Eureka Math² Level K Correlation to Connecticut Model Curriculum

	Level K: Part-Part-Total		
Model Unit Name	**Model Unit Standards**	**Lessons**	**Pacing** *Lessons that address concepts in more than one unit are only counted once.*

Counting and Matching Numerals 0–10 with Comparing	**K.CC.A.1**	**Module 1: Counting and Cardinality**
		Topic A: Classify to Make Categories and Count
		    Lesson 4: Classify objects into three categories and count.
		Topic B: Answer How Many Questions with Up to 5 Objects
		    Lesson 6: Organize, count, and represent a collection of objects.
		Topic C: Write Numerals and Create Sets of Up to 5 Objects
		    Lesson 12: Write numerals 4 and 5 to answer how many questions.
		Topic E: Answer How Many Questions with Up to 10 Objects
		    Lesson 19: Organize, count, and represent a collection of objects.
		Topic F: Write Numerals and Create Sets of Up to 10 Objects
		    Lesson 26: Write numeral 8.
		    Lesson 28: Order numerals 1–10 and reason about an unknown number in the number sequence.
		Topic G: Analyze the Count Sequence
		    Lesson 33: Organize, count, and represent a collection of objects.
		
		Module 2: Two- and Three-Dimensional Shapes
		Topic C: Construct Shapes
		    Lesson 16: Organize, count, and represent a collection of objects. (Optional)
		
		Module 3: Comparison
		Topic D: Compare Numbers Within 10
		    Lesson 22: Organize, count, and represent a collection of objects. (Optional)
			48 days

Counting and Matching Numerals 0–10 with Comparing (cont.)		**Module 4: Composition and Decomposition**
		
		Topic C: Model Composition and Decomposition in Story Problems
		
		      Lesson 17: Organize, count, and represent a collection of objects. (Optional)
		
		Module 5: Addition and Subtraction
		
		Topic D: Make Use of Structure
		
		      Lesson 27: Organize, count, and represent a collection of objects. (Optional)
		
		Module 6: Place Value Foundations
		
		Topic A: Count and Write Teen Numbers
		
		      Lesson 2: Find 10 ones in a teen number.
		      Lesson 5: Reason about a number's position in the number sequence.
		
		Topic C: Count to 100
		
		      Lesson 13: Organize, count, and represent a collection of objects.
		      Lesson 14: Count by tens.
		      Lesson 15: Count by tens by using math tools.
		      Lesson 16: Use the structure of ten to count to 100.
		      Lesson 17: Use patterns in the number sequence to count by ones within 100.
		      Lesson 18: Count within and across decades when counting by ones, part 1.
		      Lesson 19: Count within and across decades when counting by ones, part 2.
		
		Topic D: Compare
		
		      Lesson 24: Organize, count, and represent a collection of objects.	

	K.CC.B.4	**Module 1: Counting and Cardinality**
		
		Topic B: Answer How Many Questions with Up to 5 Objects
		
		      Lesson 6: Organize, count, and represent a collection of objects.
		      Lesson 7: Practice counting accurately.
		      Lesson 9: Conserve number regardless of the arrangement of objects.
		
		Topic C: Write Numerals and Create Sets of Up to 5 Objects
		
		      Lesson 13: Count out enough objects and write the number.
		
		Topic E: Answer How Many Questions with Up to 10 Objects
		
		      Lesson 19: Organize, count, and represent a collection of objects.
		      Lesson 20: Count objects in 5-group and array configurations and match to a numeral.
		      Lesson 23: Conserve number regardless of the order in which objects are counted.	

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Counting and Matching Numerals 0–10 with Comparing (cont.)		Topic G: Analyze the Count Sequence
		Lesson 29: Model the pattern of 1 more in the forward count sequence.
		Lesson 30: Build number stairs to show the pattern of 1 more in the forward count sequence.
		Lesson 31: Model the pattern of 1 less in the backward count sequence.
		Lesson 32: Build number stairs to show the pattern of 1 less in the backward count sequence.
		Lesson 33: Organize, count, and represent a collection of objects.
		Module 6: Place Value Foundations
		Topic A: Count and Write Teen Numbers
		Lesson 4: Order numerals 0–20.
	K.CC.C.6	**Module 3: Comparison**
		Topic C: Compare Sets Within 10
		Lesson 12: Relate more and fewer to length.
		Lesson 13: Compare sets by using more than, fewer than, and the same number as.
		Lesson 14: Use number to compare sets with like units.
		Lesson 16: Count and compare sets with unlike units.
		Lesson 17: Count and compare sets in pictures.
		Topic D: Compare Numbers Within 10
		Lesson 21: Describe and compare several measurable attributes of objects and sets.
		Module 6: Place Value Foundations
		Topic D: Compare
		Lesson 20: Compare totals in story situations. (Optional)
		Lesson 21: Count and compare sets with more than 10 objects. (Optional)
		Lesson 22: Compare area by comparing number. (Optional)
		Lesson 23: Compare lengths of objects by using 10-sticks and individual cubes. (Optional)

Counting and Matching Numerals 0–10 with Comparing (cont.)	**K.MD.B.3**	**Module 1: Counting and Cardinality** Topic A: Classify to Make Categories and Count 　　Lesson 1:　Compare objects based on their attributes. 　　Lesson 2:　Classify objects into two categories. 　　Lesson 3:　Classify objects into two categories and count. 　　Lesson 5:　Classify objects into three categories, count, and match to a numeral. Topic D: Decompose Number 　　Lesson 15:　Sort the same group of objects in more than one way and count. 　　Lesson 16:　Decompose a set shown in a picture. **Module 3: Comparison** Topic C: Compare Sets Within 10 　　Lesson 15:　Classify flat shapes into groups and compare the number of shapes in each group.	
Counting and Matching Numerals 11–20	**K.CC.A.2**	**Module 5: Addition and Subtraction** Topic C: Make Sense of Problems 　　Lesson 18:　Count starting from a number other than 1 to find the total. Topic D: Make Use of Structure 　　Lesson 22:　Identify and extend linear patterns. 　　Lesson 23:　Use a pattern to make a prediction. **Module 6: Place Value Foundations** Topic A: Count and Write Teen Numbers 　　Lesson 5:　Reason about a number's position in the number sequence. Topic C: Count to 100 　　Lesson 16:　Use the structure of ten to count to 100. 　　Lesson 17:　Use patterns in the number sequence to count by ones within 100. 　　Lesson 18:　Count within and across decades when counting by ones, part 1. 　　Lesson 19:　Count within and across decades when counting by ones, part 2.	**20 days**

Counting and Matching Numerals 11–20 (cont.)	K.CC.A.3	**Module 1: Counting and Cardinality**	
		Topic A: Classify to Make Categories and Count	
		Lesson 5: Classify objects into three categories, count, and match to a numeral.	
		Topic B: Answer How Many Questions with Up to 5 Objects	
		Lesson 7: Practice counting accurately.	
		Topic C: Write Numerals and Create Sets of Up to 5 Objects	
		Lesson 11: Write numerals 1–3 to answer how many questions.	
		Topic D: Decompose Numbers	
		Lesson 14: Understand the meaning of zero and write the numeral.	
		Topic E: Answer How Many Questions with Up to 10 Objects	
		Lesson 21: Count sets in circular configurations and match to a numeral.	
		Lesson 22: Count sets in scattered configurations and match to a numeral.	
		Topic F: Write Numerals and Create Sets of Up to 10 Objects	
		Lesson 25: Write numerals 6 and 7.	
		Lesson 26: Write numeral 8.	
		Lesson 27: Write numerals 9 and 10.	
		Module 6: Place Value Foundations	
		Topic A: Count and Write Teen Numbers	
		Lesson 3: Write numerals 11–20.	
		Topic C: Count to 100	
		Lesson 17: Use patterns in the number sequence to count by ones within 100.	
	K.CC.B.5	**Module 1: Counting and Cardinality**	
		Topic A: Classify to Make Categories and Count	
		Lesson 3: Classify objects into two categories and count.	
		Topic B: Answer How Many Questions with Up to 5 Objects	
		Lesson 6: Organize, count, and represent a collection of objects.	
		Lesson 7: Practice counting accurately.	
		Lesson 8: Count sets in linear, array, and scattered configurations.	
		Topic C: Write Numerals and Create Sets of Up to 5 Objects	
		Lesson 10: Count out a group of objects to match a numeral.	

Counting and Matching Numerals 11–20 (cont.)		**Topic E: Answer How Many Questions with Up to 10 Objects** Lesson 19: Organize, count, and represent a collection of objects. Lesson 20: Count objects in 5-group and array configurations and match to a numeral. Lesson 21: Count sets in circular configurations and match to a numeral. Lesson 22: Count sets in scattered configurations and match to a numeral. **Topic F: Write Numerals and Create Sets of Up to 10 Objects** Lesson 24: Count out a group of objects to match a numeral. **Topic G: Analyze the Count Sequence** Lesson 33: Organize, count, and represent a collection of objects. **Module 6: Place Value Foundations** **Topic A: Count and Write Teen Numbers** Lesson 1: Describe teen numbers as 10 ones and _____ ones. Lesson 6: Count out a group of objects to match a numeral. **Topic B: Compose and Decompose Teen Numbers** Lesson 7: Decompose numbers 10–20 with 10 as a part. Lesson 12: Investigate different ways to decompose teen numbers. (Optional)	
	K.CC.C.7	**Module 3: Comparison** **Topic D: Compare Numbers Within 10** Lesson 18: Compare the capacity of containers by using numerals. Lesson 19: Compare numbers by using greater than, less than, and equal to. Lesson 20: Compare two numbers in story situations.	
	K.CC.A.1	**Module 1: Counting and Cardinality** **Topic A: Classify to Make Categories and Count** Lesson 4: Classify objects into three categories and count. **Topic B: Answer How Many Questions with Up to 5 Objects** Lesson 6: Organize, count, and represent a collection of objects. **Topic C: Write Numerals and Create Sets of Up to 5 Objects** Lesson 12: Write numerals 4 and 5 to answer how many questions. **Topic E: Answer How Many Questions with Up to 10 Objects** Lesson 19: Organize, count, and represent a collection of objects.	

Counting and Matching Numerals 11–20 (cont.)		**Topic F: Write Numerals and Create Sets of Up to 10 Objects**
		      Lesson 26: Write numeral 8.
		      Lesson 28: Order numerals 1–10 and reason about an unknown number in the number sequence.
		Topic G: Analyze the Count Sequence
		      Lesson 33: Organize, count, and represent a collection of objects.
		
		Module 2: Two- and Three-Dimensional Shapes
		Topic C: Construct Shapes
		      Lesson 16: Organize, count, and represent a collection of objects. (Optional)
		
		Module 3: Comparison
		Topic D: Compare Numbers Within 10
		      Lesson 22: Organize, count, and represent a collection of objects. (Optional)
		
		Module 4: Composition and Decomposition
		Topic C: Model Composition and Decomposition in Story Problems
		      Lesson 17: Organize, count, and represent a collection of objects. (Optional)
		
		Module 5: Addition and Subtraction
		Topic D: Make Use of Structure
		      Lesson 27: Organize, count, and represent a collection of objects. (Optional)
		
		Module 6: Place Value Foundations
		Topic A: Count and Write Teen Numbers
		      Lesson 2: Find 10 ones in a teen number.
		      Lesson 5: Reason about a number's position in the number sequence.
		Topic C: Count to 100
		      Lesson 13: Organize, count, and represent a collection of objects.
		      Lesson 14: Count by tens.
		      Lesson 15: Count by tens by using math tools.
		      Lesson 16: Use the structure of ten to count to 100.
		      Lesson 17: Use patterns in the number sequence to count by ones within 100.	

Counting and Matching Numerals 11–20 (cont.)		Lesson 18: Count within and across decades when counting by ones, part 1. Lesson 19: Count within and across decades when counting by ones, part 2. Topic D: Compare Lesson 24: Organize, count, and represent a collection of objects.	

	K.CC.B.4	**Module 1: Counting and Cardinality**
		Topic B: Answer How Many Questions with Up to 5 Objects
		    Lesson 6: Organize, count, and represent a collection of objects.
		    Lesson 7: Practice counting accurately.
		    Lesson 9: Conserve number regardless of the arrangement of objects.
		Topic C: Write Numerals and Create Sets of Up to 5 Objects
		    Lesson 13: Count out enough objects and write the number.
		Topic E: Answer How Many Questions with Up to 10 Objects
		    Lesson 19: Organize, count, and represent a collection of objects.
		    Lesson 20: Count objects in 5-group and array configurations and match to a numeral.
		    Lesson 23: Conserve number regardless of the order in which objects are counted.
		Topic G: Analyze the Count Sequence
		    Lesson 29: Model the pattern of 1 more in the forward count sequence.
		    Lesson 30: Build number stairs to show the pattern of 1 more in the forward count sequence.
		    Lesson 31: Model the pattern of 1 less in the backward count sequence.
		    Lesson 32: Build number stairs to show the pattern of 1 less in the backward count sequence.
		    Lesson 33: Organize, count, and represent a collection of objects.
		
		Module 6: Place Value Foundations
		Topic A: Count and Write Teen Numbers
		    Lesson 4: Order numerals 0–20.	

	K.CC.C.6	**Module 3: Comparison**
		Topic C: Compare Sets Within 10
		    Lesson 12: Relate more and fewer to length.
		    Lesson 13: Compare sets by using more than, fewer than, and the same number as.
		    Lesson 14: Use number to compare sets with like units.	

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Counting and Matching Numerals 11–20 (cont.)		Lesson 16: Count and compare sets with unlike units. Lesson 17: Count and compare sets in pictures. Topic D: Compare Numbers Within 10 Lesson 21: Describe and compare several measurable attributes of objects and sets. **Module 6: Place Value Foundations** Topic D: Compare Lesson 20: Compare totals in story situations. (Optional) Lesson 21: Count and compare sets with more than 10 objects. (Optional) Lesson 22: Compare area by comparing number. (Optional) Lesson 23: Compare lengths of objects by using 10-sticks and individual cubes. (Optional)	
Addition & Subtraction within 10	K.OA.A.1	**Module 1: Counting and Cardinality** Topic D: Decompose Numbers Lesson 17: Model story problems. Lesson 18: Model story problems and identify the numeral referents. **Module 4: Composition and Decomposition** Topic A: Explore Composition and Decomposition Lesson 3: Decompose a group to identify parts and total. Lesson 4: Decompose a group and record parts and total by using a number bond. Topic B: Record Composition and Decomposition Lesson 6: Decompose a number in more than one way and record. Lesson 7: Find partners to 5. Lesson 10: Sort and record the decomposition with a number bond. Topic C: Model Composition and Decomposition in Story Problems Lesson 11: Model put together with total unknown story problems. Lesson 15: Choose a math tool to solve take apart with both addends unknown situations. **Module 5: Addition and Subtraction** Topic A: Represent Addition Lesson 1: Represent add to with result unknown story problems by using drawings and numbers.	42 days

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Addition & Subtraction within 10 (cont.)		Lesson 2: Relate number sentences and number bonds through story problems. Lesson 3: Represent and solve add to with result unknown story problems. Lesson 4: Represent decomposition situations by using number bonds and addition sentences. Lesson 5: Represent take apart with both addends unknown situations with a number sentence. Lesson 6: Tell addition story problems starting from number sentence models. Lesson 7: Find the total in an addition sentence. **Topic B: Represent Subtraction** Lesson 8: Understand taking away as a type of subtraction. Lesson 9: Represent take from with result unknown story problems by using drawings and numbers. Lesson 10: Represent and solve take from with result unknown story problems. Lesson 11: Represent decomposition situations by using number bonds and subtraction sentences. Lesson 12: Relate parts to total in subtraction situations. Lesson 13: Tell subtraction story problems starting from number sentence models. Lesson 14: Find the difference in a subtraction sentence. **Topic C: Make Sense of Problems** Lesson 15: Identify the action in a problem to represent and solve it. Lesson 16: Relate addition and subtraction through word problems. Lesson 19: Represent and solve take from with change unknown problems. Lesson 21: Organize drawings to solve problems efficiently. **Topic D: Make Use of Structure** Lesson 24: Solve story problems by using repeated reasoning. Lesson 26: Reason about numbers to add and subtract.	
	K.OA.A.2	**Module 4: Composition and Decomposition** **Topic C: Model Composition and Decomposition in Story Problems** Lesson 11: Model put together with total unknown story problems. Lesson 12: Draw to represent put together with total unknown story problems. Lesson 13: Choose a math tool to solve put together with total unknown story problems.	

Addition & Subtraction within 10 (cont.)		Lesson 14: Model take apart with both addends unknown situations.
		Lesson 15: Choose a math tool to solve take apart with both addends unknown situations.
		Lesson 16: Compose and decompose numbers and shapes.

Module 5: Addition and Subtraction

Topic A: Represent Addition

    Lesson 3: Represent and solve add to with result unknown story problems.

Topic B: Represent Subtraction

    Lesson 10: Represent and solve take from with result unknown story problems.

    Lesson 12: Relate parts to total in subtraction situations.

Topic C: Make Sense of Problems

    Lesson 15: Identify the action in a problem to represent and solve it.

    Lesson 16: Relate addition and subtraction through word problems.

    Lesson 17: Reason about different units to solve story problems.

Module 6: Place Value Foundations

Topic B: Compose and Decompose Teen Numbers

    Lesson 8: Represent teen number compositions and decompositions as addition sentences.

    Lesson 9: Represent teen number decompositions as subtraction sentences.

    Lesson 10: Make sense of word problems involving teen numbers.

    Lesson 11: Represent teen number decompositions as 10 ones and some ones and find a hidden part.

K.OA.A.3

Module 4: Composition and Decomposition

Topic B: Record Composition and Decomposition

    Lesson 5: Sort to decompose a number in more than one way.

    Lesson 6: Decompose a number in more than one way and record.

    Lesson 7: Find partners to 5.

    Lesson 8: Find partners to 10.

Addition & Subtraction within 10 (cont.)		**Topic C: Model Composition and Decomposition in Story Problems**
		        Lesson 18: Use the structure of 5 and 10 to build a rekenrek. (Optional)
		
		Module 5: Addition and Subtraction
		Topic A: Represent Addition
		        Lesson 4: Represent decomposition situations by using number bonds and addition sentences.	

	K.OA.A.4	**Module 5: Addition and Subtraction**
		Topic C: Make Sense of Problems
		        Lesson 20: Find the number that makes 10 and record with a number sentence.
		Topic D: Make Use of Structure
		        Lesson 26: Reason about numbers to add and subtract.	

	K.OA.A.5	**Module 5: Addition and Subtraction**
		Topic A: Represent Addition
		        Lesson 7: Find the total in an addition sentence.
		Topic B: Represent Subtraction
		        Lesson 14: Find the difference in a subtraction sentence.	

	K.CC.A.3	**Module 1: Counting and Cardinality**
		Topic A: Classify to Make Categories and Count
		        Lesson 5: Classify objects into three categories, count, and match to a numeral.
		Topic B: Answer How Many Questions with Up to 5 Objects
		        Lesson 7: Practice counting accurately.
		Topic C: Write Numerals and Create Sets of Up to 5 Objects
		        Lesson 11: Write numerals 1–3 to answer how many questions.
		Topic D: Decompose Numbers
		        Lesson 14: Understand the meaning of zero and write the numeral.
		Topic E: Answer How Many Questions with Up to 10 Objects
		        Lesson 21: Count sets in circular configurations and match to a numeral.
		        Lesson 22: Count sets in scattered configurations and match to a numeral.	

Addition & Subtraction within 10 (cont.)		**Topic F: Write Numerals and Create Sets of Up to 10 Objects** Lesson 25: Write numerals 6 and 7. Lesson 26: Write numeral 8. Lesson 27: Write numerals 9 and 10. **Module 6: Place Value Foundations** Topic A: Count and Write Teen Numbers Lesson 3: Write numerals 11–20. Topic C: Count to 100 Lesson 17: Use patterns in the number sequence to count by ones within 100.	
	K.CC.B.4	**Module 1: Counting and Cardinality** Topic B: Answer How Many Questions with Up to 5 Objects Lesson 6: Organize, count, and represent a collection of objects. Lesson 7: Practice counting accurately. Lesson 9: Conserve number regardless of the arrangement of objects. Topic C: Write Numerals and Create Sets of Up to 5 Objects Lesson 13: Count out enough objects and write the number. Topic E: Answer How Many Questions with Up to 10 Objects Lesson 19: Organize, count, and represent a collection of objects. Lesson 20: Count objects in 5-group and array configurations and match to a numeral. Lesson 23: Conserve number regardless of the order in which objects are counted. Topic G: Analyze the Count Sequence Lesson 29: Model the pattern of 1 more in the forward count sequence. Lesson 30: Build number stairs to show the pattern of 1 more in the forward count sequence. Lesson 31: Model the pattern of 1 less in the backward count sequence. Lesson 32: Build number stairs to show the pattern of 1 less in the backward count sequence. Lesson 33: Organize, count, and represent a collection of objects. **Module 6: Place Value Foundations** Topic A: Count and Write Teen Numbers Lesson 4: Order numerals 0–20.	

Addition & Subtraction within 10 (cont.)	**K.CC.B.5**	**Module 1: Counting and Cardinality**
		
		Topic A: Classify to Make Categories and Count
		    Lesson 3: Classify objects into two categories and count.
		Topic B: Answer How Many Questions with Up to 5 Objects
		    Lesson 6: Organize, count, and represent a collection of objects.
		    Lesson 7: Practice counting accurately.
		    Lesson 8: Count sets in linear, array, and scattered configurations.
		Topic C: Write Numerals and Create Sets of Up to 5 Objects
		    Lesson 10: Count out a group of objects to match a numeral.
		Topic E: Answer How Many Questions with Up to 10 Objects
		    Lesson 19: Organize, count, and represent a collection of objects.
		    Lesson 20: Count objects in 5-group and array configurations and match to a numeral.
		    Lesson 21: Count sets in circular configurations and match to a numeral.
		    Lesson 22: Count sets in scattered configurations and match to a numeral.
		Topic F: Write Numerals and Create Sets of Up to 10 Objects
		    Lesson 24: Count out a group of objects to match a numeral.
		Topic G: Analyze the Count Sequence
		    Lesson 33: Organize, count, and represent a collection of objects.
		
		Module 6: Place Value Foundations
		Topic A: Count and Write Teen Numbers
		    Lesson 1: Describe teen numbers as 10 ones and ____ ones.
		    Lesson 6: Count out a group of objects to match a numeral.
		Topic B: Compose and Decompose Teen Numbers
		    Lesson 7: Decompose numbers 10–20 with 10 as a part.
		    Lesson 12: Investigate different ways to decompose teen numbers. (Optional)	

Teen Numbers (11–19) and Counting in 100	**K.NBT.A.1**	**Module 6: Place Value Foundations**
		Topic A: Count and Write Teen Numbers
		    Lesson 1: Describe teen numbers as 10 ones and ____ ones.
		    Lesson 2: Find 10 ones in a teen number.
		    Lesson 3: Write numerals 11–20.
			No additional instructional days

Teen Numbers (11–19) and Counting in 100 (cont.)		
		Lesson 4: Order numerals 0–20.
		Lesson 6: Count out a group of objects to match a numeral.
		Topic B: Compose and Decompose Teen Numbers
		Lesson 7: Decompose numbers 10–20 with 10 as a part.
		Lesson 8: Represent teen number compositions and decompositions as addition sentences.
		Lesson 9: Represent teen number decompositions as subtraction sentences.
		Lesson 10: Make sense of word problems involving teen numbers.
		Lesson 11: Represent teen number decompositions as 10 ones and some ones and find a hidden part.
	K.OA.A.1	**Module 4: Composition and Decomposition**
		Topic A: Explore Composition and Decomposition
		Lesson 3: Decompose a group to identify parts and total.
		Lesson 4: Decompose a group and record parts and total by using a number bond.
		Topic B: Record Composition and Decomposition
		Lesson 6: Decompose a number in more than one way and record.
		Lesson 7: Find partners to 5.
		Lesson 10: Sort and record the decomposition with a number bond.
		Topic C: Model Composition and Decomposition in Story Problems
		Lesson 11: Model put together with total unknown story problems.
		Lesson 15: Choose a math tool to solve take apart with both addends unknown situations.
		Module 5: Addition and Subtraction
		Topic A: Represent Addition
		Lesson 1: Represent add to with result unknown story problems by using drawings and numbers.
		Lesson 2: Relate number sentences and number bonds through story problems.
		Lesson 3: Represent and solve add to with result unknown story problems.
		Lesson 4: Represent decomposition situations by using number bonds and addition sentences.
		Lesson 5: Represent take apart with both addends unknown situations with a number sentence.

Teen Numbers (11–19) and Counting in 100 (cont.)		Lesson 6: Tell addition story problems starting from number sentence models.
		Lesson 7: Find the total in an addition sentence.
		Topic B: Represent Subtraction
		Lesson 8: Understand taking away as a type of subtraction.
		Lesson 9: Represent take from with result unknown story problems by using drawings and numbers.
		Lesson 10: Represent and solve take from with result unknown story problems.
		Lesson 11: Represent decomposition situations by using number bonds and subtraction sentences.
		Lesson 12: Relate parts to total in subtraction situations.
		Lesson 13: Tell subtraction story problems starting from number sentence models.
		Lesson 14: Find the difference in a subtraction sentence.
		Topic C: Make Sense of Problems
		Lesson 15: Identify the action in a problem to represent and solve it.
		Lesson 16: Relate addition and subtraction through word problems.
		Lesson 19: Represent and solve take from with change unknown problems.
		Lesson 21: Organize drawings to solve problems efficiently.
		Topic D: Make Use of Structure
		Lesson 24: Solve story problems by using repeated reasoning.
		Lesson 26: Reason about numbers to add and subtract.
	K.CC.A.1	**Module 1: Counting and Cardinality**
		Topic A: Classify to Make Categories and Count
		Lesson 4: Classify objects into three categories and count.
		Topic B: Answer How Many Questions with Up to 5 Objects
		Lesson 6: Organize, count, and represent a collection of objects.
		Topic C: Write Numerals and Create Sets of Up to 5 Objects
		Lesson 12: Write numerals 4 and 5 to answer how many questions.
		Topic E: Answer How Many Questions with Up to 10 Objects
		Lesson 19: Organize, count, and represent a collection of objects.
		Topic F: Write Numerals and Create Sets of Up to 10 Objects
		Lesson 26: Write numeral 8.
		Lesson 28: Order numerals 1–10 and reason about an unknown number in the number sequence.

Teen Numbers (11–19) and Counting in 100 (cont.)		**Topic G: Analyze the Count Sequence**
		Lesson 33: Organize, count, and represent a collection of objects.
		Module 2: Two- and Three-Dimensional Shapes
		Topic C: Construct Shapes
		Lesson 16: Organize, count, and represent a collection of objects. (Optional)
		Module 3: Comparison
		Topic D: Compare Numbers Within 10
		Lesson 22: Organize, count, and represent a collection of objects. (Optional)
		Module 4: Composition and Decomposition
		Topic C: Model Composition and Decomposition in Story Problems
		Lesson 17: Organize, count, and represent a collection of objects. (Optional)
		Module 5: Addition and Subtraction
		Topic D: Make Use of Structure`
		Lesson 27: Organize, count, and represent a collection of objects. (Optional)
		Module 6: Place Value Foundations
		Topic A: Count and Write Teen Numbers
		Lesson 2: Find 10 ones in a teen number.
		Lesson 5: Reason about a number's position in the number sequence.
		Topic C: Count to 100
		Lesson 13: Organize, count, and represent a collection of objects.
		Lesson 14: Count by tens.
		Lesson 15: Count by tens by using math tools.
		Lesson 16: Use the structure of ten to count to 100.
		Lesson 17: Use patterns in the number sequence to count by ones within 100.
		Lesson 18: Count within and across decades when counting by ones, part 1.
		Lesson 19: Count within and across decades when counting by ones, part 2.
		Topic D: Compare
		Lesson 24: Organize, count, and represent a collection of objects.

Teen Numbers (11–19) and Counting in 100 (cont.)	**K.CC.A.2**	**Module 5: Addition and Subtraction**
		Topic C: Make Sense of Problems
		  Lesson 18: Count starting from a number other than 1 to find the total.
		Topic D: Make Use of Structure
		  Lesson 22: Identify and extend linear patterns.
		  Lesson 23: Use a pattern to make a prediction.
		
		Module 6: Place Value Foundations
		Topic A: Count and Write Teen Numbers
		  Lesson 5: Reason about a number's position in the number sequence.
		Topic C: Count to 100
		  Lesson 16: Use the structure of ten to count to 100.
		  Lesson 17: Use patterns in the number sequence to count by ones within 100.
		  Lesson 18: Count within and across decades when counting by ones, part 1.
		  Lesson 19: Count within and across decades when counting by ones, part 2.	

	K.CC.B.4	**Module 1: Counting and Cardinality**
		Topic B: Answer How Many Questions with Up to 5 Objects
		  Lesson 6: Organize, count, and represent a collection of objects.
		  Lesson 7: Practice counting accurately.
		  Lesson 9: Conserve number regardless of the arrangement of objects.
		Topic C: Write Numerals and Create Sets of Up to 5 Objects
		  Lesson 13: Count out enough objects and write the number.
		Topic E: Answer How Many Questions with Up to 10 Objects
		  Lesson 19: Organize, count, and represent a collection of objects.
		  Lesson 20: Count objects in 5-group and array configurations and match to a numeral.
		  Lesson 23: Conserve number regardless of the order in which objects are counted.
		Topic G: Analyze the Count Sequence
		  Lesson 29: Model the pattern of 1 more in the forward count sequence.
		  Lesson 30: Build number stairs to show the pattern of 1 more in the forward count sequence.
		  Lesson 31: Model the pattern of 1 less in the backward count sequence.	

Teen Numbers (11–19) and Counting in 100 (cont.)		**Lesson 32:** Build number stairs to show the pattern of 1 less in the backward count sequence. **Lesson 33:** Organize, count, and represent a collection of objects. **Module 6: Place Value Foundations** Topic A: Count and Write Teen Numbers **Lesson 4:** Order numerals 0–20.	

	K.CC.B.5	**Module 1: Counting and Cardinality**
		Topic A: Classify to Make Categories and Count
		    Lesson 3: Classify objects into two categories and count.
		Topic B: Answer How Many Questions with Up to 5 Objects
		    Lesson 6: Organize, count, and represent a collection of objects.
		    Lesson 7: Practice counting accurately.
		    Lesson 8: Count sets in linear, array, and scattered configurations.
		Topic C: Write Numerals and Create Sets of Up to 5 Objects
		    Lesson 10: Count out a group of objects to match a numeral.
		Topic E: Answer How Many Questions with Up to 10 Objects
		    Lesson 19: Organize, count, and represent a collection of objects.
		    Lesson 20: Count objects in 5-group and array configurations and match to a numeral.
		    Lesson 21: Count sets in circular configurations and match to a numeral.
		    Lesson 22: Count sets in scattered configurations and match to a numeral.
		Topic F: Write Numerals and Create Sets of Up to 10 Objects
		    Lesson 24: Count out a group of objects to match a numeral.
		Topic G: Analyze the Count Sequence
		    Lesson 33: Organize, count, and represent a collection of objects.
		
		Module 6: Place Value Foundations
		Topic A: Count and Write Teen Numbers
		    Lesson 1: Describe teen numbers as 10 ones and _____ ones.
		    Lesson 6: Count out a group of objects to match a numeral.
		Topic B: Compose and Decompose Teen Numbers
		    Lesson 7: Decompose numbers 10–20 with 10 as a part.
		    Lesson 12: Investigate different ways to decompose teen numbers. (Optional)	

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Identify and Describe 2-D and 3-D Shapes	K.G.A.1	**Module 2: Two- and Three-Dimensional Shapes** Topic A: Analyze and Name Two-Dimensional Shapes Lesson 2: Classify shapes as triangles or nontriangles. Lesson 3: Classify shapes as circles, hexagons, or neither. Lesson 4: Classify shapes as rectangles or nonrectangles, with square rectangles as a special case. Lesson 5: Communicate the position of flat shapes by using position words. Topic C: Construct Shapes Lesson 14: Compose Flat Shapes	12 days
	K.G.A.2	**Module 2: Two- and Three-Dimensional Shapes** Topic A: Analyze and Name Two-Dimensional Shapes Lesson 2: Classify shapes as triangles or nontriangles. Lesson 3: Classify shapes as circles, hexagons, or neither. Lesson 4: Classify shapes as rectangles or nonrectangles, with square rectangles as a special case. Topic B: Analyze and Name Three-Dimensional Shapes Lesson 7: Name solid shapes and discuss their attributes. Topic C: Construct Shapes Lesson 11: Construct and classify polygons. Lesson 14: Compose Flat Shapes	
	K.G.A.3	**Module 2: Two- and Three-Dimensional Shapes** Topic B: Analyze and Name Three-Dimensional Shapes Lesson 6: Distinguish between flat and solid shapes. Lesson 9: Match solid shapes to their two-dimensional faces.	
	K.G.B.5	**Module 2: Two- and Three-Dimensional Shapes** Topic C: Construct Shapes Lesson 10: Construct a circle. Lesson 11: Construct and classify polygons. Lesson 12: Construct solid shapes by using a square base. Lesson 13: Draw flat shapes	

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Identify and Describe 2-D and 3-D Shapes (cont.)	K.MD.B.3	**Module 1: Counting and Cardinality**
		Topic A: Classify to Make Categories and Count
		      Lesson 1: Compare objects based on their attributes.
		      Lesson 2: Classify objects into two categories.
		      Lesson 3: Classify objects into two categories and count.
		      Lesson 5: Classify objects into three categories, count, and match to a numeral.
		Topic D: Decompose Number
		      Lesson 15: Sort the same group of objects in more than one way and count.
		      Lesson 16: Decompose a set shown in a picture.
		
		Module 3: Comparison
		Topic C: Compare Sets Within 10
		      Lesson 15: Classify flat shapes into groups and compare the number of shapes in each group.	

Compare, Analyze and Compose 2-D and 3-D Shapes	K.G.B.4	**Module 2: Two- and Three-Dimensional Shapes**
		Topic A: Analyze and Name Two-Dimensional Shapes
		      Lesson 1: Find and describe attributes of flat shapes.
		      Lesson 2: Classify shapes as triangles or nontriangles.
		      Lesson 3: Classify shapes as circles, hexagons, or neither.
		      Lesson 4: Classify shapes as rectangles or nonrectangles, with square rectangles as a special case.
		Topic B: Analyze and Name Three-Dimensional Shapes
		      Lesson 7: Name solid shapes and discuss their attributes.
		      Lesson 8: Classify solid shapes based on the ways they can be moved.
		      Lesson 9: Match solid shapes to their two-dimensional faces.
		Topic C: Construct Shapes
		      Lesson 10: Construct a Circle.
		      Lesson 12: Construct solid shapes by using a square base.
		      Lesson 13: Draw flat shapes.
		      Lesson 15: Compose solid shapes to create a structure that can fit a toy inside
			18 days

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Compare, Analyze and Compose 2-D and 3-D Shapes (cont.)	K.G.B.5	**Module 2: Two- and Three-Dimensional Shapes** Topic C: Construct Shapes 　　　Lesson 10: Construct a Circle. 　　　Lesson 11: Construct and classify polygons. 　　　Lesson 12: Construct solid shapes by using a square base. 　　　Lesson 13: Draw flat shapes	
	K.G.B.6	**Module 4: Composition and Decomposition** Topic A: Explore Composition and Decomposition 　　　Lesson 1: Compose flat shapes and count the parts. 　　　Lesson 2: Decompose flat shapes and count the parts. Topic B: Record Composition and Decomposition 　　　Lesson 9: Compose shapes in more than one way. **Module 5: Addition and Subtraction** Topic D: Make Use of Structure 　　　Lesson 25: Extend growing patterns.	
	K.MD.A.2	**Module 3: Comparison** Topic A: Compare Heights and Lengths 　　　Lesson 1: Align endpoints to compare lengths by using taller than and shorter than. 　　　Lesson 2: Compare lengths of simple straight objects by using longer than, shorter than, and about the same length as. 　　　Lesson 3: Compare lengths of complex objects by using longer than, shorter than, and about the same length as. 　　　Lesson 4: Compare the lengths of cube sticks to flat shapes. 　　　Lesson 5: Compare the lengths of two cube sticks. 　　　Lesson 6: Compose cube sticks that are the same length. Topic B: Compare Weights 　　　Lesson 7: Compare weights by using heavier than, lighter than, and about the same weight as. 　　　Lesson 8: Use a balance scale to compare two objects. 　　　Lesson 9: Use a balance scale to compare an object to a group of cubes.	

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Compare, Analyze and Compose 2-D and 3-D Shapes (cont.)		Lesson 10: Use a balance scale to compare an object to different units. Lesson 11: Observe conservation of weight on the balance scale. Topic C: Compare Sets Within 10 Lesson 12: Relate more and fewer to length. Topic D: Compare Numbers Within 10 Lesson 21: Describe and compare several measurable attributes of objects and sets.	
	K.G.A.1	**Module 2: Two- and Three-Dimensional Shapes** Topic A: Analyze and Name Two-Dimensional Shapes Lesson 2: Classify shapes as triangles or nontriangles. Lesson 3: Classify shapes as circles, hexagons, or neither. Lesson 4: Classify shapes as rectangles or nonrectangles, with square rectangles as a special case. Lesson 5: Communicate the position of flat shapes by using position words. Topic C: Construct Shapes Lesson 14: Compose Flat Shapes	
	K.G.A.2	**Module 2: Two- and Three-Dimensional Shapes** Topic A: Analyze and Name Two-Dimensional Shapes Lesson 2: Classify shapes as triangles or nontriangles. Lesson 3: Classify shapes as circles, hexagons, or neither. Lesson 4: Classify shapes as rectangles or nonrectangles, with square rectangles as a special case. Topic B: Analyze and Name Three-Dimensional Shapes Lesson 7: Name solid shapes and discuss their attributes. Topic C: Construct Shapes Lesson 11: Construct and classify polygons. Lesson 14: Compose Flat Shapes	
	K.G.A.3	**Module 2: Two- and Three-Dimensional Shapes** Topic B: Analyze and Name Three-Dimensional Shapes Lesson 6: Distinguish between flat and solid shapes. Lesson 9: Match solid shapes to their two-dimensional faces.	

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Measurement and Direct Comparison	K.MD.A.1	**Module 3: Comparison** Topic A: Compare Heights and Lengths Lesson 1: Align endpoints to compare lengths by using taller than and shorter than. Lesson 2: Compare lengths of simple straight objects by using longer than, shorter than, and about the same length as. Topic B: Compare Weights Lesson 7: Compare weights by using heavier than, lighter than, and about the same weight as. Topic C: Compare Sets Within 10 Lesson 12: Relate more and fewer to length. Topic D: Compare Numbers Within 10 Lesson 21: Describe and compare several measurable attributes of objects and sets.	*No additional instructional days*
	K.MD.A.2	**Module 3: Comparison** Topic A: Compare Heights and Lengths Lesson 1: Align endpoints to compare lengths by using taller than and shorter than. Lesson 2: Compare lengths of simple straight objects by using longer than, shorter than, and about the same length as. Lesson 3: Compare lengths of complex objects by using longer than, shorter than, and about the same length as. Lesson 4: Compare the lengths of cube sticks to flat shapes. Lesson 5: Compare the lengths of two cube sticks. Lesson 6: Compose cube sticks that are the same length. Topic B: Compare Weights Lesson 7: Compare weights by using heavier than, lighter than, and about the same weight as. Lesson 8: Use a balance scale to compare two objects. Lesson 9: Use a balance scale to compare an object to a group of cubes. Lesson 10: Use a balance scale to compare an object to different units. Lesson 11: Observe conservation of weight on the balance scale. Topic C: Compare Sets Within 10 Lesson 12: Relate more and fewer to length. Topic D: Compare Numbers Within 10 Lesson 21: Describe and compare several measurable attributes of objects and sets.	

Eureka Math² Scope and Sequence: Year at a Glance
Level K: Part–Part–Total

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

Module 1 Counting and Cardinality	Module 2 Two- and Three-Dimensional Shapes	Module 3 Comparison	Module 4 Composition and Decomposition	Module 5 Addition and Subtraction	Module 6 Place Value Foundations
Topic A: Classify to Make Categories and Count **Lesson 1:** Compare objects based on their attributes. K.MD.B.3, MP6, K.Mod1.AD10 **Lesson 2:** Classify objects into two categories. K.MD.B.3, MP2, K.Mod1.AD10 **Lesson 3:** Classify objects into two categories and count. K.CC.B.5, K.MD.B.3, MP7, K.Mod1.AD8, K.Mod1.AD10 **Lesson 4:** Classify objects into three categories and count. K.CC.A.1, K.MD.B.3, MP4, K.Mod1.AD1, K.Mod1.AD10 **Lesson 5:** Classify objects into three categories, count, and match to a numeral. K.CC.A.3, K.MD.B.3, MP3, K.Mod1.AD3, K.Mod1.AD10	**Topic A: Analyze and Name Two-Dimensional Shapes** **Lesson 1:** Find and describe attributes of flat shapes. K.G.B.4, MP6, K.Mod2.AD5 **Lesson 2:** Classify shapes as triangles or nontriangles. K.G.A.1, K.G.A.2, K.G.B.4, MP3, MP6, K.Mod2.AD1, K.Mod2.AD3, K.Mod2.AD5 **Lesson 3:** Classify shapes as circles, hexagons, or neither. K.G.A.1, K.G.A.2, K.G.B.4, MP7, K.Mod2.AD1, K.Mod2.AD3, K.Mod2.AD5, K.Mod2.AD6 **Lesson 4:** Classify shapes as rectangles or nonrectangles, with square rectangles as a special case. K.G.A.1, K.G.A.2, K.G.B.4, MP3, MP6, K.Mod2.AD1, K.Mod2.AD3, K.Mod2.AD5, K.Mod2.AD6	**Topic A: Compare Heights and Lengths** **Lesson 1:** Align endpoints to compare lengths by using taller than and shorter than. K.MD.A.1, K.MD.A.2, MP6, K.Mod3.AD3, K.Mod3.AD4 **Lesson 2:** Compare lengths of simple straight objects by using longer than, shorter than, and about the same length as. K.MD.A.1, K.MD.A.2, MP6, K.Mod3.AD3, K.Mod3.AD4 **Lesson 3:** Compare lengths of complex objects by using longer than, shorter than, and about the same length as. K.MD.A.2, MP1, K.Mod3.AD4 **Lesson 4:** Compare the lengths of cube sticks to flat shapes. K.MD.A.2, MP6, K.Mod3.AD4	**Topic A: Explore Composition and Decomposition** **Lesson 1:** Compose flat shapes and count the parts. K.G.B.6, MP3, K.Mod4.AD5 **Lesson 2:** Decompose flat shapes and count the parts. K.G.B.6, MP6, K.Mod4.AD5 **Lesson 3:** Decompose a group to identify parts and total. K.OA.A.1, MP4, K.Mod4.AD1 **Lesson 4:** Decompose a group and record parts and total by using a number bond. K.OA.A.1, MP5, K.Mod4.AD1 ───────────────── **Topic B: Record Composition and Decomposition** **Lesson 5:** Sort to decompose a number in more than one way. K.OA.A.3, MP4, K.Mod4.AD4	**Topic A: Represent Addition** **Lesson 1:** Represent add to with result unknown story problems by using drawings and numbers. K.OA.A.1, MP2, K.Mod5.AD2 **Lesson 2:** Relate number sentences and number bonds through story problems. K.OA.A.1, MP7, K.Mod5.AD2 **Lesson 3:** Represent and solve add to with result unknown story problems. K.OA.A.1, K.OA.A.2, MP5, K.Mod5.AD2, K.Mod5.AD4, K.Mod5.AD6 **Lesson 4:** Represent decomposition situations by using number bonds and addition sentences. K.OA.A.1, K.OA.A.3, MP6, K.Mod5.AD2, K.Mod5.AD7 **Lesson 5:** Represent take apart with both addends unknown situations with a number sentence. K.OA.A.1, MP2, K.Mod5.AD2	**Topic A: Count and Write Teen Numbers** **Lesson 1:** Describe teen numbers as 10 ones and __ ones. K.CC.B.5, K.NBT.A.1, MP5, K.Mod6.AD5, K.Mod6.AD8 **Lesson 2:** Find 10 ones in a teen number. K.CC.A.1, K.NBT.A.1, MP7, K.Mod6.AD1, K.Mod6.AD8 **Lesson 3:** Write numerals 11–20. K.CC.A.3, K.NBT.A.1, MP8, K.Mod6.AD2, K.Mod6.AD3, K.Mod6.AD8 **Lesson 4:** Order numerals 0–20. K.CC.B.4.c, K.NBT.A.1, MP7, K.Mod6.AD4, K.Mod6.AD8, K.Mod6.AD9 **Lesson 5:** Reason about a number's position in the number sequence. K.CC.A.1, K.CC.A.2, MP3, K.Mod5.AD1, K.Mod6.AD1

Topic B: Answer How Many Questions with Up to 5 Objects

Lesson 6: Organize, count, and represent a collection of objects.
K.CC.A.1, K.CC.B.4.a, K.CC.B.4.b, K.CC.B.5, MP1, K.Mod1.AD1, K.Mod1.AD4, K.Mod1.AD5, K.Mod1.AD8

Lesson 7: Practice counting accurately.
K.CC.A.3, K.CC.B.4.a, K.CC.B.4.b, K.CC.B.5, MP2, K.Mod1.AD3, K.Mod1.AD4, K.Mod1.AD5, K.Mod1.AD8

Lesson 8: Count sets in linear, array, and scattered configurations.
K.CC.B.5, MP2, K.Mod1.AD8

Lesson 9: Conserve number regardless of the arrangement of objects.
K.CC.B.4.b, MP 8, K.Mod1.AD6

Topic C: Write Numerals and Create Sets of Up to 5 Objects

Lesson 10: Count out a group of objects to match a numeral. K.CC.B.5, MP2, K.Mod1.AD9

Lesson 11: Write numerals 1–3 to answer how many questions.
K.CC.A.3, MP6, K.Mod1.AD2

Lesson 12: Write numerals 4 and 5 to answer how many questions.
K.CC.A.1, K.CC.A.3, MP2, K.Mod1.AD1, K.Mod1.AD2

Lesson 5: Communicate the position of flat shapes by using position words.
K.G.A.1, MP7, K.Mod2.AD2

Topic B: Analyze and Name Three-Dimensional Shapes

Lesson 6: Distinguish between flat and solid shapes.
K.G.A.3, MP7, K.Mod2.AD4

Lesson 7: Name solid shapes and discuss their attributes.
K.G.A.2, K.G.B.4, MP2, K.Mod2.AD3, K.Mod2.AD5, K.Mod2.AD6

Lesson 8: Classify solid shapes based on the ways they can be moved.
K.G.B.4, MP7, K.Mod2.AD5, K.Mod2.AD6

Lesson 9: Match solid shapes to their two-dimensional faces. K.G.A.3, K.G.B.4, MP1, K.Mod2.AD4, K.Mod2.AD5, K.Mod2.AD6

Topic C: Construct Shapes

Lesson 10: Construct a circle. K.G.B.4, K.G.B.5, MP7, K.Mod2.AD5, K.Mod2.AD6, K.Mod2.AD7

Lesson 11: Construct and classify polygons.
K.G.A.2, K.G.B.5, MP3, K.Mod2.AD3, K.Mod2.AD7
Lesson 12: Construct solid shapes by using a square base. K.G.B.4, K.G.B.5, MP6, K.Mod2.AD5, K.Mod2.AD6, K.Mod2.AD7

Lesson 5: Compare the lengths of two cube sticks.
K.MD.A.2, MP4, K.Mod3.AD4

Lesson 6: Compose cube sticks that are the same length.
K.MD.A.2, MP2, K.Mod3.AD4

Topic B: Compare Weights

Lesson 7: Compare weights by using heavier than, lighter than, and about the same weight as. K.MD.A.1, K.MD.A.2, MP5, K.Mod3.AD3, K.Mod3.AD5

Lesson 8: Use a balance scale to compare two objects.
K.MD.A.2, MP3, K.Mod3.AD5

Lesson 9: Use a balance scale to compare an object to a group of cubes.
K.MD.A.2, MP2, K.Mod3.AD5

Lesson 10: Use a balance scale to compare an object to different units.
K.MD.A.2, MP4, K.Mod3.AD5

Lesson 11: Observe conservation of weight on the balance scale. K.MD.A.2, MP8, K.Mod3.AD5

Topic C: Compare Sets Within 10

Lesson 12: Relate more and fewer to length.
K.CC.C.6, K.MD.A.1, K.MD.A.2, MP6, K.Mod3.AD1, K.Mod3.AD3, K.Mod3.AD4

Lesson 6: Decompose a number in more than one way and record.
K.OA.A.1, K.OA.A.3, MP8, K.Mod4.AD1, K.Mod4.AD4

Lesson 7: Find partners to 5. K.OA.A.1, K.OA.A.3, MP6, K.Mod4.AD1, K.Mod4.AD4

Lesson 8: Find partners to 10.
K.OA.A.3, MP4, K.Mod4.AD4

Lesson 9: Compose shapes in more than one way.
K.G.B.6, MP6, MP7, K.Mod4.AD5

Lesson 10: Sort and record the decomposition with a number bond.
K.OA.A.1, MP4, K.Mod4.AD1

Topic C: Model Composition and Decomposition in Story Problems

Lesson 11: Model put together with total unknown story problems.
K.OA.A.1, K.OA.A.2, MP5, K.Mod4.AD1, K.Mod4.AD2

Lesson 12: Draw to represent put together with total unknown story problems.
K.OA.A.2, MP4, K.Mod4.AD2

Lesson 13: Choose a math tool to solve put together with total unknown story problems.
K.OA.A.2, MP4, MP5, K.Mod4.AD2

Lesson 14: Model take apart with both addends unknown situations.
K.OA.A.2, MP1, K.Mod4.AD3

Lesson 6: Tell addition story problems starting from number sentence models.
K.OA.A.1, MP3, K.Mod5.AD2

Lesson 7: Find the total in an addition sentence.
K.OA.A.1, K.OA.A.5, MP5, K.Mod5.AD2, K.Mod5.AD9

Topic B: Represent Subtraction

Lesson 8: Understand taking away as a type of subtraction.
K.OA.A.1, MP8, K.Mod5.AD3

Lesson 9: Represent take from with result unknown story problems by using drawings and numbers.
K.OA.A.1, MP2, K.Mod5.AD3

Lesson 10: Represent and solve take from with result unknown story problems.
K.OA.A.1, K.OA.A.2, MP5, K.Mod5.AD3, K.Mod5.AD4, K.Mod5.AD6

Lesson 11: Represent decomposition situations by using number bonds and subtraction sentences.
K.OA.A.1, MP7, K.Mod5.AD3

Lesson 12: Relate parts to total in subtraction situations.
K.OA.A.1, K.OA.A.2, MP4, K.Mod5.AD3, K.Mod5.AD4, K.Mod5.AD6
Lesson 13: Tell subtraction story problems starting from number sentence models.
K.OA.A.1, MP3, K.Mod5.AD3

Lesson 6: Count out a group of objects to match a numeral.
K.NBT.A.1, MP5, MP7, K.Mod6.AD6, K.Mod6.AD8, K.Mod6.AD9

Topic B: Compose and Decompose Teen Numbers

Lesson 7: Decompose numbers 10–20 with 10 as a part.
K.CC.B.5, K.NBT.A.1, MP8, K.Mod6.AD5, K.Mod6.AD8, K.Mod6.AD9

Lesson 8: Represent teen number compositions and decompositions as addition sentences.
K.OA.A.2, K.NBT.A.1, MP2, K.Mod6.AD7, K.Mod6.AD8, K.Mod6.AD9

Lesson 9: Represent teen number decompositions as subtraction sentences.
K.OA.A.2, K.NBT.A.1, MP4, K.Mod6.AD7, K.Mod6.AD8, K.Mod6.AD9

Lesson 10: Make sense of word problems involving teen numbers.
K.OA.A.2, K.NBT.A.1, MP1, K.Mod6.AD7, K.Mod6.AD8, K.Mod6.AD9

Lesson 11: Represent teen number decompositions as 10 ones and some ones and find a hidden part.
K.OA.A.2, K.NBT.A.1, MP4, MP5, K.Mod6.AD7, K.Mod6.AD8, K.Mod6.AD9

Lesson 13: Count out enough objects and write the numeral.
K.CC.B.4.a, K.CC.B.4.b, MP3, K.Mod1.AD4, K.Mod1.AD5

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Topic D: Decompose Numbers

Lesson 14: Understand the meaning of zero and write the numeral.
K.CC.A.3, MP2, K.Mod1.AD2, K.Mod1.AD3

Lesson 15: Sort the same group of objects in more than one way and count.
K.MD.B.3, K.OA.A.3, MP6, K.Mod1.AD10

Lesson 16: Decompose a set shown in a picture.
K.MD.B.3, K.OA.A.3, MP5, K.Mod1.AD10

Lesson 17: Model story problems.
MP4, MP5

Lesson 18: Model story problems and identify the numeral referents. MP2

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Topic E: Answer How Many Questions with Up to 10 Objects

Lesson 19: Organize, count, and represent a collection of objects.
K.CC.A.1, K.CC.B.4.a, K.CC.B.4.b, K.CC.B.5, MP5, K.Mod1.AD1, K.Mod1.AD4, K.Mod1.AD5, K.Mod1.AD8

Lesson 13: Draw flat shapes.
K.G.B.4, K.G.B.5, MP5, K.Mod2.AD5, K.Mod2.AD6, K.Mod2.AD8

Lesson 14: Compose flat shapes.
K.G.A.1, K.G.A.2, MP6, K.Mod2.AD2, K.Mod2.AD3

Lesson 15: Compose solid shapes to create a structure that can fit a toy inside.
K.G.B.4, MP1, K.Mod2.AD5, K.Mod2.AD6

Lesson 16: Organize, count, and represent a collection of objects. (Optional)
MP4

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Lesson 13: Compare sets by using more than, fewer than, and the same number as.
K.CC.C.6, K.Mod3.AD1

Lesson 14: Use number to compare sets with like units.
K.CC.C.6, MP5, K.Mod3.AD1

Lesson 15: Classify flat shapes into groups and compare the number of shapes in each group.
K.MD.B.3, MP3, K.Mod3.AD6

Lesson 16: Count and compare sets with unlike units.
K.CC.C.6, MP2, K.Mod3.AD1

Lesson 17: Count and compare sets in pictures.
K.CC.C.6, MP1, K.Mod3.AD1

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Topic D: Compare Numbers Within 10

Lesson 18: Compare the capacity of containers by using numerals.
K.CC.C.7, MP2, K.Mod3.AD2

Lesson 19: Compare numbers by using greater than, less than, and equal to.
K.CC.C.7, MP6, K.Mod3.AD2

Lesson 20: Compare two numbers in story situations.
K.CC.C.7, MP3, K.Mod3.AD2

Lesson 21: Describe and compare several measurable attributes of objects and sets.
K.CC.C.6, K.MD.A.1, K.MD.A.2, MP1, K.Mod3.AD1, K.Mod3.AD3, K.Mod3.AD4, K.Mod3.AD5

Lesson 15: Choose a math tool to solve take apart with both addends unknown situations.
K.OA.A.1, K.OA.A.2, MP2, K.Mod4.AD1, K.Mod4.AD3

Lesson 16: Compose and decompose numbers and shapes.
K.OA.A.2, MP7, K.Mod4.AD2, K.Mod4.AD3

Lesson 17: Organize, count, and represent a collection of objects. (Optional)
MP7

Lesson 18: Use the structure of 5 and 10 to build a rekenrek. (Optional)
K.OA.A.3, MP5, MP7, K.Mod4.AD4

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Lesson 14: Find the difference in a subtraction sentence.
K.OA.A.1, K.OA.A.5, MP5, K.Mod5.AD3, K.Mod5.AD10

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Topic C: Make Sense of Problems

Lesson 15: Identify the action in a problem to represent and solve it.
K.OA.A.1, K.OA.A.2, MP1, K.Mod5.AD2, K.Mod5.AD3, K.Mod5.AD4, K.Mod5.AD6

Lesson 16: Relate addition and subtraction through word problems.
K.OA.A.1, K.OA.A.2, MP7, K.Mod5.AD2, K.Mod5.AD3, K.Mod5.AD4, K.Mod5.AD6

Lesson 17: Reason about different units to solve story problems.
K.OA.A.2, MP1, K.Mod5.AD4, K.Mod5.AD6

Lesson 18: Count starting from a number other than 1 to find the total.
K.CC.A.2, MP8, K.Mod5.AD1

Lesson 19: Represent and solve take apart with change unknown problems.
K.OA.A.1, MP4, K.Mod5.AD2, K.Mod5.AD3

Lesson 20: Find the number that makes 10 and record with a number sentence.
K.OA.A.4, MP3, K.Mod5.AD8

Lesson 21: Organize drawings to solve problems efficiently.
K.OA.A.1, MP2, MP4, K.Mod5.AD2, K.Mod5.AD3

Lesson 12: Investigate different ways to decompose teen numbers. (Optional)
K.CC.B.5, MP7, K.Mod6.AD5

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Topic C: Count to 100

Lesson 13: Organize, count, and represent a collection of objects.
MP7

Lesson 14: Count by tens.
K.CC.A.1, MP6, K.Mod6.AD1

Lesson 15: Count by tens by using math tools.
K.CC.A.1, MP5, K.Mod6.AD1

Lesson 16: Use the structure of ten to count to 100.
K.CC.A.1, K.CC.A.2, MP7, K.Mod5.AD1, K.Mod6.AD1

Lesson 17: Use patterns in the number sequence to count by ones within 100.
K.CC.A.1, K.CC.A.2, K.CC.A.3, MP7, K.Mod5.AD1, K.Mod6.AD1, K.Mod6.AD3

Lesson 18: Count within and across decades when counting by ones, part 1.
K.CC.A.1, K.CC.A.2, MP3, K.Mod5.AD1, K.Mod6.AD1

Lesson 19: Count within and across decades when counting by ones, part 2.
K.CC.A.1, K.CC.A.2, MP5, K.Mod5.AD1, K.Mod6.AD1

Lesson 20: Count objects in 5-group and array configurations and match to a numeral.
K.CC.B.4.b, K.CC.B.5, K.CC.A.3, MP7, K.Mod1.AD5, K.Mod1.AD8

Lesson 21: Count sets in circular configurations and match to a numeral.
K.CC.A.3, K.CC.B.5, MP6, K.Mod1.AD3, K.Mod1.AD8

Lesson 22: Count sets in scattered configurations and match to a numeral.
K.CC.A.3, K.CC.B.5,
MP2, K.Mod1.AD3, K.Mod1.AD8

Lesson 23: Conserve number regardless of the order in which objects are counted.
K.CC.B.4.b, MP8, K.Mod1.AD6

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Topic F: Write Numerals and Create Sets of Up to 10 Objects

Lesson 24: Count out a group of objects to match a numeral.
K.CC.B.5, MP4, K.Mod1.AD9

Lesson 25: Write numerals 6 and 7.
K.CC.A.3, MP2, K.Mod1.AD2

Lesson 26: Write numeral 8. K.CC.A.1, K.CC.A.3, MP7, K.Mod1.AD1, K.Mod1.AD2

Lesson 27: Write numerals 9 and 10.
K.CC.A.3, MP5, K.Mod1.AD2

Lesson 28: Order numerals 1–10 and reason about an unknown number in the number sequence.
K.CC.A.1, MP7, K.Mod1.AD1

Lesson 22: Organize, count, and represent a collection of objects. (Optional)
MP5

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Topic D: Make Use of Structure

Lesson 22: Identify and extend linear patterns.
K.CC.A.2, MP7, K.Mod5.AD1

Lesson 23: Use a pattern to make a prediction.
K.CC.A.2, MP2, MP7, MP8, K.Mod5.AD1

Lesson 24: Solve story problems by using repeated reasoning.
K.OA.A.1, MP7, MP8, K.Mod5.AD2

Lesson 25: Extend growing patterns.
K.G.B.6, MP7, K.Mod5.AD5

Lesson 26: Reason about numbers to add and subtract.
K.OA.A.1, K.OA.A.4, MP8, K.Mod5.AD2, K.Mod5.AD3, K.Mod5.AD8

Lesson 27: Organize, count, and represent a collection of objects. (Optional)
MP7

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Topic D: Compare

Lesson 20: Compare totals in story situations. (Optional)
K.CC.C.6, MP3, K.Mod3.AD1

Lesson 21: Count and compare sets with more than 10 objects. (Optional)
K.CC.C.6, MP5, K.Mod3.AD1

Lesson 22: Compare area by comparing number. (Optional)
K.CC.C.6, MP6, K.Mod3.AD1

Lesson 23: Compare lengths of objects by using 10-sticks and cubes. (Optional)
K.CC.C.6, MP7, K.Mod3.AD1

Lesson 24: Organize, count, and represent a collection of objects.
MP7

■

Topic G: Analyze the Count Sequence

Lesson 29: Model the pattern of 1 more in the forward count sequence. K.CC.B.4.c, MP8, K.Mod1.AD7

Lesson 30: Build number stairs to show the pattern of 1 more in the forward count sequence. K.CC.B.4.c, MP7, K.Mod1.AD7

Lesson 31: Model the pattern of 1 less in the backward count sequence. K.CC.B.4.c, MP8, K.Mod1.AD7

Lesson 32: Build number stairs to show the pattern of 1 less in the backward count sequence. K.CC.B.4.c, MP7, K.Mod1.AD7

Lesson 33: Organize, count, and represent a collection of objects. K.CC.A.1, K.CC.B.4.a, K.CC.B.4.b, K.CC.B.5, MP4, K.Mod1.AD1, K.Mod1.AD4, K.Mod1.AD5, K.Mod1.AD8

■

Year-Long Curriculum Overview: Levels K–2 | 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 the total number of lessons. About thirty additional days are allotted at each level for assessment and responsive teaching.

		Level K Part–Part–Total	Level 1 Units of Ten	Level 2 Ten Tens
Trimester 1	**Quarter 1**	Module 1: Counting and Cardinality 7 Topics | 33 Lessons	Module 1: Counting, Comparison, and Addition 4 Topics | 25 Lessons	Module 1: Place Value Concepts Through Metric Measurment and Data • Place Value, Counting, and Comparing Within 1,000 9 Topics | 38 Lessons
		Module 2: Two- and Three-Dimensional Shapes 3 Topics | 16 Lessons	Module 2: Addition and Subtraction Relationships 5 Topics | 23 Lessons	
Trimester 2	**Quarter 2**	Module 3: Comparison 4 Topics | 22 Lessons	Module 3: Properties of Operations to Make Easier Problems 5 Topics | 26 Lessons	Module 2: Addition and Subtraction Within 200 4 Topics | 27 Lessons
				Module 3: Shapes and Time with Fraction Concepts 4 Topics | 19 Lessons
	Quarter 3	Module 4: Composition and Decomposition 3 Topics | 18 Lessons	Module 4: Comparison and Composition of Length Measurements 3 Topics | 14 Lessons	Module 4: Addition and Subtraction Within 1,000 5 Topics | 24 Lessons
		Module 5: Addition and Subtraction 4 Topics | 27 Lessons	Module 5: Place Value Concepts to Compare, Add, and Subtract 5 Topics | 25 Lessons	
Trimester 3	**Quarter 4**			Module 5: Money, Data, and Customary Measurement 3 Topics | 16 Lessons
		Module 6: Place Value Foundations 4 Topics | 24 Lessons	Module 6: Attributes of Shapes • Advancing Place Value, Addition, and Subtraction 6 Topics | 31 Lessons	Module 6: Multiplication and Division Foundations 4 Topics | 18 Lessons
		TOTAL: 25 Topics | 140 Lessons	**TOTAL:** 28 Topics | 144 Lessons	**TOTAL:** 29 Topics | 142 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.

Launch 10

Students solve and compare related addition and subtraction problems.

Gather students and present the following situation.

There are 7 pencils on my desk. *(Display the picture of 7 pencils.)*

I put some more pencils on my desk. *(Display the picture of 9 pencils.)*

Now there are 9 pencils on my desk.

How many pencils did I put on my desk? How do you know?

Have students think–pair–share to determine how many pencils were put on the desk. Invite students to explain their thinking. If possible, include someone who counted on to find the unknown part.

2 pencils. We counted on: Sevennnn, 8, 9.

2 pencils. We know 7 + 2 = 9.

Ask students to write a number sentence that corresponds to the story and to unknown. Have the class discuss how the number sentence represents the sto the idea that the unknown represents the added part, or the pencils put on t

$$7 + \boxed{2} = 9$$

Continue to display the picture of 9 pencils.

FAMILY MATH
Decompose Numbers

Module 1
Topic D

Dear Family,

Your child is learning about the relationship between numbers by sorting objects in more than one way. You might be thinking, Why are we still sorting? Sorting is a way to see how numbers can be broken into parts. For example, 5 bears can be sorted into 4 yellow bears and 1 red bear. The number sentence 5 is 4 and 1 represents this situation. 5 bears can also be sorted into 3 big bears and 2 small bears. Your child might say, "5 is 3 and 2" to represent this sort.

Invite your child to show you counting the math way—a new way they are learning to count on their fingers.

Words We Are Learning
number sentence

Sorting by color—5 is 4 and 1.

Sorting by size—5 is 3 and 2.

At-Home Activities
Activity Idea 1 Sorting Different Ways

Give your child a group of 4 or 5 items, such as toys, markers, or coins, that they can sort into different categories by color, shape, or size. Let your child decide how to sort. Then ask the following questions to help your child think about the total number of objects and the number in each group.

• How many _____ are there?
• How many groups did you make?
• How many are in this group?

Put the objects back into a pile. Ask your child to sort in a different way, and then ask the same questions. Did this sort result in the same number of groups?

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UDL: Engagement

The pencil context is one option for presenting the situations in this lesson. If desired, use a context that is more relevant or engaging to your students. Be sure that it works for the actions of both adding to and taking away.

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 margin note in grade 1 module 2 lesson 11 (page 176) suggests that teachers leverage students' interests when solving and comparing related addition and subtraction problems.

Adjusting contexts to make them more meaningful to students provides options for recruiting interest by personalizing the content to learners' lives. In kindergarten module 3 lesson 11 (page 128), teachers draw on students' experiences from their homes by modifying the baked goods to types of baked goods that relate to students' cultures. Students' experiences from their homes 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 Math²*, 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

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 of students to form small groups of four.

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

working cooperatively in groups to deepen their mathematical conceptual understanding. See grade 2 module 3 lesson 10 (pages 163–165) for an example of Co-construction and grade 2 module 1 lesson 34 (pages 487–488) for an example of Numbered Heads. In grade 1 module 1 lesson 16 (page 224) there is an example of Numbered Heads modified for younger students.

Beyond the instructional routines, *Eureka Math²* taps 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.

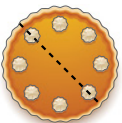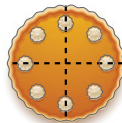
Learn ㉟

Halves and Quarters
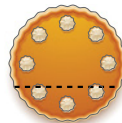
Students identify whether an object is partitioned into halves or fourths and justify their thinking.

Display each of the pictures of partitioned pies.

Engage students in a variation of the Take a Stand routine as each picture is displayed. Have students stand if they think the picture shows an object cut into halves. Invite students who stand to explain their reasoning.

Language Support

Support student-to-student discourse by pointing out the sentence stems on the Talking Tool. Encourage students to use the sentence stems to build on one another's ideas. For example, a student might say, "I disagree that this pie shows halves because the 2 parts are not the same size."

Both sides are the same size. There are 2 equal parts. The parts are the same shape. They are half-circles.	The 2 parts are not the same size. The pieces are not halves because they are not equal shares.	The 2 pieces are the same shape and size. They are still halves, just turned.	Halves have 2 pieces. This has 4. This shows fourths. The parts are all the same shape. They are quarter-circles.

Language Support

The term *quarters* is a synonym for *fourths*. Help students remember the terms presented in this topic by making an anchor chart such as the one shown.

Fourths
Quarters

Halves

Hammond references individualism as emphasizing individual achievement and independence (page 25). In *Eureka Math²*, an individualist approach to learning mathematics may be seen in the embedded systems for independent practice in every lesson, such as Exit Tickets and Problem 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 discourse. See grade 2 module 3 lesson 12 (page 195) for an example of the Critique a Flawed Response routine and grade 1 module 6 lesson 12 (pages 185–186) for an example of the Take a Stand routine, shown in the image to the left.

Beyond balancing individualism and collectivism, *Eureka Math²* 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 Math² 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.
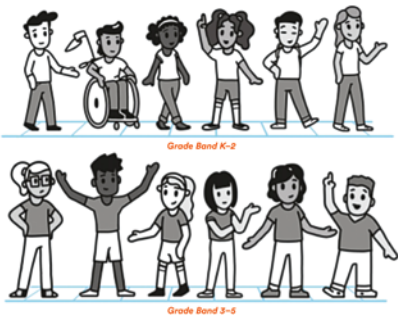
For example, *Eureka Math²* includes various mathematical activities that involve counting on hands or simulating a number line with one's fingers. In images throughout the curriculum, care was taken to include a variety of body types and skin tones.

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 Math²* 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 Math²* 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.

For example, a real-world lesson in grade 2 module 5 about determining when and why precise measurements are needed highlights the biography of Katherine Johnson, who was the first African American to work with the American Space Task Group. Her calculations were crucial for allowing NASA to safely send and return the first astronauts to space in 1961 and to the moon. Students discuss why Johnson needed exact numbers rather than estimates in her calculations. Students go on to reason about what real-life situations require precision rather than estimation. Later, they measure accurately, solve word problems with lengths, and label their answers with an appropriate unit (addressing the mathematical habit of mind of attending to precision). The Math Past Teacher Resource (pages 274–275) highlights the esteemed group of women known as Hidden Figures at NASA. Students are asked to think about what it means to be a *human computer*, why precision is important in mathematics, and the invaluable contributions made by this team of women.

Ada Lovelace
Alan Turing
Katherine Johnson
Srinivasa Ramanujan
Mariel Vázquez
Alberto Pedro Calderón

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"

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:

- Launch (the opening section of each lesson) in grade K module 6 lesson 21 relates Faith Ringgold's *The Sunflower Quilting Bee at Arles* to both estimating and recognizing and writing numerals to 20 and beyond.

- Land in grade 2 module 6 lesson 8 connects the painting *Castle and Sun* by Paul Klee to a foundational understanding of multiplication when students locate as many arrays as possible in the artwork.

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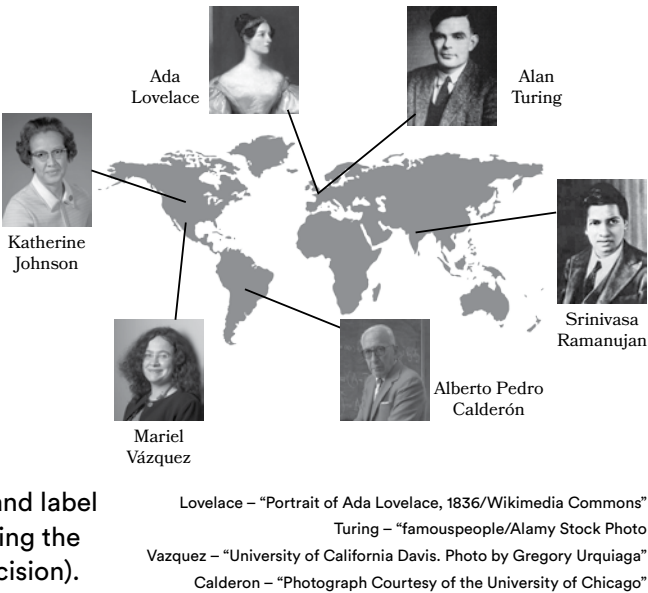
to solve problems in our everyday lives and make sense of the world around us. Three types of highly engaging videos may be found in the curriculum: character animation, collage animation, and live action.

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 K module 6 lesson 8: *Craft Fair*
- Grade 1 module 2 lesson 13: *Crunchy Carrots*
- Grade 2 module 2 lesson 27: *Imani's Wish*

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.

Display *Castle and Sun*, 1928, by Paul Klee.

Invite students to be detectives and find as many arrays as they can in the artwork. Choose a few students to point out the arrays they found. For each array, invite students to share the matching repeated addition equation for both rows and columns. Then choose one array to focus the discussion.

Invite students to think–pair–share about the effect of describing an array by rows or by columns.

If we look at the rows, the repeated addition equation is $5 + 5 = 10$.

If we look at the columns, the repeated addition equation is $2 + 2 + 2 + 2 + 2 = 10$.

The total doesn't change because the array is just flipped.

Display the pictures of arrays that show 3 rows of 2.

Klee, Paul (1879–1940) *Castle and Sun,* 1928. Canvas. © 2020 Artists Rights Society (ARS), New York. Photo Credit : Erich Lessing / Art Resource, NY

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.

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."

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).

UDL: Action & Expression

Consider presenting the information in a different format. Invite students to use a number bond to show the shaded and unshaded parts of the array in unit form.

8 threes

4 threes   4 threes
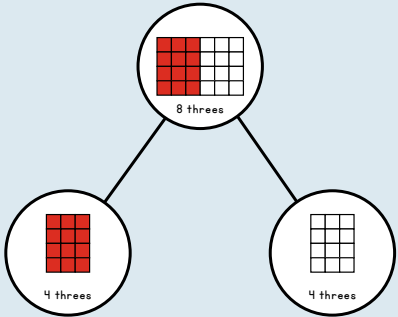
UDL: Representation

Demonstrate partitioning, or cutting, the array into two parts. Highlight the connection between the array and the number bond by pushing the two parts from the bottom left and bottom right to the top center while saying "12 and 12 make 24." Similarly, pull the two parts back to the original positions and say, "24 decomposed into two parts is 12 and 12."

UDL: Action & Expression

Consider adapting the process for making the numberless ruler to reduce barriers posed by the motor demands of the task. For example, students might work in pairs to create rulers. Have one student hold the paper and the tiles while the other student makes tick marks. Then have partners switch tasks.

Launch 15

Students become familiar with ancient Egyptian measurement tools.

Activate prior knowledge by asking students what tools they use to measure length.

Introduce the idea that people in Egypt long ago used different tools to measure length. Display the pictures of ancient Egypt to help establish a sense of place and historical context. Then show students where Egypt is on a map.
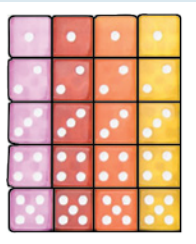

Long ago, Egyptians measured length using a unit called a *cubit*.

- Provide visual organizers.
- Provide think alouds.
- Use novel learning contexts.
- Help students focus on what is important rather than on things that are irrelevant.

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 1 module 6 lesson 25, the Differentiation: Challenge margin note offers a suggestion for students to interact with the lesson objective of solving nonroutine problems in a deeper way. During the lesson, students use the shape of a set of dice to count a total by recognizing patterns. The margin note suggests students consider dice with other totals, which raises the ceiling to another level of thinking about patterns and counting with efficiency.

This Differentiation: Support margin note from grade 1 module 6 lesson 14 encourages teachers to alter the number of representations used in instruction to support students for whom too many stimuli may be problematic.

Differentiation: Challenge

Invite students to answer the question of how many in more than one way. Also consider providing students with dice to make their own configurations. They can share them with a partner or group to find how many.

Differentiation: Support

The cards include times to the hour and half hour in variations: analog, digital, and word form. Support the needs of your students by removing some forms from the set as necessary.

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 point 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 view.**

(See more at the Great Minds MLL blog at https://gm.greatminds.org/how-to-support-multilingual-learners-in-engaging-in-math-conversations-in-the-classroom.)

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

Talking Tool

I Can Share My Thinking 💬	My drawing shows . . . . I did it this way because . . . . I think ____ because . . . .
I Can Agree or Disagree 👍👎	I agree because . . . . I disagree because . . . . I did it a different way. I . . . .
I Can Ask Questions ❓	How did you . . . ? Why did you . . . ? Can you explain . . . ?
I Can Say It Again 🔄	I heard you say . . . . ____ said . . . . Can you say it another way?

example, before students are asked to *combine* in grade 1 module 2 lesson 23 (page 350), teachers are encouraged to preview the meaning of the academic verb, supporting the meaning of the term in a class discussion by emphasizing various familiar contexts in which that verb is used.

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

Language Support margin notes often 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

This is the first occurrence of the term *combine* in grade 1 lessons. Support understanding of this term by sharing some examples used in real life.

- We combine all the grade 1 classes in one school bus when we go on a field trip.
- We combine all our school supplies and share them.
- When we cook, we combine the ingredients in the recipe.

Language Support

Support students' language development by pointing out that *table* has multiple meanings.

Point to a tabletop and say, "This is one kind of table. We can sit at a table when we eat lunch." Then point to the chart and say, "This is another kind of table. We use it to show information."

The term *key* is introduced later in the lesson. Consider using a similar support as you introduce that term.

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