7–8 | Pennsylvania Core Standards Mathematics Correlation to *Eureka Math²*®

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 Math²*®, 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 Math²* 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 Math² 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 Math² 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 Math²* 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 Math²* 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.

Standards for Mathematical Practice	Aligned Components of *Eureka Math²*
MP.1 Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.2 Reason abstractly and quantitatively.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.3 Construct viable arguments and critique the reasoning of others.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.4 Model with mathematics.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.5 Use appropriate tools strategically.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.6 Attend to precision.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.7 Look for and make use of structure.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.
MP.8 Look for and express regularity in repeated reasoning.	Lessons in every module engage students in mathematical practices. These are indicated in margin notes included with every lesson.

Numbers and Operations

CC.2.1.7.D Ratios and Proportional Relationships

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems.	7–8 M2 Topic C: From Ratio Relationships to Proportional Relationships 7–8 M2 Topic D: Percents and Proportional Relationships

Numbers and Operations

CC.2.1.7.E The Number System

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.1.7.E.1 Apply and extend previous understandings of operations with fractions to operations with rational numbers.	7–8 M1 Topic A: Add and Subtract Rational Numbers 7–8 M1 Topic B: Multiply and Divide Rational Numbers

Numbers and Operations

CC.2.1.8.E The Number System

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.1.8.E.1 Distinguish between rational and irrational numbers using their properties.	7–8 M1 Lesson 20: Using the Pythagorean Theorem 7–8 M1 Lesson 22: Rational and Irrational Numbers 7–8 M1 Lesson 23: Revisiting Equations with Squares and Cubes 7–8 M2 Lesson 6: Expressing Repeating Decimals as Fractions

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.1.8.E.4 Estimate irrational numbers by comparing them to rational numbers.	7–8 M1 Lesson 20: Using the Pythagorean Theorem 7–8 M1 Lesson 21: Approximating Values of Roots 7–8 M1 Lesson 22: Rational and Irrational Numbers

Algebraic Concepts
CC.2.2.7.B Expressions and Equations

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.2.7.B.1 Apply properties of operations to generate equivalent expressions.	7–8 M2 Lesson 2: Using Equivalent Expressions to Solve Equations 7–8 M2 Lesson 21: Discount, Markup, Sales Tax, and Tip 7–8 M2 Lesson 22: Percent Increase and Percent Decrease
CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.	7–8 M2 Lesson 1: Finding Unknown Angle Measures 7–8 M2 Lesson 3: Solving Equations 7–8 M2 Lesson 4: Using Equations to Solve Inequalities 7–8 M2 Lesson 5: Solving Problems Involving Equations and Inequalities 7–8 M2 Lesson 11: Using Linear Equations to Solve Real-World Problems 7–8 M2 Lesson 17: Using Proportional Reasoning to Solve Multi-Step Problems 7–8 M2 Lesson 18: Handstand Sprint 7–8 M2 Lesson 23: What Is the Best Deal?

Algebraic Concepts
CC.2.2.8.B Expressions and Equations

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.2.8.B.1 Apply concepts of radicals and integer exponents to generate equivalent expressions.	7–8 M1 Topic C: Properties of Exponents and Scientific Notation 7–8 M1 Lesson 18: Solving Equations with Squares and Cubes 7–8 M1 Lesson 19: The Pythagorean Theorem 7–8 M1 Lesson 20: Using the Pythagorean Theorem 7–8 M1 Lesson 21: Approximating Values of Roots 7–8 M1 Lesson 23: Revisiting Equations with Squares and Cubes
CC.2.2.8.B.2 Understand the connections between proportional relationships, lines, and linear equations.	7–8 M4 Lesson 4: Comparing Proportional Relationships 7–8 M4 Lesson 5: Proportional Relationships and Slope 7–8 M4 Lesson 6: Slopes of Rising Lines and Falling Lines 7–8 M4 Lesson 7: Using Coordinates to Find Slope 7–8 M4 Lesson 8: Slope-Intercept Form of the Equation of a Line
CC.2.2.8.B.3 Analyze and solve linear equations and pairs of simultaneous linear equations.	7–8 M2 Lesson 6: Expressing Repeating Decimals as Fractions 7–8 M2 Topic B: Multi-Step Equations and Their Solutions 7–8 M4 Topic C: Solving Systems of Linear Equations 7–8 M4 Topic D: Writing and Solving Systems of Linear Equations

Algebraic Concepts
CC.2.2.8.C Functions

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.2.8.C.1 Define, evaluate, and compare functions.	7–8 M5 Topic A: Functions 7–8 M5 Lesson 6: Linear Functions and Rate of Change 7–8 M5 Lesson 7: Interpreting Rate of Change and Initial Value 7–8 M5 Lesson 8: Comparing Functions 7–8 M5 Lesson 10: Graphs of Nonlinear Functions
CC.2.2.8.C.2 Use concepts of functions to model relationships between quantities.	7–8 M5 Lesson 6: Linear Functions and Rate of Change 7–8 M5 Lesson 7: Interpreting Rate of Change and Initial Value 7–8 M5 Lesson 9: Increasing and Decreasing Functions 7–8 M5 Lesson 10: Graphs of Nonlinear Functions 7–8 M5 Lesson 23: Applications of Volume

Geometry
CC.2.3.7.A Geometry

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.	7–8 M2 Lesson 1: Finding Unknown Angle Measures 7–8 M2 Lesson 2: Using Equivalent Expressions to Solve Equations 7–8 M2 Lesson 7: Solving Multi-Step Equations 7–8 M3 Lesson 3: Exploring and Constructing Circles 7–8 M3 Lesson 4: Area and Circumference of a Circle 7–8 M3 Lesson 5: Area and Circumference of Circular Regions

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.3.7.A.1 *continued*	7–8 M3 Lesson 6: Watering a Lawn
	7–8 M5 Lesson 11: Surface Areas of Prisms and Pyramids
	7–8 M5 Lesson 16: Volume of Prisms
	7–8 M5 Lesson 18: Designing a Fish Tank
	7–8 M5 Lesson 21: Volume of Composite Solids
CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them.	7–8 M3 Lesson 1: Sketching and Constructing Geometric Figures
	7–8 M3 Lesson 2: Conditions of Unique Triangles
	7–8 M3 Lesson 3: Exploring and Constructing Circles
	7–8 M3 Topic D: Scale Drawings and Dilations
	7–8 M5 Lesson 13: Understanding Planes and Cross Sections
	7–8 M5 Lesson 14: Cross Section Scavenger Hunt
	7–8 M5 Lesson 15: Proportionality and Scale Factor of Cross Sections

Geometry

CC.2.3.8.A Geometry

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.3.8.A.1 Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.	7–8 M5 Topic D: Volume

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.3.8.A.2 Understand and apply congruence, similarity, and geometric transformations using various tools.	7–8 M3 Topic B: Rigid Motions and Congruence 7–8 M3 Lesson 12: Lines Cut by a Transversal 7–8 M3 Lesson 22: Dilations 7–8 M3 Topic E: Similarity
CC.2.3.8.A.3 Understand and apply the Pythagorean Theorem to solve problems.	7–8 M1 Lesson 19: The Pythagorean Theorem 7–8 M3 Lesson 15: Proving the Pythagorean Theorem 7–8 M3 Lesson 16: Proving the Converse of the Pythagorean Theorem 7–8 M3 Lesson 17: Applications of the Pythagorean Theorem 7–8 M3 Lesson 29: Using Similar Figures to Find Unknown Side Lengths 7–8 M5 Lesson 19: Volumes of Pyramids and Cones

Measurement, Data, and Probability

CC.2.4.7.B Statistics and Probability

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.4.7.B.1 Draw inferences about populations based on random sampling concepts.	7–8 M6 Topic C: Random Sampling
CC.2.4.7.B.2 Draw informal comparative inferences about two populations.	7–8 M6 Topic D: Comparing Populations

Pennsylvania Core Standards Mathematics	**Aligned Components of *Eureka Math²***
CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models.	7–8 M6 Topic A: Calculating and Interpreting Probabilities 7–8 M6 Topic B: Estimating Probabilities

Measurement, Data, and Probability
CC.2.4.8.B Statistics and Probability

Pennsylvania Core Standards Mathematics	**Aligned Components of *Eureka Math²***
CC.2.4.8.B.1 Analyze and/or interpret bivariate data displayed in multiple representations.	7–8 M6 Topic E: Bivariate Numerical Data 7–8 M6 Topic F: Bivariate Categorical Data
CC.2.4.8.B.2 Understand that patterns of association can be seen in bivariate data utilizing frequencies.	7–8 M6 Topic F: Bivariate Categorical Data