

Curriculum Map: 6th Grade Math 2016-2017

***Fluency 6th Grade Standard

Major 6th Grade Standard

Module	Essential Questions	Vocabulary *by familiar terms and symbols	Skills (Standards) (please see below for more details)	Assessments	Resources (Beyond Eureka Math Curriculum)
Module 0- Introductory Skills: -Process standards -Group work -Math arguments 10 days	-How do we use math outside the classroom?	Precision, perseverance, abstract, quantitative, viable, critique, appropriate, strategically, structure	5.NBT.1- Place value including decimals 5.NBT.2- Powers of 10 5.NBT.3- Read, write, & compare decimals to thousandths 5.NBT.4- Round decimals ***6.NS.2 -Divide multi-digit numbers ***6.NS.3 Operations on decimals 5.NF.3 Interpret fractions as division of whole numbers using visual models 5.MD.2 Line plot of measurement up to the nearest $\frac{1}{8}$ 5.NF.4 Multiply fraction or whole number by fraction 5.NF.6. Solve problems involving multiplication of fractions and mixed numbers 5.NF.7. Divide unit fractions by whole numbers and whole numbers by unit fractions 5.OA.1 Use parentheses in numerical expressions, and evaluate expressions with these symbols (including order of operations)	Discussion Exit Tickets Class observations	
Module 1- Ratios and Unit Rates	a) representing and reasoning about ratios	Equivalent ratios, measurement of a quantity, percent, quantity, rate, ratio,	6.RP.1 Ratios 6.RP.2 Unit Rate 6.RP.3 (a, b, c, d) Solve real-world	Exit Tickets Problem Sets	

35 days	b) Collections of equivalent ratios c) unit rates d) percent	ratio relationship, type of quantity, unit of measurement, unit rate, value of a ratio *convert, coordinate plane, equation, tape diagram	ratio problems	Mid Module Assessment End of Module Assessment	
Module 2- Arithmetic Operations Including Division of Fractions 25 days	a) Dividing fractions by fractions b) Multi-digit decimal operations c) Dividing whole numbers and decimals d) Number theory- thinking logically about arithmetic	Greatest Common Factor, Least Common Multiple, Multiplicative Inverses *Algorithm, Composite Number, Distributive Property, Dividend, Divisor, Estimate, Factors, Multiples, Prime Number, Reciprocal	6.NS.1 Quotients of fractions 6.NS.2 Fluently divide multi-digit numbers 6.NS.3 Fluently add, subtract, multiply, and divide decimals 6.NS.4 GCF, LCM, & Distributive property with expressions	Exit Tickets Problem Sets Mid Module Assessment End of Module Assessment	
Module 3- Rational Numbers 25 days	a) Understanding positive and negative numbers on a number line b) Order and absolute value c) Rational numbers and the coordinate plane	Absolute Value, Integer, Magnitude, Negative Number, Opposite, Positive Number, Quadrant, Rational Number *Coordinate Pair, Coordinate plane, fraction, line of symmetry, ordered pair, origin, quadrant, symmetry, whole numbers, x-axis, x-coordinate, y-coordinate	6.NS.5 Positive & Negative numbers in real world contexts 6.NS.6 (a, b, c) Rational numbers on number line and coordinate plane 6.NS.7 (a, b, c, d) Ordering and absolute value 6.NS.8 Solving real-world problems by graphing in the coordinate plane	Exit Tickets Problem Sets Mid Module Assessment End of Module Assessment	
Module 4- Expression s and	a) Relationships of the operations	Equation, equivalent expressions, exponential notation for whole number	6.EE.1- Numerical expressions with exponents 6.EE.2 (a, b, c) -Variable	Exit Tickets Problem Sets	

<p>Equations 45 days</p>	<p>b) Special notations of operations c) Replacing letters and numbers d) Expanding, factoring, and distributing expressions e) Expressions in Algebraic form f) Writing and evaluating expressions and formulas g) Solving equations h) Applications of equations</p>	<p>exponents, expression, linear expression, number sentence, numerical expression, solution of an equation, truth values of a number sentence, value of a numerical expression, variable</p> <p>*distribute, expand, factor, number sentence, product, properties of operations (distributive, commutative, associative), quotient, sum, term, true or false number sentence, variable or unknown number</p>	<p>expressions 6.EE.3 - Generate equivalent expressions 6.EE.4 - Identify equivalent expressions 6.EE.5 - True equations and inequalities 6.EE.6 - Write expression with variables when solving real-world problems 6.EE.7 - Solve real-world problems 6.EE.8 - Write and understand inequalities 6.EE.9 -Independent and dependent variables</p>	<p>Mid Module Assessment</p> <p>End of Module Assessment</p>	
<p>Module 5- Area, Surface Area, and Volume Problems 25 days</p>	<p>a) Area of triangles, quadrilaterals, and polygons b) Polygons on the coordinate plane c) Volume of right rectangular prisms d) Nets and surface area</p>	<p>Altitude and base of a triangle, cube, hexagon, line perpendicular to a plane, net, parallel planes, pentagon, right rectangular prism, surface of a prism, triangular region</p> <p>*angle, area, length of a segment, parallel, parallelogram, perimeter, perpendicular, quadrilateral, rectangle, segment, square, trapezoid, triangle, volume</p>	<p>6.G.1- Area of polygons 6.G.2 - Volume of prisms by packing and using formula 6.G.3 Draw polygons in the coordinate plane 6.G.4 Nets of 3-D figures and surface area</p>	<p>Exit Tickets</p> <p>Problem Sets</p> <p>Mid Module Assessment</p> <p>End of Module Assessment</p>	
<p>Module 6- Statistics</p>	<p>a) Understanding</p>	<p>Absolute deviation, box plot, dot plot, frequency,</p>	<p>6.SP.1 Statistical Questions 6.SP.2 Distributions have center,</p>	<p>Exit Tickets</p>	

25 days	distributions b) Summarizing distribution that is approximately symmetric using the mean and mean absolute deviation c) Summarizing distribution that is skewed using the median and interquartile range d) Summarizing and describing distributions	frequency table, histogram, interquartile range, Mean, mean absolute deviation, median, relative frequency, statistical question, variability *line plot or dot plot	spread and overall shape 6.SP.3 Measures of center and variability 6.SP.4 Display data 6.SP.5 (a, b, c, d) Summarize data	Problem Sets Mid Module Assessment End of Module Assessment	
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- Mathematics | Standards for Mathematical Practice**
1. Make sense of problems and persevere in solving them.
 2. Reason abstractly and quantitatively.
 3. Construct viable arguments and critique the reasoning of others.
 4. Model with mathematics.
 5. Use appropriate tools strategically.
 6. Attend to precision.
 7. Look for and make use of structure.
 8. Look for and express regularity in repeated reasoning

- *In Grade 6, instructional time should focus on four critical areas:**
- 1) Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems;
 - 2) Completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers;
 - 3) Writing, interpreting, and using expressions and equations;
 - 4) Developing understanding of statistical thinking