
Grade K | Indiana Academic Standards for Mathematics Correlation to *Eureka Math*²TM

When the original *Eureka Math*[®] curriculum was released, it quickly became the most widely used K–5 mathematics curriculum in the country. Now, the Great Minds[®] teacher–writers have created *Eureka Math*²TM, a groundbreaking new curriculum that helps teachers deliver *exponentially better* math instruction while still providing students with the same deep understanding of and fluency in math. *Eureka Math*² carefully sequences mathematical content to maximize vertical alignment—a principle tested and proven to be essential in students’ mastery of math—from kindergarten through high school.

While this innovative new curriculum includes all the trademark *Eureka Math* aha moments that have been delighting students and teachers for years, it also boasts these exciting new features:

Teachability

*Eureka Math*² employs streamlined materials that allow teachers to plan more efficiently and focus their energy on delivering high-quality instruction that meets the individual needs of their students. Differentiation suggestions, slide decks, digital interactives, and multiple forms of assessment are just a few of the resources built right into the teacher materials.

Accessibility

*Eureka Math*² incorporates Universal Design for Learning principles so all learners can access the mathematics and take on challenging math concepts. Student supports are built into the instructional design and are clearly identified in the *Teach* book. Further, the curriculum carries a focus on readability. By eliminating unnecessary words and using simple, clear sentences, the *Eureka Math*² teacher–writers have created one of the most readable mathematics curricula on the market. The curriculum’s readability and accessibility help all students see themselves as mathematical thinkers and doers who are fully capable of owning their mathematics learning.

Digital Engagement

The digital elements of *Eureka Math*² add to students’ engagement with the math. The curriculum provides teachers with digital slides for each lesson. In addition, each grade level includes wordless videos that spark students’ interest and curiosity. Students at all levels work through mathematical explorations that help lead to their own mathematical discoveries. Digital lessons and videos provide opportunities for students to wonder, explore, and make sense of mathematics, which contributes to the development of a strong, positive mathematical identity.

Process Standards for Mathematics

Aligned Components of *Eureka Math*²

PS.1: Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway, rather than simply jumping into a solution attempt. They consider analogous problems and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” and “Is my answer reasonable?” They understand the approaches of others to solving complex problems and identify correspondences between different approaches. Mathematically proficient students understand how mathematical ideas interconnect and build on one another to produce a coherent whole.

While lessons in every module engage students in making sense of problems and persevering in solving them, this mathematical practice is specifically addressed in the following modules:

- K M1: Counting and Cardinality
- K M2: Two- and Three-Dimensional Shapes

PS.2: Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

While lessons in every module engage students in reasoning abstractly and quantitatively, this mathematical practice is specifically addressed in the following modules:

- K M1: Counting and Cardinality
- K M3: Comparison
- K M5: Addition and Subtraction

Process Standards for Mathematics

Aligned Components of *Eureka Math*²

PS.3: Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They analyze situations by breaking them into cases and recognize and use counterexamples. They organize their mathematical thinking, justify their conclusions and communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. They justify whether a given statement is true always, sometimes, or never. Mathematically proficient students participate and collaborate in a mathematics community. They listen to or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

While lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others, this mathematical practice is specifically addressed in the following modules:

K M5: Addition and Subtraction

K M6: Place Value Foundations

Process Standards for Mathematics

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<p>PS.4: Model with mathematics.</p> <p>Mathematically proficient students apply the mathematics they know to solve problems arising in everyday life, society, and the workplace using a variety of appropriate strategies. They create and use a variety of representations to solve problems and to organize and communicate mathematical ideas. Mathematically proficient students apply what they know and are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.</p>	<p>While lessons in every module engage students in modeling with mathematics, this mathematical practice is specifically addressed in the following modules:</p> <p>K M1: Counting and Cardinality</p> <p>K M4: Composition and Decomposition</p>
<p>PS.5: Use appropriate tools strategically.</p> <p>Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Mathematically proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. Mathematically proficient students identify relevant external mathematical resources, such as digital content, and use them to pose or solve problems. They use technological tools to explore and deepen their understanding of concepts and to support the development of learning mathematics. They use technology to contribute to concept development, simulation, representation, reasoning, communication and problem solving.</p>	<p>While lessons in every module engage students in using appropriate tools strategically, this mathematical practice is specifically addressed in the following modules:</p> <p>K M1: Counting and Cardinality</p> <p>K M5: Addition and Subtraction</p> <p>K M6: Place Value Foundations</p>

Process Standards for Mathematics

Aligned Components of *Eureka Math*²

<p>PS.6: Attend to precision.</p> <p>Mathematically proficient students communicate precisely to others. They use clear definitions, including correct mathematical language, in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They express solutions clearly and logically by using the appropriate mathematical terms and notation. They specify units of measure and label axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently and check the validity of their results in the context of the problem. They express numerical answers with a degree of precision appropriate for the problem context.</p>	<p>While lessons in every module engage students in attending to precision, this mathematical practice is specifically addressed in the following modules:</p> <p>K M1: Counting and Cardinality</p> <p>K M2: Two- and Three-Dimensional Shapes</p> <p>K M3: Comparison</p>
<p>PS.7: Look for and make use of structure.</p> <p>Mathematically proficient students look closely to discern a pattern or structure. They step back for an overview and shift perspective. They recognize and use properties of operations and equality. They organize and classify geometric shapes based on their attributes. They see expressions, equations, and geometric figures as single objects or as being composed of several objects.</p>	<p>While lessons in every module engage students in looking for and making use of structure, this mathematical practice is specifically addressed in the following modules:</p> <p>K M1: Counting and Cardinality</p> <p>K M2: Two- and Three-Dimensional Shapes</p> <p>K M5: Addition and Subtraction</p> <p>K M6: Place Value Foundations</p>
<p>PS.8: Look for and express regularity in repeated reasoning.</p> <p>Mathematically proficient students notice if calculations are repeated and look for general methods and shortcuts. They notice regularity in mathematical problems and their work to create a rule or formula. Mathematically proficient students maintain oversight of the process, while attending to the details as they solve a problem. They continually evaluate the reasonableness of their intermediate results.</p>	<p>While lessons in every module engage students in looking for and expressing regularity in repeated reasoning, this mathematical practice is specifically addressed in the following modules:</p> <p>K M1: Counting and Cardinality</p> <p>K M5: Addition and Subtraction</p>

Strands	Indiana Academic Standards for Mathematics	Aligned Components of <i>Eureka Math</i> ²
<p>Number Sense</p>	<p>K.NS.1</p> <p>Count to at least 100 by ones and tens and count on by one from any number.</p>	<p>K M1 Lesson 4: Classify objects into three categories and count.</p> <p>K M1 Lesson 6: Organize, count, and represent a collection of objects.</p> <p>K M1 Lesson 12: Write numerals 4 and 5 to answer <i>how many</i> questions.</p> <p>K M1 Lesson 19: Organize, count, and represent a collection of objects.</p> <p>K M1 Lesson 21: Count objects in circular configurations and match to a numeral.</p> <p>K M1 Topic F: Write Numerals and Create Sets of Up to 10 Objects</p> <p>K M1 Lesson 33: Organize, count, and represent a collection of objects.</p> <p>K M2 Lesson 16: Organize, count, and represent a collection of objects.</p> <p>K M3 Lesson 22: Organize, count, and represent a collection of objects.</p> <p>K M4 Lesson 17: Organize, count, and represent a collection of objects.</p> <p>K M5 Lesson 18: Count starting from a number other than 1 to find the total.</p> <p>K M5 Topic D: Make Use of Structure</p> <p>K M6: Place Value Foundations</p>
	<p>K.NS.2</p> <p>Write whole numbers from zero to 20 and recognize number words from zero to 10. Represent a number of objects with a written numeral zero to 20 (with zero representing a count of no objects).</p>	<p>K M1: Counting and Cardinality</p> <p>K M3 Lesson 5: Compare the lengths of two cube sticks.</p> <p>K M5 Lesson 27: Organize, count, and represent a collection of objects.</p> <p>K M6 Topic A: Count and Write Teen Numbers</p> <p>K M6 Lesson 7: Decompose numbers 10–20 with 10 as a part.</p> <p>K M6 Lesson 17: Use patterns in the number sequence to count by ones within 100.</p>

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	<p>K.NS.3</p> <p>Find the number that is one more than or one less than any whole number up to 20.</p>	<p>K M1 Topic G: Analyze the Count Sequence</p> <p>K M3 Lesson 5: Compare the lengths of two cube sticks.</p> <p>K M5 Lesson 25: Extend growing patterns.</p> <p>K M6 Lesson 4: Order numerals 0–20.</p>
	<p>K.NS.4</p> <p>Say the number names in standard order when counting objects, pairing each object with one and only one number name and each number name with one and only one object. Understand that the last number describes the number of objects counted and that the number of objects is the same regardless of their arrangement or the order in which they were counted.</p>	<p>K M1 Topic B: Answer <i>How Many</i> Questions with Up to 5 Objects</p> <p>K M1 Lesson 13: Count out enough objects and write the numeral.</p> <p>K M1 Lesson 19: Organize, count, and represent a collection of objects.</p> <p>K M1 Lesson 23: Conserve number regardless of the order in which objects are counted.</p> <p>K M1 Lesson 33: Organize, count, and represent a collection of objects.</p> <p>K M2 Lesson 16: Organize, count, and represent a collection of objects.</p> <p>K M3 Lesson 22: Organize, count, and represent a collection of objects.</p> <p>K M4 Lesson 17: Organize, count, and represent a collection of objects.</p> <p>K M5 Lesson 27: Organize, count, and represent a collection of objects.</p> <p>K M6 Lesson 13: Organize, count, and represent a collection of objects.</p> <p>K M6 Lesson 24: Organize, count, and represent a collection of objects.</p>
	<p>K.NS.5</p> <p>Count up to 20 objects arranged in a line, a rectangular array, or a circle. Count up to 10 objects in a scattered configuration. Count out the number of objects, given a number from one to 20.</p>	<p>K M1: Counting and Cardinality</p> <p>K M2 Lesson 16: Organize, count, and represent a collection of objects.</p> <p>K M3 Lesson 22: Organize, count, and represent a collection of objects.</p> <p>K M4 Lesson 17: Organize, count, and represent a collection of objects.</p> <p>K M4 Lesson 18: Use the structure of 5 and 10 to build a rekenrek.</p> <p>K M5 Lesson 27: Organize, count, and represent a collection of objects.</p> <p>K M6: Place Value Foundations</p>

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	<p>K.NS.6</p> <p>Recognize sets of one to 10 objects in patterned arrangements and tell how many without counting.</p>	<p>K M4 Lesson 3: Decompose a group to identify parts and total.</p> <p>K M4 Lesson 4: Decompose a group and record parts and total by using a number bond.</p> <p>K M5 Lesson 4: Represent decomposition situations by using number bonds and addition sentences.</p> <p>K M5 Lesson 18: Count starting from a number other than 1 to find the total.</p> <p>K M5 Lesson 19: Represent and solve <i>take from with change unknown</i> problems.</p> <p>K M5 Lesson 21: Organize drawings to solve problems efficiently.</p> <p>K M5 Lesson 24: Solve story problems by using repeated reasoning.</p> <p>K M6 Lesson 13: Organize, count, and represent a collection of objects.</p> <p>K M6 Lesson 15: Count by tens by using math tools.</p> <p><i>Recognizing patterned sets without counting is also addressed through the fluencies Finger Flash, Choral Response: Peek-a-Boo Counting, 5-Groups, and Dot Cards.</i></p>
	<p>K.NS.7</p> <p>Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., by using matching and counting strategies).</p>	<p>K M1 Lesson 7: Practice counting accurately.</p> <p>K M1 Lesson 13: Count out enough objects and write the numeral.</p> <p>K M3 Topic C: Compare Sets Within 10</p> <p>K M3 Lesson 18: Compare the capacity of containers by using numerals.</p> <p>K M3 Lesson 19: Compare numbers by using <i>greater than</i>, <i>less than</i>, and <i>equal to</i>.</p> <p>K M3 Lesson 21: Describe and compare several measurable attributes of objects and sets.</p> <p>K M6 Topic D: Compare</p>

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	<p>K.NS.8</p> <p>Compare the values of two numbers from 1 to 20 presented as written numerals.</p>	<p>K M3 Lesson 16: Count and compare sets with unlike units.</p> <p>K M3 Topic D: Compare Numbers Within 10</p> <p>K M6 Topic D: Compare</p>
	<p>K.NS.9</p> <p>Correctly use the words for comparison, including: one and many; none, some and all; more and less; most and least; and equal to, more than and less than.</p>	<p>K M3 Topic C: Compare Sets Within 10</p> <p>K M3 Topic D: Compare Numbers Within 10</p> <p>K M5 Lesson 3: Represent and solve <i>add to with result unknown</i> story problems.</p> <p>K M5 Lesson 13: Tell subtraction story problems starting from number sentence models.</p> <p>K M6 Topic D: Compare</p>
	<p>K.NS.10</p> <p>Separate sets of 10 or fewer objects into equal groups.</p>	<p>K M6 Lesson 12: Investigate different ways to decompose teen numbers.</p> <p><i>Supplemental material is necessary to address separating into equal groups.</i></p>
	<p>K.NS.11</p> <p>Develop initial understandings of place value and the base 10 number system by showing equivalent forms of whole numbers from 10 to 20 as groups of tens and ones using objects and drawings.</p>	<p>K M6 Topic A: Count and Write Teen Numbers</p> <p>K M6 Topic B: Compose and Decompose Teen Numbers</p> <p>K M6 Lesson 21: Count and compare sets with more than 20 objects.</p>

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Computation and Algebraic Thinking	K.CA.1 Use objects, drawings, mental images, sounds, etc., to represent addition and subtraction within 10.	K M1 Lesson 17: Model story problems. K M1 Lesson 18: Model story problems and identify the numeral referents. K M4 Topic A: Explore Composition and Decomposition K M4 Lesson 10: Sort and record the decomposition with a number bond. K M4 Topic C: Model Composition and Decomposition in Story Problems K M5: Addition and Subtraction
	K.CA.2 Solve real-world problems that involve addition and subtraction within 10 (e.g., by using objects or drawings to represent the problem).	K M4 Topic C: Model Composition and Decomposition in Story Problems K M5: Addition and Subtraction
	K.CA.3 Use objects, drawings, etc., to decompose numbers less than or equal to 10 into pairs in more than one way, and record each decomposition with a drawing or an equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$). [In Kindergarten, students should see equations and be encouraged to trace them, however, writing equations is not required.]	K M1 Lesson 15: Sort the same group of objects in more than one way and count. K M1 Lesson 16: Decompose a set shown in a picture. K M3 Lesson 6: Compose cube sticks that are the same length. K M3 Lesson 17: Count and compare sets in pictures. K M4 Lesson 4: Decompose a group and record parts and total by using a number bond. K M4 Topic B: Record Composition and Decomposition K M4 Topic C: Model Composition and Decomposition in Story Problems K M5 Lesson 4: Represent decomposition situations by using number bonds and addition sentences. K M5 Lesson 5: Represent <i>take apart with both addends unknown</i> situations with a number sentence. K M5 Lesson 8: Understand taking away as a type of subtraction.

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	<p>K.CA.4</p> <p>Find the number that makes 10 when added to the given number for any number from one to nine (e.g., by using objects or drawings), and record the answer with a drawing or an equation.</p>	<p>K M5 Topic C: Make Sense of Problems</p> <p>K M6 Lesson 10: Make sense of word problems involving teen numbers.</p>
	<p>K.CA.5</p> <p>Create, extend, and give an appropriate rule for simple repeating and growing patterns with numbers and shapes.</p>	<p>K M5 Topic D: Make Use of Structure</p>
<p>Geometry</p>	<p>K.G.1</p> <p>Describe the positions of objects and geometric shapes in space using the terms inside, outside, between, above, below, near, far, under, over, up, down, behind, in front of, next to, to the left of and to the right of.</p>	<p>K M2 Topic A: Analyze and Name Two-Dimensional Shapes</p> <p>K M2 Lesson 7: Name solid shapes and discuss their attributes.</p> <p>K M2 Lesson 10: Construct a circle.</p> <p>K M2 Lesson 14: Compose flat shapes.</p>
	<p>K.G.2</p> <p>Compare two- and three-dimensional shapes in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).</p>	<p>K M2: Two- and Three-Dimensional Shapes</p> <p>K M4 Topic A: Explore Composition and Decomposition</p>
	<p>K.G.3</p> <p>Model shapes in the world by composing shapes from objects (e.g., sticks and clay balls) and drawing shapes.</p>	<p>K M2 Topic C: Construct Shapes</p> <p>K M3 Lesson 4: Compare the lengths of cube sticks to flat shapes.</p>

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	<p>K.G.4</p> <p>Compose simple geometric shapes to form larger shapes (e.g., create a rectangle composed of two triangles).</p>	<p>K M2 Lesson 14: Compose flat shapes.</p> <p>K M2 Lesson 15: Compose solid shapes to create a structure that can fit a toy inside.</p> <p>K M3 Lesson 15: Classify flat shapes into groups and compare the number of shapes in each group.</p> <p>K M4 Topic A: Explore Composition and Decomposition</p> <p>K M4 Lesson 9: Compose shapes in more than one way.</p> <p>K M4 Lesson 16: Compose and decompose numbers and shapes.</p> <p>K M5 Lesson 12: Relate parts to total in subtraction situations.</p> <p>K M5 Lesson 25: Extend growing patterns.</p>
<p>Measurement</p>	<p>K.M.1</p> <p>Make direct comparisons of the length, capacity, weight, and temperature of objects, and recognize which object is shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more.</p>	<p>K M2 Lesson 15: Compose solid shapes to create a structure that can fit a toy inside.</p> <p>K M3: Comparison</p> <p>K M5 Lesson 10: Represent and solve <i>take from with result unknown</i> story problems.</p> <p>K M6 Lesson 12: Investigate different ways to decompose teen numbers.</p> <p>K M6 Lesson 22: Compare area by comparing number.</p> <p>K M6 Lesson 23: Compare lengths of objects by using 10-sticks and individual cubes.</p>
	<p>K.M.2</p> <p>Understand concepts of time, including: morning, afternoon, evening, today, yesterday, tomorrow, day, week, month, and year. Understand that clocks and calendars are tools that measure time.</p>	<p>K M1 Lesson 28: Order numerals 1–10 and reason about an unknown number in the number sequence.</p> <p>K M3 Lesson 17: Count and compare sets in pictures.</p> <p><i>Supplemental material is necessary to address concepts of time and tools that measure time.</i></p>

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Data Analysis	<p>K.DA.1</p> <p>Identify, sort, and classify objects by size, number, and other attributes. Identify objects that do not belong to a particular group and explain the reasoning used.</p>	<p>K M1 Topic A: Classify to Make Categories and Count</p> <p>K M1 Lesson 15: Sort the same group of objects in more than one way and count.</p> <p>K M1 Lesson 16: Decompose a set shown in a picture.</p> <p>K M2 Topic A: Analyze and Name Two-Dimensional Shapes</p> <p>K M2 Lesson 6: Distinguish between flat and solid shapes.</p> <p>K M2 Lesson 11: Construct and classify polygons.</p> <p>K M3 Topic A: Compare Heights and Lengths</p> <p>K M3 Lesson 8: Use a balance scale to compare two objects.</p> <p>K M3 Topic C: Compare Sets Within 10</p> <p>K M4 Lesson 5: Sort to decompose a number in more than one way.</p> <p>K M4 Lesson 10: Sort and record the decomposition with a number bond.</p>