EUREKA MATH™

GREAT MINDS

ABOUT *EUREKA MATH*

Created by the nonprofit Great Minds, *Eureka Math* helps teachers deliver unparalleled math instruction that provides students with a deep understanding and fluency in math. Crafted by teachers and math scholars, the curriculum carefully sequences the mathematical progressions to maximize coherence from Prekindergarten through Precalculus—a principle tested and proven to be essential in students' mastery of math.

Teachers and students using *Eureka Math* find the trademark "Aha!" moments in *Eureka Math* to be a source of joy and inspiration, lesson after lesson, year after year.

ALIGNED

Eureka Math is the only curriculum found by EdReports.org to align fully with the Common Core State Standards for Mathematics for all grades, Kindergarten through Grade 8. Great Minds offers detailed analyses which demonstrate how each grade of *Eureka Math* aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

DATA

Schools and districts nationwide are experiencing student growth and impressive test scores after using *Eureka Math*. See their stories and data at greatminds.org/data.

FULL SUITE OF RESOURCES

As a nonprofit, Great Minds offers the *Eureka Math* curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at greatminds.org/math/curriculum.

The teacher–writers who created the curriculum have also developed essential resources, available only from Great Minds, including the following:

- Printed material in English and Spanish
- Digital resources
- Professional development
- Classroom tools and manipulatives
- Teacher support materials
- Parent resources

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GRADE 1 MATHEMATICS

The Grade 1 Utah Core Standards for Mathematics are fully covered by the Grade 1 *Eureka Math* curriculum. A detailed analysis of alignment is provided in the table below.

INDICATORS

- Green indicates that the Utah standard is fully addressed in *Eureka Math*.
- Yellow indicates that the Utah standard may not be completely addressed in *Eureka Math*.
- Red indicates that the Utah standard is not addressed in *Eureka Math*.
- Blue indicates there is a discrepancy between the grade level at which this standard is addressed in the Utah standards and in *Eureka Math*.

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Standards for Mathematical Practice	Aligned Components of *Eureka Math*
1: Make sense of problems and persevere in solving them. Explain the meaning of a problem, look for entry points to begin work on the problem, and plan and choose a solution pathway. When a solution pathway does not make sense, look for another pathway that does. Explain connections between various solution strategies and representations. Upon finding a solution, look back at the problem to determine whether the solution is reasonable and accurate, often checking answers to problems using a different method or approach.	Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 1, which is specifically addressed in the following modules: G1 M5: Identifying, Composing, and Partitioning Shapes G1 M6: Place Value, Comparison, Addition and Subtraction to 100
2: Reason abstractly and quantitatively. Make sense of quantities and their relationships in problem situations. Contextualize quantities and operations by using images or stories. Decontextualize a given situation and represent it symbolically. Interpret symbols as having meaning, not just as directions to carry out a procedure. Know and flexibly use different properties of operations, numbers, and geometric objects.	Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 2, which is specifically addressed in the following modules: G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M3: Ordering and Comparing Length Measurements as Numbers

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Standards for Mathematical Practice	Aligned Components of *Eureka Math*
3: Construct viable arguments and critique the reasoning of others. Use stated assumptions, definitions, and previously established results to construct arguments. Explain and justify the mathematical reasoning underlying a strategy, solution, or conjecture by using concrete referents such as objects, drawings, diagrams, and actions. Listen to or read the arguments of others, decide whether they make sense, ask useful questions to clarify or improve the arguments, and build on those arguments.	Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 3, which is specifically addressed in the following modules: G1 M3: Ordering and Comparing Length Measurements as Numbers G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M6: Place Value, Comparison, Addition and Subtraction to 100
4: Model with mathematics. Identify the mathematical elements of a situation and create a mathematical model that shows the relationships among them. Identify important quantities in a contextual situation, use mathematical models to show the relationships of those quantities, analyze the relationships, and draw conclusions. Models may be verbal, contextual, visual, symbolic, or physical.	Lessons in every module engage students in modeling with mathematics as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 4, which is specifically addressed in the following modules: G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M6: Place Value, Comparison, Addition and Subtraction to 100

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Standards for Mathematical Practice	Aligned Components of *Eureka Math*
5: Use appropriate tools strategically. Consider the tools that are available when solving a mathematical problem, whether in a real-world or mathematical context. Choose tools that are relevant and useful to the problem at hand, such as physical objects, drawings, diagrams, physical tools, technologies, or mathematical tools such as estimation or a particular strategy or algorithm.	Lessons in every module engage students in using appropriate tools strategically as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 5, which is specifically addressed in the following modules: G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M6: Place Value, Comparison, Addition and Subtraction to 100
6: Attend to precision. Communicate precisely to others by crafting careful explanations that communicate mathematical reasoning by referring specifically to each important mathematical element, describing the relationships among them, and connecting their words clearly to representations. Calculate accurately and efficiently, and use clear and concise notation to record work.	Lessons in every module engage students in attending to precision as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 6, which is specifically addressed in the following modules: G1 M1: Sums and Differences to 10 G1 M3: Ordering and Comparing Length Measurements as Numbers G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M5: Identifying, Composing, and Partitioning Shapes

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Standards for Mathematical Practice	Aligned Components of *Eureka Math*
7: Look for and make use of structure. Recognize and apply the structures of mathematics such as patterns, place value, the properties of operations, or the flexibility of numbers. See complicated things as single objects or as being composed of several objects.	Lessons in every module engage students in looking for and making use of structure as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 7, which is specifically addressed in the following modules: G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M3: Ordering and Comparing Length Measurements as Numbers G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M5: Identifying, Composing, and Partitioning Shapes
8: Look for and express regularity in repeated reasoning. Notice repetitions in mathematics when solving multiple related problems. Use observations and reasoning to find shortcuts or generalizations. Evaluate the reasonableness of intermediate results.	Lessons in every module engage students in looking for and expressing regularity in repeated reasoning as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 8, which is specifically addressed in the following modules: G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20

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Strand	Standards for Mathematical Content	Aligned Components of *Eureka Math*
Operations and Algebraic Thinking	**Cluster: Represent and solve problems involving addition and subtraction within 20.**	
	1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.	G1 M1 Topic B: Counting On from Embedded Numbers G1 M1 Topic C: Addition Word Problems G1 M1 Lesson 25: Solve *add to with change unknown* math stories with addition, and relate to subtraction. Model with materials, and write corresponding number sentences. G1 M1 Topic H: Subtraction Word Problems G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M3 Lesson 9: Answer *compare with difference unknown* problems about lengths of two different objects measured in centimeters. G1 M3 Topic D: Data Interpretation G1 M4 Topic E: Varied Problem Types Within 20 G1 M6 Topic A: Comparison Word Problems
	1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.	G1 M2 Lesson 1: Solve word problems with three addends, two of which make ten. G1 M2 Lesson 2: Use the associative and commutative properties to make ten with three addends.

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Strand	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	Cluster: Understand and apply properties of operations and the relationship between addition and subtraction.	
	1.OA.3 Apply properties of operations as strategies to add and subtract.	G1 M1 Topic E: The Commutative Property of Addition and the Equal Sign G1 M1 Topic F: Development of Addition Fluency Within 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M4 Topic D: Addition of Tens or Ones to a Two-Digit Number
	1.OA.4 Understand subtraction as an unknown-addend problem.	G1 M1 Topic G: Subtraction as an Unknown Addend Problem G1 M1 Topic H: Subtraction Word Problems G1 M2 Lesson 16: Relate counting on to making ten and taking from ten. G1 M2 Lesson 19: Compare efficiency of counting on and taking from ten. G1 M2 Lesson 21: Share and critique peer solution strategies for *take from with result unknown* and *take apart with addend unknown* word problems from the teens. G1 M2 Topic C: Strategies for Solving *Change* or *Addend Unknown* Problems

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Strand	Standards for Mathematical Content		Aligned Components of *Eureka Math*
	Cluster: Represent and solve problems involving addition and subtraction within 20.		
	1.OA.5 Relate counting to addition and subtraction.		G1 M1 Lesson 3: See and describe numbers of objects using *1 more* within 5-group configurations. G1 M1 Topic B: Counting On from Embedded Numbers G1 M1 Topic D: Strategies for Counting On G1 M1 Topic G: Subtraction as an Unknown Addend Problem G1 M1 Lesson 33: Model 0 less and 1 less pictorially and as subtraction number sentences. G1 M6 Topic A: Comparison Word Problems
	1.OA.6 Add and subtract within 20.		
	a. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.		G1 M1: Sums and Differences to 10 G1 M2: Introduction to Place Value Through Addition and Subtraction Within 20 G1 M4 Lesson 29: Add a pair of two-digit numbers with varied sums in the ones. G1 M6 Topic A: Comparison Word Problems
	b. By the end of Grade 1, demonstrate fluency for addition and subtraction within 10.		Fluency activities address addition and subtraction within 10 throughout the year.

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	Cluster: Work with addition and subtraction equations.	
	1.OA.7 Understand the meaning of the equal sign, and determine whether equations involving addition and subtraction are true or false.	G1 M1 Topic E: The Commutative Property of Addition and the Equal Sign G1 M2 Lesson 25: Strategize and apply understanding of the equal sign to solve equivalent expressions.
	1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.	G1 M1 Topic C: Addition Word Problems G1 M1 Lesson 16: Count on to find the unknown part in missing addend equations such as 6 + ___ = 9. Answer, "How many more to make 6, 7, 8, 9, and 10?" G1 M1 Topic H: Subtraction Word Problems G1 M4 Topic E: Varied Problem Types Within 20 G1 M6 Topic A: Comparison Word Problems
Number and Operations in Base Ten	**Cluster: Extend the counting sequence.**	
	1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	G1 M4 Lesson 1: Compare the efficiency of counting by ones and counting by tens. G1 M6 Lesson 7: Count and write numbers to 120. Use Hide Zero cards to relate numbers 0 to 20 to 100 to 120. G1 M6 Lesson 8: Count to 120 in unit form using only tens and ones. Represent numbers to 120 as tens and ones on the place value chart. G1 M6 Lesson 9: Represent up to 120 objects with a written numeral.

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Strand	Standards for Mathematical Content		Aligned Components of *Eureka Math*
	Cluster: Understand place value.		
	1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:		
	a. 10 can be thought of as a bundle of ten ones, called a "ten."		G1 M2 Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones G1 M4 Topic A: Tens and Ones G1 M4 Lesson 23: Interpret two-digit numbers as tens and ones, including cases with more than 9 ones. G1 M6 Lesson 3: Use the place value chart to record and name tens and ones within a two-digit number up to 100. G1 M6 Lesson 4: Write and interpret two-digit numbers to 100 as addition sentences that combine tens and ones.
	b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.		G1 M2 Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones

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	c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	G1 M4 Topic A: Tens and Ones G1 M4 Lesson 23: Interpret two-digit numbers as tens and ones, including cases with more than 9 ones. G1 M6 Lesson 3: Use the place value chart to record and name tens and ones within a two-digit number up to 100. G1 M6 Lesson 4: Write and interpret two-digit numbers to 100 as addition sentences that combine tens and ones.
	1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	G1 M4 Topic B: Comparison of Pairs of Two-Digit Numbers G1 M6 Lesson 6: Use the symbols >, =, and < to compare quantities and numerals to 100.
	Cluster: Use place value understanding and properties of operations to add and subtract.	
	1.NBT.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens to tens and ones to ones, and that it is sometimes necessary to compose a ten.	G1 M4: Place Value, Comparison, Addition and Subtraction to 40 G1 M6 Topic C: Addition to 100 Using Place Value Understanding G1 M6 Topic D: Varied Place Value Strategies for Addition to 100

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	1.NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	G1 M4 Lesson 5: Identify 10 more, 10 less, 1 more, and 1 less than a two-digit number. G1 M4 Lesson 6: Use dimes and pennies as representations of tens and ones. G1 M6 Lesson 5: Identify 10 more, 10 less, 1 more, and 1 less than a two-digit number within 100.
	1.NBT.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	G1 M4 Topic C: Addition and Subtraction of Tens G1 M6 Lesson 10: Add and subtract multiples of 10 from multiples of 10 to 100, including dimes.
Measurement and Data	**Cluster: Measure lengths indirectly and by iterating length units.**	
	1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	G1 M3 Topic A: Indirect Comparison in Length Measurement G1 M3 Lesson 6: Order, measure, and compare the length of objects before and after measuring with centimeter cubes, solving *compare with difference unknown* word problems.

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Strand	Standards for Mathematical Content	Aligned Components of *Eureka Math*
	1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.	G1 M3: Ordering and Comparing Length Measurements as Numbers
	Cluster: Tell and write time.	
	1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.	G1 M5 Topic D: Application of Halves to Tell Time
	Cluster: Represent and interpret data.	
	1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	G1 M3 Topic D: Data Interpretation
	Cluster: Identify the value of coins.	
	1.MD.5 Identify the values of pennies, nickels, dimes, and quarters, and know their comparative values. Use appropriate notation to designate a coin's value.	G1 M6 Topic E: Coins and Their Values

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Geometry	**Cluster: Reason with shapes and their attributes.**		
	1.G.1 Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.		G1 M5 Topic A: Attributes of Shapes
	1.G.2 Compose shapes.		
	a. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) to create a composite shape, and compose new shapes from the composite shape.		G1 M5 Topic B: Part–Whole Relationships Within Composite Shapes
	b. Compose three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. First grade students do not need to learn formal names such as "right rectangular prism."		G1 M5 Topic B: Part–Whole Relationships Within Composite Shapes

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Strand	Standards for Mathematical Content		Aligned Components of *Eureka Math*
	1.G.3 Partition circles and rectangles into two and four equal shares; describe the shares using the words halves, fourths, and quarters; and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two or four of the shares. Understand that, for these examples, decomposing into more equal shares creates smaller shares.		G1 M5: Identifying, Composing, and Partitioning Shapes

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