ABOUT EUREKA MATH

ALIGNED

DATA

FULL SUITE OF RESOURCES

Created by the nonprofit Great Minds, Eureka Math helps teachers deliver unparalleled math instruction that provides students with a deep understanding and fluency in math. Crafted by teachers and math scholars, the curriculum carefully sequences the mathematical progressions to maximize coherence from Prekindergarten through Precalculus-a principle tested and proven to be essential in students' mastery of math.

Teachers and students using Eureka Math find the trademark "Aha!" moments in Eureka Math to be a source of joy and inspiration, lesson after lesson, year after year.

Eureka Math is the only curriculum found by EdReports.org to align fully with the Common Core State Standards for Mathematics for all grades, Kindergarten through Grade 8. Great Minds offers detailed analyses which demonstrate how each grade of Eureka Math aligns with specific state standards. Access these free alignment studies at greatminds.org/state-studies.

Schools and districts nationwide are experiencing student growth and impressive test scores after using Eureka Math. See their stories and data at greatminds.org/data.

As a nonprofit, Great Minds offers the Eureka Math curriculum as PDF downloads for free, noncommercial use. Access the free PDFs at greatminds.org/math/curriculum.

The teacher-writers who created the curriculum have also developed essential resources, available only from Great Minds, including the following:

- Printed material in English and Spanish
- Digital resources
- Professional development
- Classroom tools and manipulatives
- Teacher support materials
- Parent resources


## Colorado Academic Standards in Mathematics Correlation to Eureka Math ${ }^{\text {™ }}$

## GRADE 6 MATHEMATICS

The majority of the Grade 6 Colorado Academic Standards in Mathematics are fully covered by the Grade 6 Eureka Math curriculum. The primary area where the Grade 6 Colorado Academic Standards in Mathematics and Eureka Math do not align is in the standard of Number Sense, Properties, and Operations. Grade Level Expectations from this standard will require the use of supplemental materials. A detailed analysis of alignment is provided in the table below. With strategic placement of supplemental materials, Eureka Math can ensure students are successful in achieving the proficiencies of the Colorado Academic Standards in Mathematics while still benefiting from the coherence and rigor of Eureka Math.

## INDICATORS

$\square$ Green indicates that the Colorado standard is fully addressed in Eureka Math.Yellow indicates that the Colorado standard may not be completely addressed in Eureka Math.
$\square$ Red indicates that the Colorado standard is not addressed in Eureka Math.
$\square$ Blue indicates there is a discrepancy between the grade level at which this standard is addressed in the Colorado standards and in Eureka Math.

## Standards for Mathematical Practice

## 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. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

## Aligned Components of Eureka Math

Lessons in every module engage students in making sense of problems and persevering in solving them as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 1, which is specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates
G6 M2: Arithmetic Operations Including Division of Fractions
G6 M5: Area, Surface Area, and Volume Problems
G6 M6: Statistics

## Standards for Mathematical Practice

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 referentsand 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.

## Aligned Components of Eureka Math

Lessons in every module engage students in reasoning abstractly and quantitatively as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 2, which is specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates
G6 M2: Arithmetic Operations Including Division of Fractions
G6 M3: Rational Numbers
G6 M4: Expressions and Equations
G6 M6: Statistics

## Standards for Mathematical Practice

## 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 are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, 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 argumentexplain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

## Aligned Components of Eureka Math

Lessons in every module engage students in constructing viable arguments and critiquing the reasoning of others as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 3, which is specifically addressed in the following modules:

G6 M5: Area, Surface Area, and Volume Problems
G6 M6: Statistics

## Standards for Mathematical Practice

## 4: Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know 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 can 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.

## Aligned Components of Eureka Math

Lessons in every module engage students in modeling with mathematics as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 4, which is specifically addressed in the following modules:

G6 M3: Rational Numbers
G6 M5: Area, Surface Area, and Volume Problems
G6 M6: Statistics

## Standards for Mathematical Practice

## 5: Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. 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. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

## Aligned Components of Eureka Math

Lessons in every module engage students in using appropriate tools strategically as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 5, which is specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates

## Standards for Mathematical Practice

## 6: Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions 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 are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

## Aligned Components of Eureka Math

Lessons in every module engage students in attending to precision as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 6, which is specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates
G6 M2: Arithmetic Operations Including Division of Fractions
G6 M3: Rational Numbers
G6 M4: Expressions and Equations
G6 M5: Area, Surface Area, and Volume Problems
G6 M6: Statistics

## Standards for Mathematical Practice

## 7: Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see $7 \times 8$ equals the well remembered $7 \times 5+7 \times 3$, in preparation for learning about the distributive property. In the expression $x^{2}+9 x+14$, older students can see the 14 as $2 \times 7$ and the 9 as $2+7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5-3(x-y)^{2}$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers $x$ and $y$.

## Aligned Components of Eureka Math

Lessons in every module engage students in looking for and making use of structure as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 7, which is specifically addressed in the following modules:

G6 M1: Ratios and Unit Rates
G6 M2: Arithmetic Operations Including Division of Fractions
G6 M3: Rational Numbers
G6 M4: Expressions and Equations

## Standards for Mathematical Practice

## 8: Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through $(1,2)$ with slope 3 , middle school students might abstract the equation $(y-2) /(x-1)=3$. Noticing the regularity in the way terms cancel when expanding $(x-1)(x+1),(x-1)\left(x^{2}+x+1\right)$, and $(x-1)\left(x^{3}+x^{2}+x+1\right)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

## Aligned Components of Eureka Math

Lessons in every module engage students in looking for and expressing regularity in repeated reasoning as required by this standard. This practice standard is analogous to the CCSSM Standards for Mathematical Practice 8, which is specifically addressed in the following modules:

G6 M2: Arithmetic Operations Including Division of Fractions
G6 M4: Expressions and Equations

| Number <br> Sense, <br> Properties, and Operation | Prepared Graduates: Make both relative (multiplicative) and absolute (arithmetic) comparisons between quantities. Multiplicative thinking underlies proportional reasoning |  |
| :---: | :---: | :---: |
|  | Grade Level Expectation: Quantities can be expressed and compared using ratios and rates |  |
|  | 1.1.a <br> Apply the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. | G6 M1: Ratios and Unit Rates |
|  | 1.1.b <br> Apply the concept of a unit rate $a / b$ associated with a ratio $a: b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. | G6 M1 Topic C: Unit Rates |
|  | 1.1.c <br> Use ratio and rate reasoning to solve realworld and mathematical problems. |  |
|  | i. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. | G6 M1 Topic B: Collections of Equivalent Ratios |
|  | ii. Use tables to compare ratios. | G6 M1 Lesson 11: Comparing Ratios Using Ratio Tables |

Evidence Outcomes
Aligned Components of Eureka Math

|  | iii. Solve unit rate problems including those involving unit pricing and constant speed. | G6 M1 Lessons 21-22: Getting the Job Done-Speed, Work, and Measurement Units <br> G6 M1 Lesson 23: Problem-Solving Using Rates, Units Rates, and Conversions |
| :---: | :---: | :---: |
|  | iv. Find a percent of a quantity as a rate per 100. | G6 M1 Topic D: Percent |
|  | v. Solve problems involving finding the whole, given a part and the percent. | G6 M1 Topic D: Percent |
|  | vi. Use common fractions and percents to calculate parts of whole numbers in problem situations including comparisons of savings rates at different financial institutions. | G6 M1 Topic D: Percent <br> Note: Supplemental material is necessary to address savings rates at different financial institutions. |
|  | vii. Express the comparison of two whole number quantities using differences, part-to-part ratios, and part-to-whole ratios in real contexts, including investing and saving. | G6 M1: Ratios and Unit Rates <br> Note: Supplemental material is necessary to address investing and saving. |
|  | viii. Use ratio reasoning to convert measurement units. | G6 M1 Lessons 21-22: Getting the Job Done-Speed, Work, and Measurement Units <br> G6 M1 Lesson 23: Problem-Solving Using Rates, Units Rates, and Conversions |

Evidence Outcomes
Aligned Components of Eureka Math

| Prepared Graduates: Are fluent with basic numerical and symbolic facts and algorithms, and <br> are able to select and use appropriate (mental math, paper and pencil, and technology) methods <br> based on an understanding of their efficiency, precision, and transparency |  |
| :--- | :--- |
| Grade Level Expectation: Formulate, represent, and use algorithms with positive rational <br> numbers with flexibility, accuracy, and efficiency |  |
| 1.2.a <br> Fluently divide multi-digit numbers using the <br> standard algorithm. | G6 M2 Topic C: Dividing Whole Numbers and Decimals |
| 1.2.b <br> Fluently add, subtract, multiply, and divide <br> multi-digit decimals using the standard <br> algorithm for each operation. | G6 M2: Arithmetic Operations Including Division of Fractions |
| 1.2.c <br> Find the greatest common factor of two whole <br> numbers less than or equal to 100. | G6 M2 Topic D: Number Theory-Thinking Logically About <br> Multiplicative Arithmetic |
| 1.2.d <br> Find the least common multiple of two whole <br> numbers less than or equal to 12. | G6 M2 Topic D: Number Theory-Thinking Logically About <br> Multiplicative Arithmetic |
| 1.2.e <br> Use the distributive property to express a sum <br> of two whole numbers 1-100 with a common <br> factor as a multiple of a sum of two whole <br> numbers with no common factor. | G6 M2 Topic D: Number Theory-Thinking Logically About <br> Multiplicative Arithmetic |


| 1.2.f <br> Interpret and model quotients of fractions <br> through the creation of story contexts. | G6 M2 Topic A: Dividing Fractions by Fractions |
| :--- | :--- |
| 1.2.g <br> Compute quotients of fractions. | G6 M2 Topic A: Dividing Fractions by Fractions |
| 1.2.h <br> Solve word problems involving division of <br> fractions by fractions, e.g., by using visual <br> fraction models and equations to represent the <br> problem. <br> Prepared Graduates: Understand the structure and properties of our number system. At their <br> most basic level numbers are abstract symbols that represent real-world quantities <br> Grade Level Expectation: In the real number system, rational numbers have a unique location on <br> the number line and in space <br> 1.3.a <br> Explain why positive and negative numbers <br> are used together to describe quantities having <br> opposite directions or values. <br> i. Use positive and negative numbers <br> to represent quantities in real-world <br> contexts, explaining the meaning of o in <br> each situation.$\quad$G6 Mopic A: Dividing Fractions by Fractions |  |


| 1.3.b <br> Use number line diagrams and coordinate axes <br> to represent points on the line and in the plane <br> with negative number coordinates. |  |
| :--- | :--- |
| i.Describe a rational number as a point on <br> the number line. <br> ii. Use opposite signs of numbers to indicate <br> locations on opposite sides of o on the <br> number line. <br> iii. Identify that the opposite of the opposite <br> of a number is the number itself. <br> iv. Explain when two ordered pairs differ <br> only by signs, the locations of the points <br> are related by reflections across one or <br> both axes. <br> G6mbers on the Number Line | G6 M3 Lesson 4: The Opposite of a Number |
| v. Find and position integers and other Opposite of a Number's Opposite <br> rational numbers on a horizontal or <br> vertical number line diagram. | G6 M3: Rational Numbers |
| vi. Find and position pairs of integers and <br> other rational numbers on a coordinate <br> plane. Rational Numbers and the Coordinate Plane | G6 M3 Topic C: Rational Numbers and the Coordinate Plane |


| 1.3.c <br> Order and find absolute value of rational <br> numbers. |  |
| :---: | :--- |
| i. Interpret statements of inequality as <br> statements about the relative position of <br> two numbers on a number line diagram. | G6 M3 Topic B: Order and Absolute Value |
| ii. Write, interpret, and explain statements <br> of order for rational numbers in real- <br> world contexts. | G6 M3 Topic B: Order and Absolute Value |
| iii. Define the absolute value of a rational <br> number as its distance from o on the <br> number line and interpret absolute value <br> as magnitude for a positive or negative <br> quantity in a real-world situation. | G6 M3 Lesson 13: Statements of Order in the Real World |
| iv. Distinguish comparisons of absolute <br> value from statements about order. | G6 M3 Lesson 11: Absolute Value-Magnitude and Distance |
| G6 M3 Lesson 12: The Relationship Between Absolute Value |  |
| and Order |  |
| 1.3.d <br> Solve real-world and mathematical problems <br> by graphing points in all four quadrants <br> of the coordinate plane including the use <br> of coordinates and absolute value to find <br> distances between points with the same first <br> coordinate or the same second coordinate. | G6 M3 Lesson 13: Statements of Order in the Real World |

Evidence Outcomes
Aligned Components of Eureka Math

| Patterns, Functions, and Algebraic Structures | Prepared Graduates: Make claims about relationships among numbers, shapes, symbols, and data and defend those claims by relying on the properties that are the structure of mathematics |  |
| :---: | :---: | :---: |
|  | Grade Level Expectation: Algebraic expressions can be used to generalize properties of arithmetic |  |
|  | 2.1.a <br> Write and evaluate numerical expressions involving whole-number exponents. | G6 M4 Topic B: Special Notations of Operations <br> G6 M4 Lesson 16: Write Expressions in Which Letters Stand for Numbers |
|  | 2.1.b <br> Write, read, and evaluate expressions in which letters stand for numbers. |  |
|  | i. Write expressions that record operations with numbers and with letters standing for numbers. | G6 M4 Topic D: Expanding, Factoring, and Distributing Expressions <br> G6 M4 Topic E: Expressing Operations in Algebraic Form G6 M4 Topic F: Writing and Evaluating Expressions and Formulas |
|  | ii. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient) and describe one or more parts of an expression as a single entity. | G6 M4 Topic D: Expanding, Factoring, and Distributing Expressions <br> G6 M4 Topic E: Expressing Operations in Algebraic Form |
|  | iii. Evaluate expressions at specific values of their variables including expressions that arise from formulas used in real-world problems. | G6 M4 Topic B: Special Notations of Operations <br> G6 M4 Topic C: Replacing Letters and Numbers |


| iv. Perform arithmetic operations, <br> including those involving whole-number <br> exponents, in the conventional order <br> when there are no parentheses to specify <br> a particular order (Order of Operations). | G6 M4 Topic B: Special Notations of Operations |
| :--- | :--- |
| 2.1.c <br> Apply the properties of operations to generate <br> equivalent expressions. | G6 M4 Topic A: Relationships of the Operations <br> G6 M4 Topic D: Expanding, Factoring, and Distributing <br> Expressions |
| 2.1.d <br> Identify when two expressions are equivalent. | G6 M4 Topic C: Replacing Letters and Numbers <br> G6 M4 Topic D: Expanding, Factoring, and Distributing <br> Expressions |
| Prepared Graduates: Make claims about relationships among numbers, shapes, symbols, and data <br> and defend those claims by relying on the properties that are the structure of mathematics |  |
| Grade Level Expectation: Variables are used to represent unknown quantities within equations <br> and inequalities |  |
| 2.2.a <br> Describe solving an equation or inequality as a <br> process of answering a question: which values <br> from a specified set, if any, make the equation <br> or inequality true? | G6 M4 Topic H: Applications of Equations |
| 2.2.b <br> Use substitution to determine whether a given <br> number in a specified set makes an equation or <br> inequality true. | G6 M4 Topic H: Applications of Equations |


| 2.2.c <br> Use variables to represent numbers and write <br> expressions when solving a real-world or <br> mathematical problem. |  |
| :--- | :--- |
| i.Recognize that a variable can represent <br> an unknown number, or, depending on <br> the purpose at hand, any number in a <br> specified set. | G6 M4 Topic F: Writing and Evaluating Expressions and <br> Formulas |
| G6 M4 Topic G: Solving Equations |  |


|  | 2.2.9 <br> Represent and analyze quantitative relationships between dependent and independent variables. |  |
| :---: | :---: | :---: |
|  | i. Use variables to represent two quantities in a real-world problem that change in relationship to one another. | G6 M4 Lesson 31: Problems in Mathematical Terms <br> G6 M4 Lesson 32: Multi-Step Problems in the Real World |
|  | ii. Write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. | G6 M4 Lesson 31: Problems in Mathematical Terms <br> G6 M4 Lesson 32: Multi-Step Problems in the Real World |
|  | iii. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. | G6 M4 Lesson 31: Problems in Mathematical Terms <br> G6 M4 Lesson 32: Multi-Step Problems in the Real World |


| Data <br> Analysis, <br> Statistics, <br> and <br> Probability | Prepared Graduates: Solve problems and make decisions that depend on understanding, <br> explaining, and quantifying the variability in data |  |
| :--- | :--- | :--- |
|  | Grade Level Expectation: Visual displays and summary statistics of one-variable data condense <br> the information in data sets into usable knowledge |  |
|  | 3.1.a <br> Identify a statistical question as one that <br> anticipates variability in the data related to the <br> question and accounts for it in the answers. | G6 M6 Lesson 1: Posing Statistical Questions |
|  | 3.1.b <br> Demonstrate that a set of data collected to <br> answer a statistical question has a distribution <br> which can be described by its center, spread, <br> and overall shape. | G6 M6: Statistics |
|  | 3.1.c <br> Explain that a measure of center for a <br> numerical data set summarizes all of its values <br> with a single number, while a measure of <br> variation describes how its values vary with a <br> single number. | G6 M6: Statistics |
|  | 3.1.d <br> Summarize and describe distributions. | G6 M6: Statistics |
|  | i. Display numerical data in plots on <br> a number line, including dot plots, <br> histograms, and box plots. |  |


|  | ii. Summarize numerical data sets in relation to their context. |  |
| :---: | :---: | :---: |
|  | 1. Report the number of observations. | G6 M6: Statistics |
|  | 2. Describe the nature of the attribute under investigation, including how it was measured and its units of measurement. | G6 M6: Statistics |
|  | 3. Give quantitative measures of center (median and/or mean) and variability (interquartile range and/ or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. | G6 M6: Statistics |
|  | 4. Relate the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. | G6 M6: Statistics |


| Shape, <br> Dimension, and Geometric Relationships | Prepared Graduates: Make claims about relationships among numbers, shapes, symbols, and data and defend those claims by relying on the properties that are the structure of mathematics |  |
| :---: | :---: | :---: |
|  | Grade Level Expectation: Objects in space and their parts and attributes can be measured and analyzed |  |
|  | 4.1.a <br> Develop and apply formulas and procedures for area of plane figures. |  |
|  | i. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes. | G6 M5: Area, Surface Area, and Volume Problems |
|  | ii. Apply these techniques in the context of solving real-world and mathematical problems. | G6 M5: Area, Surface Area, and Volume Problems |
|  | 4.1.b <br> Develop and apply formulas and procedures for volume of regular prisms. |  |
|  | i. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths. | G6 M5 Topic C: Volume of Right Rectangular Prisms <br> G6 M5 Lesson 19: Surface Area and Volume in the Real World <br> G6 M5 Lesson 19a: Addendum Lesson for ModelingApplying Surface Area and Volume to Aquariums |


|  | ii. Show that volume is the same as multiplying the edge lengths of a rectangular prism. | G6 M5 Topic C: Volume of Right Rectangular Prisms <br> G6 M5 Lesson 19: Surface Area and Volume in the Real World <br> G6 M5 Lesson 19a: Addendum Lesson for ModelingApplying Surface Area and Volume to Aquariums |
| :---: | :---: | :---: |
|  | iii. Apply the formulas $V=l w h$ and $V=b h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving realworld and mathematical problems. | G6 M5 Topic C: Volume of Right Rectangular Prisms <br> G6 M5 Lesson 19: Surface Area and Volume in the Real World <br> G6 M5 Lesson 19a: Addendum Lesson for ModelingApplying Surface Area and Volume to Aquariums |
|  | 4.1.c <br> Draw polygons in the coordinate plan to solve real-world and mathematical problems. |  |
|  | i. Draw polygons in the coordinate plane given coordinates for the vertices. | G6 M5 Topic B: Polygons on the Coordinate Plane |
|  | ii. Use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. | G6 M5 Topic B: Polygons on the Coordinate Plane |

Evidence Outcomes
Aligned Components of Eureka Math

|  | 4.1.d <br> Develop and apply formulas and procedures <br> for the surface area. |  |
| :--- | :--- | :--- |
|  | i. Represent three-dimensional figures <br> using nets made up of rectangles and <br> triangles. | G6 M5 Lesson 15: Representing Three-Dimensional Figures <br> Using Nets <br> G6 M5 Lesson 16: Constructing Nets |
|  | ii. Use nets to find the surface area of <br> figures. | G6 M5 Lesson 16: Constructing Nets |
|  | iii. Apply techniques for finding surface area <br> in the context of solving real-world and <br> mathematical problems. | G6 M5 Topic D: Nets and Surface Area |

