Grade 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.2.1.8.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.	8 M1 Lesson 22: Familiar and Not So Familiar Numbers 8 M4 Lesson 5: An Interesting Application of Linear Equations, Part 1 8 M4 Lesson 6: An Interesting Application of Linear Equations, Part 2
CC.2.1.8.E.4 Estimate irrational numbers by comparing them to rational numbers.	8 M1 Lesson 21: Approximating Values of Roots and π^2 8 M1 Lesson 23: Ordering Irrational Numbers

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.	8 M1 Topic A: Introduction to Scientific Notation 8 M1 Topic B: Properties and Definitions of Exponents 8 M1 Topic C: Applications of the Properties and Definitions of Exponents 8 M1 Lesson 16: Perfect Squares and Perfect Cubes 8 M1 Lesson 17: Solving Equations with Squares and Cubes 8 M1 Lesson 20: Square Roots 8 M1 Lesson 22: Familiar and Not So Familiar Numbers 8 M1 Lesson 24: Revisiting Equations with Squares and Cubes

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.2.8.B.2 Understand the connections between proportional relationships, lines, and linear equations.	8 M3 Lesson 17: Similar Triangles on a Line 8 M4 Topic D: Slope of a Line 8 M4 Lesson 20: 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.	8 M4 Topic A: Linear Equations in One Variable 8 M4 Topic B: The Structure of Linear Equations in One Variable 8 M5 Topic A: Solving Systems of Linear Equations Graphically 8 M5 Topic B: Solving Systems of Equations Algebraically 8 M5 Topic C: 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.	8 M6 Topic A: Functions 8 M6 Lesson 6: Linear Functions and Rate of Change 8 M6 Lesson 7: Interpreting Rate of Change and Initial Value 8 M6 Lesson 8: Comparing Functions 8 M6 Lesson 10: Graphs of Nonlinear Functions

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.2.8.C.2 Use concepts of functions to model relationships between quantities.	8 M6 Lesson 6: Linear Functions and Rate of Change 8 M6 Lesson 7: Interpreting Rate of Change and Initial Value 8 M6 Lesson 9: Increasing and Decreasing Functions 8 M6 Lesson 10: Graphs of Nonlinear Functions 8 M6 Lesson 25: Applications of Volume

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.	8 M6 Topic E: Volume
CC.2.3.8.A.2 Understand and apply congruence, similarity, and geometric transformations using various tools.	8 M2 Topic A: Rigid Motions and Their Properties 8 M2 Topic B: Rigid Motions and Congruent Figures 8 M2 Topic C: Angle Relationships 8 M3 Topic A: Dilations 8 M3 Topic B: Properties of Dilations 8 M3 Topic C: Similar Figures 8 M3 Topic D: Applications of Similar Figures

Pennsylvania Core Standards Mathematics	Aligned Components of *Eureka Math²*
CC.2.3.8.A.3 Understand and apply the Pythagorean Theorem to solve problems.	8 M1 Lesson 18: The Pythagorean Theorem 8 M1 Lesson 19: Using the Pythagorean Theorem 8 M1 Lesson 20: Square Roots 8 M2 Topic D: Congruent Figures and the Pythagorean Theorem 8 M3 Lesson 16: Similar Right Triangles

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.	8 M6 Lesson 6: Linear Functions and Rate of Change 8 M6 Lesson 7: Interpreting Rate of Change and Initial Value 8 M6 Topic C: Bivariate Numerical Data 8 M6 Topic D: Bivariate Categorical Data
CC.2.4.8.B.2 Understand that patterns of association can be seen in bivariate data utilizing frequencies.	8 M6 Topic D: Bivariate Categorical Data