Mathematics I | Nebraska's College and Career Ready 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.

Nebraska Mathematical Processes	Aligned Components of *Eureka Math²*
MP.1 Make sense of problems and persevere in solving them.	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
MP.2 Reason quantitatively and abstractly and consider the reasoning of others.	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
MP.3 Create and use representations to organize, record, and communicate mathematical ideas.	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
MP.4 Analyze mathematical relationships to connect mathematical ideas.	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.
MP.5 Explain and justify mathematical ideas using precise mathematical language in written or oral communication.	Lessons in every module engage students in mathematical processes. These are indicated in margin notes included with every lesson.

Number: Students will solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas.

HS.N.3 Interpretation and Sense Making: Students will reason abstractly and quantitatively using units to solve problems and interpret results in context.

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.N.3.c Use units to assess the validity of an answer in the context of a problem.	Math 1 M1 Lesson 1: A Powerful Trio Math 1 M3 Lesson 14: Comparing Models for Situations Math 1 M6 Lesson 9: Solar System Models Math 1 M6 Lesson 10: Designing a Fundraiser Math 1 M6 Lesson 11: A Vanishing Sea

Algebra: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

HS.A.1 Algebraic Relationships: Students will demonstrate and represent relationships with functions.

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.A.1.b Analyze a relation to determine if it is a function given mapping diagrams, function notation (e.g., $f(x) = x^2$), a table, or a graph.	Math 1 M3 Topic A: Functions and Their Graphs

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.A.1.e Define, interpret, and analyze linear, quadratic, absolute value, and exponential functions using the points of interest of the functions and graphing technology.	Math 1 M3 Lesson 5: The Graph of the Equation $y = f(x)$ Math 1 M3 Lesson 6: Using Pseudocode to Compare Graphs of Functions and Graphs of Equations Math 1 M3 Lesson 7: Representations of Functions 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 absolute value and quadratic functions for this standard.*
HS.A.1.f Identify, analyze, and apply transformations of existing functions (including translation and dilation).	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 *Supplemental material is necessary to address dilations for this standard.*
HS.A.1.h Describe arithmetic sequences using tables of values and functions in explicit and recursive forms.	Math 1 M5 Lesson 5: Arithmetic and Geometric Sequences Math 1 M5 Lesson 6: Representations of Arithmetic and Geometric Sequences Math 1 M6 Lesson 8: The Deal
HS.A.1.i Describe geometric sequences using tables of values and functions in explicit and recursive forms.	Math 1 M5 Lesson 5: Arithmetic and Geometric Sequences Math 1 M5 Lesson 6: Representations of Arithmetic and Geometric Sequences Math 1 M6 Lesson 8: The Deal

Algebra: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

HS.A.2 Algebraic Processes: Students will apply the operational properties when evaluating rational expressions and solving linear and quadratic equations, and inequalities.

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.A.2.a Analyze and explain the properties used in solving equations, inequalities, systems of linear equations, systems of linear inequalities, and literal equations.	Math 1 M1 Lesson 3: The Commutative, Associative, and Distributive Properties 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
HS.A.2.c Analyze equations and inequalities to determine and apply efficient methods to solve and use appropriate technology as needed.	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 Math 1 M2 Topic B: Systems of Linear Equations in Two Variables
HS.A.2.d Calculate the slope (rate of change) of a line given coordinate points, a graph, or a table of values.	Math 1 M5 Lesson 17: Average Rate of Change Math 1 M5 Lesson 18: Analyzing Exponential Growth Math 1 M5 Lesson 19: Comparing Growth of Functions Math 1 M5 Lesson 23: Modeling an Invasive Species Population

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.A.2.f Given a line, write the equation of a line that is parallel or perpendicular to it.	Math 1 M2 Lesson 6: Proving the Parallel Criterion Math 1 M2 Lesson 7: Equations of Parallel and Perpendicular Lines Math 1 M2 Lesson 20: Proving Geometric Theorems Algebraically Math 1 M4 Lesson 5: Proving the Perpendicular Criterion

Geometry: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

HS.G.1 Attributes: Students will identify and describe geometric attributes, apply properties and theorems, and create two-dimensional shapes.

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.G.1.a Demonstrate that two figures are similar or congruent by using a sequence of rigid motions and dilations that map a figure onto the other in problems both with and without coordinates.	Math 1 M4 Lesson 14: Transformations of the Coordinate Plane Math 1 M4 Lesson 16: Congruent Figures *Supplemental material is necessary to address similar figures and dilations for this standard.*
HS.G.1.b Describe symmetries of a figure in terms of rigid motions that map a figure onto itself and make inferences about symmetric figures (e.g., unknown side lengths or angle measures) in problems both with and without coordinates.	Math 1 M4 Lesson 12: Reflective Symmetry and Rotational Symmetry

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.G.1.c Explain how the criteria for triangle congruence and similarity (ASA, SAS, AAS, and SSS congruence; AA similarity criterion) follow from the definition of congruence and similarity in terms of corresponding parts.	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 congruence and the AA similarity criterion for this standard.*

Data: Students will solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas.

HS.D.2 Analyze Data and Interpret Results: Students will represent and analyze the data and interpret the results.

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.D.2.a Identify appropriate ways to summarize and then represent the distribution of univariate data and bivariate data through the construction of histograms, dot plots, stem plots, box plots, cumulative relative frequency graphs, time plots, circle graphs, stacked bar graphs, and mosaic bar graphs by hand or with technology.	Math 1 M1 Lesson 17: Distributions and Their Shapes Math 1 M1 Lesson 18: Describing the Center of a Distribution Math 1 M1 Lesson 19: Using Center to Compare Data Distributions Math 1 M2 Lesson 22: Relationships Between Quantitative Variables Math 1 M2 Lesson 28: Analyzing Bivariate Quantitative Data Math 1 M6 Lesson 1: Using Data to Edit Digital Photography Math 1 M6 Topic B: Modeling with Categorical Data *Supplemental material is necessary to address stem plots, time plots, circle graphs, stacked bar graphs, and mosaic bar graphs for this standard.*

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.D.2.b Describe the shape, identify any outliers, and determine the spread of a data set.	Math 1 M1 Topic D: Univariate Data
HS.D.2.c Select and determine the appropriate measure of center based on the shape of a distribution and/or the presence of outliers.	Math 1 M1 Topic D: Univariate Data Math 1 M6 Lesson 1: Using Data to Edit Digital Photography
HS.D.2.e Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data and recognize possible associations and trends in the data.	Math 1 M6 Topic B: Modeling with Categorical Data
HS.D.2.f Represent data on two quantitative variables on a scatter plot and describe how the variables are related.	Math 1 M2 Lesson 22: Relationships Between Quantitative Variables Math 1 M2 Lesson 28: Analyzing Bivariate Quantitative Data
HS.D.2.g Use technology to develop regression models for linear and non-linear data to predict unobserved outcomes. Interpret slope and y-intercept in the context of the problem.	Math 1 M2 Lesson 23: Using Lines to Model Bivariate Quantitative Data Math 1 M2 Lesson 24: Modeling Relationships with a Line Math 1 M2 Lesson 28: Analyzing 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

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
HS.D.2.h Measure the strength of association using correlation coefficients for regression curves and interpret their meanings for the model.	Math 1 M2 Lesson 27: Interpreting Correlation Math 1 M2 Lesson 28: Analyzing Bivariate Quantitative Data
HS.D.2.i Use residuals and residual plots to judge the quality of a regression model.	Math 1 M2 Lesson 25: Calculating and Analyzing Residuals Math 1 M2 Lesson 26: Analyzing Residuals Math 1 M6 Lesson 2: Using Residual Plots to Select Models for Data Math 1 M6 Lesson 3: Analyzing Paint Splatters
HS.D.2.j Recognize and explain when arguments based on data confuse correlation with causation.	Math 1 M2 Lesson 27: Interpreting Correlation Math 1 M2 Lesson 28: Analyzing Bivariate Quantitative Data

Algebra: Students will solve problems and reason with algebra using multiple representations, make connections within math and across disciplines, and communicate their ideas.

AT.A.1 Algebraic Relationships: Students will demonstrate and represent relationships with functions.

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
AT.A.1.c Given a function, list the sequence of algebraic transformations that changes a parent function to the given function.	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

Geometry: Students will solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas.

AT.G.3 Coordinate Geometry and Transformations: Students will demonstrate and represent location, orientation, and relationships on the coordinate plane.

Nebraska's College and Career Ready Standards for Mathematics	Aligned Components of *Eureka Math²*
AT.G.3.c Find the images and preimages of transformations of a point, shape, or relation on the coordinate plane, where transformations include the following compositions: reflections about lines of any rational slope passing through the origins, dilations about the origin by any positive scale factor, and translations.	Math 1 M4 Lesson 1: Geometric Transformations *Supplemental material is necessary to address dilations for this standard.*