mathematics.

UDL: Action & Expression

Consider comparing the correct solution for problem 3 with an incorrect work sample. Present a chart that shows the correct work in sample A and the incorrect work in sample B to emphasize how the placement of parentheses affects the value of the expression. Ask students, "How would you compare the work in sample A to the work in sample B? Why is it incorrect to evaluate problem 3 the way it is shown in sample B?" Post the chart for the remainder of the topic as an example of why parentheses are used and the importance of their placement. Use color coding and annotation to highlight these features, such as in the following example:

First we need to find the sum. Then find $\frac{3}{5}$ of that sum. $\frac{3}{5}$ of the sum of $\frac{1}{6}$ and $\frac{2}{3}$	
Sample A ✓	$\frac{3}{5} \times \left(\frac{1}{6} + \frac{2}{3}\right) = \frac{3}{5} \times \left(\frac{1}{6} + \frac{4}{6}\right)$ $= \frac{3}{5} \times \frac{5}{6}$ $= \frac{3}{6}$
Sample B ✗	$\left(\frac{3}{5} \times \frac{1}{6}\right) + \frac{2}{3} = \frac{3}{30} + \frac{2}{3}$ $= \frac{3}{30} + \frac{20}{30}$ $= \frac{23}{30}$

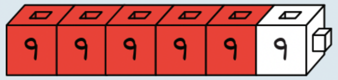
According to Allsopp et. al (2018), "Mathematics visuals appear to be most effective when used in conjunction with other effective instructional practices. An example of this is the use of explicit instruction techniques in conjunction with visuals. (page 192)." "Explicit cueing techniques can be utilized with visuals in ways that help students attend to the visual's most important features and its representation of the mathematical idea. Simple techniques, such as color-coding, using directional arrows, and highlighting, can help students focus on what is most relevant." An example of this is found in grade 7 module 5 lesson 7.

A variety of other strategies suggested in the literature are the foundation of all UDL margin notes found in *Eureka Math²*. Each margin note is aligned to a strategy found to minimize the impacts of one of the nine learning characteristics listed above. Strategies include, but are not limited to:

- Break down tasks into manageable chunks.
- Demonstrate the belief that students can be successful.
- Visually organize to cue student to important aspects of concept.
- Teach students to change their frame of thinking.
- Embed math in relevant contexts.
- Help students make connections to prior knowledge
- Engage students by addressing interests.
- Celebrate progress and success.
- Cultivate a growth mindset.
- Relate math to students' lives.
- Use concrete materials.
- Associate content with meaningful context.
- Use a variety of strategies (visual, auditory, tactile, or kinesthetic).
- Provide visual organizers.
- Provide think alouds.
- Use novel learning contexts.
- Help students focus on what is important rather than on things that are irrelevant.

UDL: Representation

To support students in transitioning from the array to the tape diagram, consider using interlocking cubes. Model the array vertically as 6 nines by using 5 cubes of one color and 1 cube of another color. Then rotate the array horizontally to show that it looks like the tape diagram.



Eureka Math² embeds differentiation through the simple-to-complex sequencing of lesson and Practice problems. This logical sequence gradually reduces scaffolds and builds in complexity, allowing teachers to differentiate assignments for either individual or small-group work. For all students, including those working above grade level, the gradual reduction of support and increase in complexity builds independent thinking and encourages productive struggle. Problems toward the end of the Problem Set (a lesson's daily independent practice) are often open-ended, at Depth of Knowledge (DOK) levels 2 and 3, and integrate two or more standards and/or Standards for Mathematical Practice. Teachers can assign problems of different complexities to students according to their needs or allow students to select problems in the 10-minute (approximate) timeframe. Lessons provide differentiation suggestions at the point of instruction to support a wide variety of learners. Differentiation margin notes found in the *Teach* book offer guidance for adapting instruction so that all students can successfully access grade-level content. There are two types of Differentiation margin notes: Support and Challenge. Challenge boxes suggest ways to keep students working at a more advanced level engaged by providing opportunities for extension while Support boxes offer specific, lesson-based scaffolds for helping students access content.

In this example from grade 5 module 6 lesson 2, the Differentiation margin note offers a suggestion for students to interact with the lesson objective of describing the location of points in the coordinate plane at a deeper level of complexity by describing a point's location relative to another point rather than providing an ordered pair.

Differentiation: Challenge

Consider challenging students by describing a point's location relative to another point, as opposed to providing an ordered pair. For example, ask students to plot a point that is 3 units to the left and 4 units up from point P in problem 1. Then have students name the ordered pair for the point they plotted.

This Support box from grade 4 module 4 lesson 2 encourages the use of concrete models to bolster understanding of fractions greater than 1 and their decomposition into both unit and non-unit fractions.

Differentiation: Support

Consider providing a concrete example of a fraction greater than 1 before presenting $\frac{6}{5}$. Pair students and ask one partner to shade all 4 fourths of their fraction strip. Have partners lay the shaded $\frac{4}{4}$ and $\frac{2}{4}$ side by side. Ask students what fraction is shaded and have them write an equation to show $\frac{6}{4}$ as the sum of $\frac{4}{4}$ and $\frac{2}{4}$.

Supporting Multilanguage Learners

Eureka Math² writers relied on language development research to outline and build in the language support needed for multilanguage learners to engage with the language-rich lessons. With the goal of supporting the clear, concise, and precise use of reading, writing, speaking, and listening in English, *Eureka Math²* supports multilanguage learners through each lesson's instructional design. It does this by including instructional best practices, support for mathematical discourse, and support for the different tiers of terminology. Additionally, Language Support margin notes provide just-in-time, targeted instructional recommendations to support multilanguage learners.

Instructional Best Practices

The following table outlines the instructional best practices included in *Eureka Math²*.

Practice	Eureka Math²
Activate prior knowledge (mathematics content, terminology, contexts)	The daily Fluency and Launch lesson components activate prior knowledge to prepare students for new learning. Context videos demonstrate math concepts in a concrete or real-world context.
Provide multiple entry points to the mathematics	Recurring Notice and Wonder routines and frequent open-middle and open-ended tasks provide multiple points of entry for students to participate. The inclusion of fine art and Math Past history components engages students with math in the real world.
Use clear, concise student-facing language	Readability guidelines ensure that words are never an obstacle to math learning.
Provide strategic active processing time	Frequent mathematical discourse, core instructional routines, and the 10/2 principle expand opportunities for students to synthesize and process new information.
Illustrate multiple modes and formats	Varied physical and visual models, such as digital interactives, context videos, and graphic organizers, help students make connections and deepen understanding.
Provide opportunities for strategic review	Daily fluency activities, distributed practice Remember problems, Exit Tickets, and comprehensive assessments provide frequent opportunities for strategic review.

Mathematical Discourse

To support all learners, lessons provide ample authentic and engaging opportunities for students to read, write, speak, and listen. *Eureka Math²* supports teachers in creating language-rich classrooms by modeling teacher-student discourse and by providing suggestions for supported student-to-student discourse. Because curricula in general have an abundance of receptive language experiences (reading and listening), *Eureka Math²* focuses specific supports on language production (speaking and writing) in mathematics.

The instructional routines that promote discourse are aligned with Stanford's Language Design Principles of supporting sense-making, optimizing output, cultivating conversation, and maximizing linguistic and cognitive meta-awareness.

Eureka Math² periodically includes Language Support notes that suggest specific sentence frames and sentence starters to support multilanguage learners in student-to-student discussions, such as those used in instructional routines. General sentence frames and sentence starters are provided in the Talking Tool which is referenced often during times of student-to-student discourse.

Terminology

Eureka Math² lessons give students experience with a new mathematical concept before naming it with a precise mathematical term. Students may see a mathematical concept come to life in a digital interactive, manipulate counters in groups, or use an instructional routine to engage in mathematical discourse before the teacher gives that concept a name. In addition, teachers are provided with educative guidance, either in the body of the lesson or in a Language Support margin note, to support students in pairing the written term with a visual representation. *Eureka Math²* highlights domain-specific terms from previous lessons in the current lesson, along with instructional recommendations for supporting those terms. These instructional recommendations focus on previewing the meaning of the terms before students are expected to interact with them in the mathematics of the lesson. Additionally, domain-specific terms from previous lessons are also supported by pairing the written term with a visual representation. For each grade, the academic verbs needed to engage with the mathematics were considered. Each grade in *Eureka Math²* offers a carefully curated list of targeted academic verbs that appear in the lessons for students to preview before they are expected to understand and use the language. For example, before students are asked to classify in grade 4 module 6 (page 39), lessons preview the meaning of the academic verb, supporting the meaning of the term in a class discussion and through a Language Support box, shown to the right.

Multiple-meaning terms encompass homophones like *whole* and *hole*, homographs like *scale* and *scale*, and other pronunciation-based challenges, like the difference between *estimate* (as a noun, as in, *What is your estimate?*) and *estimate* (as a verb, as in, *Estimate the sum.*). Lessons call out multiple-meaning terms that could affect emergent bilingual learners' understanding of the mathematics. Lessons also include Language Support notes to preview the meaning of the term in the lesson. These previews include pairing the term with a visual, with real items, or with a video to highlight the different meanings of the term and emphasize the specific meaning used in the lesson.

Language Support Boxes

A Language Support margin note appears in the first lesson of every module to prompt teachers to consider using strategic, flexible grouping in each activity of the module to support multilanguage learners. These grouping suggestions invite teachers to use students' knowledge and home language by pairing students in different ways. Each of these different ways of pairing students has specific benefits for multilanguage learners. The Language Support margin notes also highlight discourse, language or terminology supports.

Language Support

To further develop students' understanding of the word *classify*, explain that we classify things regularly. Consider using an example such as animals. Provide students with the following categories: fish, bird, insect. Name some animals and invite students to classify them. Invite students to describe what makes each category distinct from the other categories.

To learn more, please visit the Great Minds MLL blog: https://gm.greatminds.org/how-to-support-multilingual-learners-in-engaging-in-math-conversations-in-the-classroom

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