About Eureka Math

EUREKA

MATH

Created by Great Minds[®], a mission-driven Public Benefit Corporation, 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

Great Minds offers detailed analyses that 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

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

Mathematical Habits of Mind	Aligned Components of Eureka Math
MHM.1 Make sense of problems and persevere in solving them. MHM.2 Reason abstractly and quantitatively.	Lessons in every module engage students in mathematical practices. These are designated in the Module Overview and labeled in lessons. For example: A STORY OF UNITS Lesson 2 1-2
MHM.3 Construct viable arguments and critique the reasoning of others. MHM.4	 T: So, even though they added two different numbers together first, did they get the same total? S: Yes! T: Wow! Okay. Let's try this again. Let's use Bob's strategy of making ten from two of our addends. (Write 7 + 5 + 3 =) Write the equation. Draw to show the three amounts. S: (Draw to show the three quantities.) T: What two numbers make ten? S: 7 and 3.
Model with mathematics. MHM.5 Use appropriate tools strategically. MHM.6	MP.7 T: Good. Show that 7 and 3 make ten in your drawing by circling like we did yesterday with the string. NOTES ON MULTIPLE MEANS OF ENGAGEMENT: S: (Circle the 3 and the 7, making a group of 10.) T: Here is a new number sentence that shows what numbers you added first. (Write 7 + 3 + 5 =) Addends should be chosen so that students can easily identify the partners to ten, recognizing that they can add these two addends first, regardless of where they are positioned within the number sentence. If students are not fluent with 7 and 3, they may be replaced T: You just showed 10 and 5 more, which equals? S: 15.
Attend to precision.	T: Good. I'll show how we solved for the unknown. I'll write the new number sentence explaining what we just did, starting with 10. S: (Solve 7 + 3 + 5 = while the teacher writes 10 + 5 = 15.)
MHM.7 Look for and make use of structure.	T: Jo showed us at the beginning of the lesson that she could solve from left to right, without moving the addends around, in order to get the same answer as Bob. Work and talk with your partner to see if this is true again!
MHM.8 Look for and express regularity in repeated reasoning.	Repeat this process using the following suggested sequence: 9+2+1, 2+4+8 (highlighting that students might begin with the 8 rather than the 2), 4+3+6, and 3+8+7. Students complete the number sentence while the teacher completes the drawing for the third example.

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction.

West Virginia College- and Career-Readiness Standards for Mathematics

M.1.1

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 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).

Aligned Components of Eureka Math

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 Lesson 1: Solve word problems with three addends, two of which make ten. G1 M2 Lesson 3: Make ten when one addend is 9. G1 M2 Lesson 4: Make ten when one addend is 9. G1 M2 Lesson 7: Make ten when one addend is 8. G1 M2 Lesson 8: Make ten when one addend is 8. G1 M2 Lesson 11: Share and critique peer solution strategies for put together with total unknown word problems. G1 M2 Lesson 12: Solve word problems with subtraction of 9 from 10. G1 M2 Lesson 13: Solve word problems with subtraction of 9 from 10. 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 Lesson 22: Solve put together/take apart with addend unknown word problems, and relate counting on to the take from ten strategy. G1 M2 Lesson 23: Solve add to with change unknown problems, relating varied addition and subtraction strategies. G1 M2 Lesson 24: Strategize to solve take from with change unknown problems. G1 M2 Lesson 27: Solve addition and subtraction problems decomposing and composing teen numbers as 1 ten and some ones.

for Mathematics	Aligned Components of Eureka Math
M.1.1 continued	G1 M2 Lesson 28: Solve addition problems using ten as a unit, and write two-step solutions.
	G1 M2 Lesson 29: Solve subtraction problems using ten as a unit, and write two-step solutions.
	G1 M3 Lesson 9: Answer compare with difference unknown problems about lengths of two different objects measured in centimeters.
	G1 M3 Lesson 12: Ask and answer varied word problem types about a data set with three categories.
	G1 M3 Lesson 13: Ask and answer varied word problem types about a data set with three categories.
	G1 M4 Topic E: Varied Problem Types Within 20
	G1 M6 Topic A: Comparison Word Problems
	G1 M6 Topic F: Varied Problem Types Within 20
M.1.2	G1 M2 Lesson 1: Solve word problems with three addends, two of which make ten.
Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).	G1 M2 Lesson 2: Use the associative and commutative properties to make ten with three addends.

Operations and Algebraic Thinking

Understand and apply properties of operations and the relationship between addition and subtraction.

Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.3	G1 M1 Lesson 19: Represent the same story scenario with addends repositioned (the commutative property).
Apply properties of operations as strategies to add and subtract	G1 M1 Lesson 20: Apply the commutative property to count on from a larger addend.
(e.g., $If 8 + 3 = 11$ is known, then 3 + 8 = 11 is also known: Commutative	G1 M1 Lesson 22: Look for and make use of repeated reasoning on the addition chart by solving and analyzing problems with common addends.
Property of Addition. To add $2 + 6 + 4$, the second two numbers can be added	G1 M1 Lesson 24: Practice to build fluency with facts to 10.
to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$:	G1 M2 Topic A: Counting On or Making Ten to Solve Result Unknown and Total Unknown Problems
Associative Property of Addition).	G1 M2 Lesson 12: Solve word problems with subtraction of 9 from 10.
	G1 M2 Lesson 13: Solve word problems with subtraction of 9 from 10.
	G1 M2 Lesson 14: Model subtraction of 9 from teen numbers.
	G1 M2 Lesson 15: Model subtraction of 9 from teen numbers.
	G1 M2 Lesson 16: Relate counting on to making ten and taking from ten.
	G1 M2 Lesson 17: Model subtraction of 8 from teen numbers.
	G1 M2 Lesson 18: Model subtraction of 8 from teen numbers.
	G1 M2 Lesson 19: Compare efficiency of counting on and taking from ten.
	G1 M4 Topic D: Addition of Tens or Ones to a Two-Digit Number

West Virginia College- and

Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.4	G1 M1 Topic G: Subtraction as an Unknown Addend Problem
Understand subtraction as an unknown-addend problem (e.g., subtract 10-8 by finding the number that makes 10 when added to 8).	G1 M1 Lesson 29: Solve take apart with addend unknown math stories with math drawings, equations, and statements, circling the known part to find the unknown.
	G1 M1 Lesson 30: Solve add to with change unknown math stories with drawings, relating addition and subtraction.
	G1 M1 Lesson 31: Solve take from with change unknown math stories with drawings.
	G1 M1 Lesson 32: Solve put together/take apart with addend unknown math stories.
	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 Lesson 22: Solve put together/take apart with addend unknown word problems, and relate counting on to the take from ten strategy.
	G1 M2 Lesson 23: Solve add to with change unknown problems, relating varied addition and subtraction strategies.
	G1 M2 Lesson 24: Strategize to solve take from with change unknown problems.

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Operations and Algebraic Thinking

Add and subtract within 20.

West Virginia College- and Career-Readiness Standards for Mathematics

	Alighed Components of Europa Math
M.1.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2, by counting backwards 3 to subtract 3).	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.
 M.1.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10 and use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 +7 	 G1 M1 Topic B: Counting On from Embedded Numbers G1 M1 Topic C: Addition Word Problems G1 M1 Topic D: Strategies for Counting On G1 M1 Topic F: Development of Addition Fluency Within 10 G1 M1 Topic I: Decomposition Strategies for Subtraction G1 M1 Topic J: Development of Subtraction Fluency Within 10 G1 M2 Lesson 2: Use the associative and commutative properties to make ten with three addends. G1 M2 Lesson 3: Make ten when one addend is 9. G1 M2 Lesson 4: Make ten when one addend is 9. G1 M2 Lesson 6: Use the commutative property to make ten. G1 M2 Lesson 7: Make ten when one addend is 8. G1 M2 Lesson 8: Make ten when one addend is 8.
by creating the known equivalent $6+6+1=12+1=13$).	G1 M2 Lesson 9: Compare efficiency of counting on and making ten when one addend is 8. G1 M2 Lesson 10: Solve problems with addends of 7, 8, and 9.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.6 continued	G1 M2 Lesson 11: Share and critique peer solution strategies for put together with total unknown word problems.
	G1 M2 Topic B: Counting On or Taking from Ten to Solve Result Unknown and Total Unknown Problems
	G1 M2 Lesson 25: Strategize and apply understanding of the equal sign to solve equivalent expressions.
	G1 M2 Lesson 28: Solve addition problems using ten as a unit, and write two-step solutions.
	G1 M2 Lesson 29: Solve subtraction problems using ten as a unit, and write two-step solutions.
	G1 M6 Topic G: Culminating Experiences

Operations and Algebraic Thinking

Work with addition and subtraction equations.

West Virginia College- and Career-Readiness Standards for Mathematics

M.1.7	G1 M1 Lesson 17: Understand the meaning of the equal sign by pairing equivalent expressions and
Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false (e.g., Which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2). Recognize the difference between an expression $(3 + 5)$ and an equation $(3 + 5 = 8)$.	constructing true number sentences. G1 M1 Lesson 18: Understand the meaning of the equal sign by pairing equivalent expressions and constructing true number sentences. G1 M2 Lesson 25: Strategize and apply understanding of the equal sign to solve equivalent expressions.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.8 Determine the unknown whole	G1 M1 Lesson 11: Solve add to with change unknown math stories as a context for counting on by drawing, writing equations, and making statements of the solution.
number in an addition or subtraction	G1 M1 Lesson 12: Solve add to with change unknown math stories using 5-group cards.
equation relating three whole numbers (e.g., Determine the unknown number that makes the equation true in each of the equations. $8 + ? = 11, 5 = ? - 3,$ 6 + 6 = ?).	G1 M1 Lesson 13: Tell put together with result unknown, add to with result unknown, and add to with change unknown stories from equations.
	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 Lesson 30: Solve add to with change unknown math stories with drawings, relating addition and subtraction.
	G1 M1 Lesson 31: Solve take from with change unknown math stories with drawings.
	G1 M1 Lesson 32: Solve put together/take apart with addend unknown math stories.
	G1 M4 Topic E: Varied Problem Types Within 20

Number and Operations in Base Ten

Extend the counting sequence.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.9	G1 M4 Lesson 1: Compare the efficiency of counting by ones and counting by tens.
Count to 120, starting at any number less than 120. In this range, read and	G1 M6 Lesson 7: Count and write numbers to 120. Use Hide Zero cards to relate numbers 0 to 20 to 100 to 120.
write numerals and represent a number of objects with a written numeral. Skip count to 120 by 2's. Skip count to 120 by 5's and 10's.	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.

Number and Operations in Base Ten

Understand place value.

West Virginia College- and Career-Readiness Standards for Mathematics

M.1.10	G1 M2 Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones
Understand the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:	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.
	G1 M6 Lesson 24: Use dimes and pennies as representations of numbers to 120.
M.1.10.a	G1 M2 Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones
10 can be thought of as a bundle of ten ones—called a "ten." (e.g., A group of ten pennies is equivalent to a dime.)	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.
M.1.10.b	G1 M2 Topic D: Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones
The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight or nine ones.	

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.10.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 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.
	G1 M6 Lesson 24: Use dimes and pennies as representations of numbers to 120.
M.1.11	G1 M4 Topic B: Comparison of Pairs of Two-Digit Numbers
Compare and order two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	G1 M6 Lesson 6: Use the symbols >, =, and < to compare quantities and numerals to 100 .

Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

West Virginia College- and Career-Readiness Standards for Mathematics

M.1.12	G1 M4 Lesson 12: Add tens to a two-digit number.
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 and tens, ones and ones, and sometimes it is necessary to compose a ten.	 G1 M4 Topic D: Addition of Tens or Ones to a Two-Digit Number G1 M4 Lesson 24: Add a pair of two-digit numbers when the ones digits have a sum less than or equal to 10. G1 M4 Lesson 25: Add a pair of two-digit numbers when the ones digits have a sum less than or equal to 10. G1 M4 Lesson 26: Add a pair of two-digit numbers when the ones digits have a sum greater than 10. G1 M4 Lesson 26: Add a pair of two-digit numbers when the ones digits have a sum greater than 10. G1 M4 Lesson 27: Add a pair of two-digit numbers when the ones digits have a sum greater than 10. G1 M4 Lesson 28: Add a pair of two-digit numbers with varied sums in the ones. G1 M4 Lesson 29: Add a pair of two-digit numbers with varied sums in the ones. G1 M6 Topic C: Addition to 100 Using Place Value Understanding G1 M6 Topic D: Varied Place Value Strategies for Addition to 100
M.1.13 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count and 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.

Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.14	G1 M4 Lesson 11: Add and subtract tens from a multiple of 10.
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 M6 Lesson 10: Add and subtract multiples of 10 from multiples of 10 to 100, including dimes.

Measurement and Data

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Measure lengths indirectly and by iterating length units.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.15	G1 M3 Topic A: Indirect Comparison in Length Measurement
Order three objects by length and compare the lengths of two objects indirectly by using a third object.	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.

West Virginia College- and Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.16	G1 M3 Lesson 4: Express the length of an object using centimeter cubes as length units to measure
Express the length of an object as a whole number of length units, by laying	with no gaps or overlaps. G1 M3 Lesson 5: Rename and measure with centimeter cubes, using their standard unit name
multiple copies of a shorter object (the	of centimeters.
length unit) end to end; understand that the length measurement of an object	G1 M3 Topic C: Non-Standard and Standard Length Units
is the number of same-size length units that span it with no gaps or overlaps.	

Measurement and Data

Work with time and money.

West Virginia College- and Career-Readiness Standards for Mathematics

for Mathematics	Aligned Components of Eureka Math
M.1.17	G1 M5 Topic D: Application of Halves to Tell Time
Tell and write time in hours and half-hours using analog and digital clocks.	
M.1.18	G1 M4 Lesson 6: Use dimes and pennies as representations of tens and ones.
Identify the value of coins and use dimes and pennies to model the relationship between money and place value (e.g., exchange 10 pennies for 1 dime or exchange 10 dimes for 1 dollar).	G1 M6 Topic E: Coins and Their Values

Measurement and Data

Represent and interpret data.

West Virginia College- and Career-Readiness Standards for Mathematics

for Mathematics	Aligned Components of Eureka Math
M.1.19	G1 M3 Topic D: Data Interpretation
Organize, represent, 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.	

Geometry

Reason with shapes and their attributes.

West Virginia College- and Career-Readiness Standards for Mathematics

M.1.20	G1 M5 Topic A: Attributes of Shapes
Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, and/or overall size); build and draw shapes to possess defining attributes.	

West Virginia College- and Career-Readiness Standards for Mathematics

M.1.21	G1 M5 Topic B: Part-Whole Relationships Within Composite Shapes
Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or 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.	
M.1.22 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 of, or four of the shares and understand for these examples that decomposing into more equal shares creates smaller shares.	G1 M5 Topic C: Halves and Quarters of Rectangles and Circles G1 M5 Lesson 11: Recognize halves within a circular clock face and tell time to the half-hour. G1 M5 Lesson 12: Recognize halves within a circular clock face and tell time to the half-hour. G1 M5 Lesson 13: Recognize halves within a circular clock face and tell time to the half-hour.

Career-Readiness Standards for Mathematics	Aligned Components of Eureka Math
M.1.23	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?".
Create a recognizable pattern following a given rule, using colors, shapes, sizes, and sounds.	G1 M1 Lesson 23: Look for and make use of structure on the addition chart by looking for and coloring problems with the same total.
	G1 M1 Lesson 38: Look for and make use of repeated reasoning and structure, using the addition chart to solve subtraction problems.
	G1 M4 Lesson 15: Use single-digit sums to support solutions for analogous sums to 40.
	G1 M6 Lesson 7: Count and write numbers to 120. Use Hide Zero cards to relate numbers to 0 to 20 to 100 to 120.
	Supplemental material is necessary to fully address this standard.

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