Mathematics I | Oklahoma Academic Standards for 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.

Mathematical Actions and Processes	Aligned Components of *Eureka Math²*
Develop a Deep and Flexible Conceptual Understanding	Lessons in every module engage students in mathematical actions and processes.
Develop Accurate and Appropriate Procedural Fluency	Lessons in every module engage students in mathematical actions and processes.
Develop Strategies for Problem Solving	Lessons in every module engage students in mathematical actions and processes.
Develop Mathematical Reasoning	Lessons in every module engage students in mathematical actions and processes.
Develop a Productive Mathematical Disposition	Lessons in every module engage students in mathematical actions and processes.
Develop the Ability to Make Conjectures, Model, and Generalize	Lessons in every module engage students in mathematical actions and processes.
Develop the Ability to Communicate Mathematically	Lessons in every module engage students in mathematical actions and processes.

Algebraic Reasoning & Algebra

A1.A.1 Represent and solve mathematical and real-world problems using linear equations, absolute value equations, and systems of equations; interpret solutions in the original context.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.1.1 Use knowledge of solving equations with rational values to represent, use and apply mathematical models (e.g., angle measures, geometric formulas, dimensional analysis, Pythagorean theorem, science, statistics) and interpret the solutions in the original context.	Math 1 M6 Topic A: Modeling with Numerical Data Math 1 M6 Topic B: Modeling with Categorical Data Math 1 M6 Topic C: Developing Models for Contexts
A1.A.1.2 Solve absolute value equations and interpret the solutions in the original context.	Math 1 M1 Lesson 5: Printing Presses Math 1 M1 Lesson 6: Solution Sets of Equations and Inequalities in One Variable Math 1 M1 Lesson 7: Solving Linear Equations in One Variable Math 1 M1 Lesson 8: Some Potential Dangers When Solving Equations Math 1 M1 Lesson 9: Writing and Solving Equations in One Variable Math 1 M1 Lesson 11: Solving Linear Inequalities in One Variable Math 1 M1 Lesson 13: Solving and Graphing Compound Inequalities Math 1 M1 Lesson 14: Solving Absolute Value Equations Math 1 M1 Lesson 15: Solving Absolute Value Inequalities *Supplemental material is necessary to address interpreting solutions in the original context.*

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.1.3 Analyze, use and apply mathematical models to solve problems involving systems of linear equations with a maximum of two variables by graphing, substitution, and elimination. Graphing calculators or other appropriate technology may be utilized. Interpret the solutions in the original context.	Math 1 M2 Topic B: Systems of Linear Equations in Two Variables

Algebraic Reasoning & Algebra

A1.A.2 Represent and solve real-world and mathematical problems using linear inequalities and compound inequalities; interpret solutions in the original context.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.2.1 Represent relationships using mathematical models with linear inequalities; solve the resulting inequalities, graph on a coordinate plane, and interpret the solutions.	Math 1 M2 Lesson 13: Solution Sets of Linear Inequalities in Two Variables Math 1 M2 Lesson 14: Graphing Linear Inequalities in Two Variables Math 1 M2 Lesson 16: Solution Sets of Systems of Linear Inequalities Math 1 M2 Lesson 17: Graphing Solution Sets of Systems of Linear Inequalities Math 1 M2 Lesson 18: Applications of Systems of Linear Inequalities Math 1 M6 Lesson 10: Designing a Fundraiser

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.2.2 Represent relationships using mathematical models with compound and absolute value inequalities and solve the resulting inequalities by graphing and interpreting the solutions on a number line.	Math 1 M1 Lesson 9: Writing and Solving Equations in One Variable Math 1 M1 Lesson 12: Solution Sets of Compound Statements Math 1 M1 Lesson 13: Solving and Graphing Compound Inequalities Math 1 M1 Lesson 15: Solving Absolute Value Inequalities Math 1 M1 Lesson 16: Applying Absolute Value Math 1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables Math 1 M2 Lesson 15: Applications of Linear Inequalities Math 1 M2 Lesson 18: Applications of Systems of Linear Inequalities Math 1 M6 Lesson 10: Designing a Fundraiser

Algebraic Reasoning & Algebra

A1.A.3 Create and evaluate equivalent algebraic expressions and equations using algebraic properties.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.3.1 Solve equations involving several variables for one variable in terms of the others.	Math 1 M1 Lesson 10: Rearranging Formulas

Algebraic Reasoning & Algebra

A1.A.4 Analyze real-world and mathematical problems involving linear equations.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.A.4.1 Analyze, use and apply mathematical models and other data sets (e.g., graphs, equations, two points, a set of data points) to calculate and interpret slope and the x- and y-intercepts of a line.	Math 1 M2 Lesson 2: Graphing Linear Equations in Two Variables
A1.A.4.3 Write the equation of the line given its slope and y-intercept, slope and one point, two points, x- and y-intercepts, or a set of data points.	Math 1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables Math 1 M2 Lesson 2: Graphing Linear Equations in Two Variables Math 1 M2 Lesson 3: Creating Linear Equations in Two Variables Math 1 M2 Lesson 4: Proving Conditional Statements Math 1 M2 Lesson 5: Proving Biconditional Statements Math 1 M2 Lesson 8: Low-Flow Showerhead Math 1 M2 Lesson 12: Applications of Systems of Equations Math 1 M4 Lesson 5: Proving the Perpendicular Criterion
A1.A.4.4 Express linear equations in slope-intercept, point-slope, and standard forms. Convert between these forms.	Math 1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables Math 1 M2 Lesson 2: Graphing Linear Equations in Two Variables
A1.A.4.5 Analyze and interpret associations between graphical representations and written scenarios.	Math 1 M3 Lesson 8: Exploring Key Features of a Function and Its Graph Math 1 M3 Lesson 9: Identifying Key Features of a Function and Its Graph

Functions

A1.F.1 Understand functions as descriptions of covariation (how related quantities vary together) in real-world and mathematical problems.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.F.1.1 Distinguish between relations and functions.	Math 1 M3 Lesson 1: The Definition of a Function
A1.F.1.2 Identify the dependent variable, independent variable, domain and range given a function, equation, or graph. Identify restrictions on the domain and range in mathematical models.	Math 1 M3 Lesson 1: The Definition of a Function Math 1 M3 Lesson 3: Representing, Naming, and Evaluating Functions Math 1 M3 Lesson 4: The Graph of a Function Math 1 M3 Lesson 13: Modeling Elevation as a Function of Time *Supplemental material is necessary to address identifying the dependent variable and the independent variable.*
A1.F.1.3 Write linear functions, using function notation, to represent mathematical models.	Math 1 M3 Lesson 7: Representations of Functions
A1.F.1.4 Read and interpret the linear piecewise function, given a graph modeling a situation.	Math 1 M3 Lesson 13: Modeling Elevation as a Function of Time
A1.F.1.5 Interpret graphs as being discrete or continuous.	Math 1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables

Functions

A1.F.2 Recognize and understand that families of functions are defined by their characteristics.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.F.2.1 Distinguish between linear and nonlinear (including exponential) functions. Understand that linear functions grow by equal intervals (arithmetic) and that exponential functions grow by equal factors over equal intervals (geometric).	Math 1 M5 Lesson 13: Calculating Interest Math 1 M5 Lesson 16: Modeling Populations Math 1 M5 Lesson 18: Analyzing Exponential Growth Math 1 M5 Lesson 20: World Population Prediction Math 1 M5 Lesson 21: A Closer Look at Populations Math 1 M5 Lesson 23: Modeling an Invasive Species Population Math 1 M6 Lesson 2: Using Residual Plots to Select Models for Data Math 1 M6 Lesson 3: Analyzing Paint Splatters Math 1 M6 Lesson 11: A Vanishing Sea
A1.F.2.2 Recognize the parent functions $f(x) = x$ and $f(x) = \|x\|$. Predict the effects of vertical and horizontal transformations $f(x + c)$ and $f(x) + c$, algebraically and graphically.	Math 1 M3 Topic D: Transformations of Functions Math 1 M5 Lesson 9: Using Transformations to Graph Exponential Functions (Bases Greater Than 1) Math 1 M5 Lesson 10: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1) Math 1 M5 Lesson 12: Writing Equations for Exponential Functions from Tables or Graphs

Functions

A1.F.3 Represent functions in multiple ways and use the representation to interpret real-world and mathematical problems.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.F.3.1 Identify and generate equivalent representations of linear functions, graphs, tables, and real-world situations.	Math 1 M2 Lesson 1: Solution Sets of Linear Equations in Two Variables Math 1 M2 Lesson 2: Graphing Linear Equations in Two Variables Math 1 M2 Lesson 3: Creating Linear Equations in Two Variables
A1.F.3.2 Use function notation; evaluate a function, including nonlinear, at a given point in its domain algebraically and graphically. Interpret the results in terms of the original context.	Math 1 M3 Lesson 1: The Definition of a Function Math 1 M3 Lesson 2: Interpreting and Using Function Notation Math 1 M3 Lesson 3: Representing, Naming, and Evaluating Functions Math 1 M3 Lesson 7: Representations of Functions Math 1 M5 Lesson 1: Exploring Patterns Math 1 M5 Lesson 2: The Recursive Challenge Math 1 M5 Lesson 3: Recursive Formulas for Sequences Math 1 M5 Lesson 4: Explicit Formulas for Sequences Math 1 M5 Lesson 8: Graphing Exponential Functions
A1.F.3.3 Add, subtract, and multiply functions using function notation.	Math 1 M6 Lesson 8: The Deal

Data & Probability

A1.D.1 Display, describe, and compare data. For linear relationships, make predictions, and assess the reliability of those predictions.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A1.D.1.1 Display, describe, and compare data sets using summary statistics (central tendency and spread (range)). Utilize technology (e.g., spreadsheets, calculators) to display data and calculate summary statistics.	Math 1 M1 Topic D: Univariate Data Math 1 M6 Lesson 1: Using Data to Edit Digital Photography
A1.D.1.2 Collect data and analyze scatter plots for patterns, linearity, and outliers.	Math 1 M2 Lesson 22: Relationships Between Quantitative Variables Math 1 M2 Lesson 28: Analyzing Bivariate Quantitative Data
A1.D.1.3 Make predictions based upon the linear regression, and use the correlation coefficient to assess the reliability of those predictions using graphing technology.	Math 1 M2 Lesson 24: Modeling Relationships with a Line Math 1 M2 Lesson 27: Interpreting Correlation Math 1 M2 Lesson 28: Analyzing Bivariate Quantitative Data

Geometry: Two-Dimensional Shapes

G.2D.1 Discover, evaluate, and analyze the relationships between lines, angles, and polygons to solve real-world and mathematical problems; express proofs in a form that clearly justifies the reasoning (e.g., two-column proofs, paragraph proofs, flowcharts).

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
G.2D.1.6 Use coordinate geometry and algebraic reasoning to represent and analyze line segments and polygons, including determining lengths, midpoints, and slopes of line segments.	Math 1 M2 Lesson 21: Using Coordinates to Determine Perimeters and Areas of Figures Math 1 M6 Lesson 11: A Vanishing Sea
G.2D.1.9 Construct logical arguments to prove triangle congruence (SSS, SAS, ASA, AAS and HL).	Math 1 M4 Lesson 18: Side–Angle–Side Math 1 M4 Lesson 19: Angle–Angle–Angle and Side–Side–Side Math 1 M4 Lesson 20: Angle–Side–Angle Math 1 M4 Lesson 21: Side–Side–Angle and Hypotenuse–Leg *Supplemental material is necessary to address AAS.*
G.2D.1.11 Use numeric, graphic, and algebraic representations of transformations in two dimensions (e.g., reflections, translations, dilations, rotations about the origin by multiples of $90°$) to solve problems involving figures on a coordinate plane and identify types of symmetry.	Math 1 M4 Lesson 1: Geometric Transformations

Algebraic Reasoning & Algebra

A2.A.1 Represent and solve mathematical and real-world problems using nonlinear equations, systems of linear equations, and systems of linear inequalities; interpret the solutions in the original context.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A2.A.1.2 Use mathematical models to represent exponential relationships, such as compound interest, depreciation, and population growth. Solve these equations algebraically or graphically (including graphing calculator or other appropriate technology).	Math 1 M5 Lesson 7: Exponential Functions Math 1 M5 Lesson 11: Solving Equations Containing Exponential Expressions Math 1 M5 Lesson 12: Writing Equations for Exponential Functions from Tables or Graphs Math 1 M5 Lesson 13: Calculating Interest Math 1 M5 Lesson 14: Exponential Growth Math 1 M5 Lesson 15: Exponential Decay Math 1 M5 Topic D: Comparing Linear and Exponential Models Math 1 M6 Lesson 3: Analyzing Paint Splatters Math 1 M6 Lesson 8: The Deal Math 1 M6 Lesson 9: Solar System Models
A2.A.1.9 Solve systems of linear inequalities in two variables, with a maximum of three inequalities; graph and interpret the solutions on a coordinate plane. Graphing calculators or other appropriate technology may be used.	Math 1 M2 Lesson 13: Solution Sets of Linear Inequalities in Two Variables Math 1 M2 Lesson 14: Graphing Linear Inequalities in Two Variables Math 1 M2 Lesson 16: Solution Sets of Systems of Linear Inequalities Math 1 M2 Lesson 17: Graphing Solution Sets of Systems of Linear Inequalities Math 1 M2 Lesson 18: Applications of Systems of Linear Inequalities Math 1 M6 Lesson 10: Designing a Fundraiser *Supplemental material is necessary to address solving systems with three linear inequalities in two variables.*

Algebraic Reasoning & Algebra

A2.A.3 Represent and solve mathematical and real-world problems involving arithmetic and geometric sequences and series.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A2.A.3.1 Recognize that arithmetic sequences are linear using equations, tables, graphs, and verbal descriptions. Using the pattern, find the next term.	Math 1 M5 Lesson 20: World Population Prediction Math 1 M5 Lesson 21: A Closer Look at Populations
A2.A.3.2 Recognize that geometric sequences are exponential using equations, tables, graphs, and verbal descriptions. Given the formula $f(x) = a(r)^x$, find the next term and define the meaning of a and r within the context of the problem.	Math 1 M5 Lesson 20: World Population Prediction Math 1 M5 Lesson 21: A Closer Look at Populations

Functions

A2.F.1 Understand functions as descriptions of covariation (how related quantities vary together).

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A2.F.1.1 Use algebraic, interval, and set notations to specify the domain and range of various types of functions, and evaluate a function at a given point in its domain.	Math 1 M3 Lesson 2: Interpreting and Using Function Notation Math 1 M3 Lesson 3: Representing, Naming, and Evaluating Functions Math 1 M3 Lesson 7: Representations of Functions Math 1 M5 Lesson 1: Exploring Patterns Math 1 M5 Lesson 2: The Recursive Challenge Math 1 M5 Lesson 3: Recursive Formulas for Sequences Math 1 M5 Lesson 4: Explicit Formulas for Sequences
A2.F.1.4 Graph exponential and logarithmic functions. Identify the domain, range, asymptotes, and x- and y-intercepts using various methods and tools that may include calculators or other appropriate technology. Recognize exponential decay and growth graphically and algebraically.	Math 1 M5 Lesson 8: Graphing Exponential Functions Math 1 M5 Lesson 9: Using Transformations to Graph Exponential Functions (Bases Greater Than 1) Math 1 M5 Lesson 10: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1) *Supplemental material is necessary to address logarithmic functions for this standard.*

Data & Probability

A2.D.1 Display, describe, and compare data. For linear and nonlinear relationships, make predictions and assess the reliability of those predictions.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A2.D.1.2 Collect data and use scatter plots to analyze patterns and describe linear, exponential, or quadratic relationships between two variables.	Math 1 M2 Lesson 23: Using Lines to Model Bivariate Quantitative Data Math 1 M6 Lesson 2: Using Residual Plots to Select Models for Data Math 1 M6 Lesson 3: Analyzing Paint Splatters Math 1 M6 Lesson 11: A Vanishing Sea *Supplemental material is necessary to address quadratic models for this standard.*
A2.D.1.3 Make predictions based upon the regression equation (linear, exponential, or quadratic), and use the correlation coefficient to assess the reliability of those predictions using graphing technology.	Math 1 M2 Lesson 27: Interpreting Correlation Math 1 M2 Lesson 28: Analyzing Bivariate Quantitative Data *Supplemental material is necessary to address quadratic models for this standard.*

Data & Probability

A2.D.2 Analyze statistical thinking to draw inferences, make predictions, and justify conclusions.

Oklahoma Academic Standards for Mathematics	Aligned Components of *Eureka Math²*
A2.D.2.3 Differentiate between correlation and causation when describing the relationship between two variables.	Math 1 M2 Lesson 27: Interpreting Correlation Math 1 M2 Lesson 28: Analyzing Bivariate Quantitative Data