

6th Grade Math

1st Nine Weeks

Intro to Rational Numbers (15 days)

- Order a set of rational numbers (fractions/decimals)
- Generate equivalent forms of fractions, decimals and percents
- Recognize that division is equivalent to fraction notation $a/b = a \div b$
- Classify whole numbers, integers, and rational numbers using visuals
- Identify a number, its opposite and its absolute value
- Locate, compare and order integers/rational numbers on a number line
- Represent ratios and percents with models, fractions and decimals
- Represent benchmark fractions using 10 by 10, strip diagrams, number lines and numbers
- Use equivalent fractions, decimals and percents to show equal parts of the same whole

Operations with Integers (19 days)

- Add, subtract, multiply and divide integers fluently
- Represent integer operations with concrete models and standard algorithms

2nd Nine Weeks

Fraction operations (17 days)

- Multiply and divide positive fractions fluently
- Recognize that dividing by a number and multiplying by reciprocal are identical operations.
- Determine whether a quantity decreases or increases when multiplied by fraction
- Compare features and costs of checking account, debit card
- Distinguish between credit and debit cards

Decimal operations (15 days)

- Multiply and divide positive rational numbers fluently
- Graph points in all 4 quadrants
- Use order of operations and prime factorization to generate equivalent expressions

Ratios ,Rates, Proportions (15 days)

- Solve prediction and comparison using ratios and rates.
- Solve problems where you find the whole given a part and percent.
- Ratios vs Rates
- Describe information in credit report
- Explain various methods to pay for college
- Solve problems where you find the part given the whole and percent.
- Use ratios to define two quantities describing the same attribute
- Use rates to compare by division two quantities having different attributes.
- Use scale factors, tables, graphs and proportions to represent math and real world problems.

3rd Nine Weeks

Equivalent expressions (11 days)

- Distinguish between expressions and equations verbally, numerically, and algebraically.
- Determine if two expressions are equivalent using models.

Equations and inequalities (11 days)

- Model and solve one-variable one-step equations
- Write one-variable, one-step equations and inequalities to represent constraints or conditions
- Represent solutions of equations and inequalities on number lines
- Write a real-world problem given an equation or inequality
- Determine if a value makes an equation or inequality true

Multiple Representations (9 days)

- Represent a situation using verbal description, table, graph and equation in form $y = kx$ or $y = x + b$
- Identify independent and dependent quantities
- Write an equation from a table with the notion of independent and dependent quantities.
- Compare two rules verbally, numerically, graphically and symbolically
- Identify the difference between an additive and multiplicative relationship

4th Nine Weeks

Geometry and Measurement (18 days)

- Conversions within a measurement system
- Model area formulas by decomposing and rearranging
- Area of rectangles, parallelograms, trapezoids, triangles, Volume of rectangular prisms
- Triangles and their properties

Data Analysis (14 days)

- Measures of Central Tendency including mean, median, mode and range.
- Measures of Spread- range and IQR
- Data collection-dot plot, box plot
- Data Collection-dot plot, box plot, stem and leaf plot, histogram, percent bar graph
- Compare shape, center and spread of data

STAAR BLITZ (13 days)

- Review targeted TEKS from assessed curriculum
- Utilize data from benchmark to identify weaknesses.
- Close gaps.

STAAR EXAM is May 14

Bridge to 7th grade (9 days)

- Classification Real Numbers
- Integer Operations
- Fraction, Decimal, Percent Conversions

6th Grade Math PAP

1 st Nine Weeks	2 nd Nine Weeks	3 rd Nine Weeks	4 th Nine Weeks
<u>Classify numbers and integer operations (16 days)</u> - Add, subtract, multiply and divide integers fluently - Represent integer operations with concrete models and standard algorithms - Classify whole numbers, integers, and rational numbers using visuals - Locate, compare and order integers/rational numbers on a number line - Balance a check register - Extend previous knowledge of sets and subsets to describe relationships between rational numbers <u>Fraction, Decimal, Percent (10 days)</u> - Generate equivalent forms of fraction, decimal and percent - Order a set of rational numbers - Represent ratios and percents with concrete models, fractions and decimals - Represent benchmark fractions and percents using visuals - Use equivalent fraction, decimal and percent to show equal parts of same whole - Compare and order integers and rational numbers on number line Red is 7th grade accelerated material.	<u>Operations with rational numbers (22 days)</u> - Multiply and divide positive rational numbers fluently - Recognize that dividing by a number and multiplying by reciprocal are identical operations. - Determine whether a quantity decreases or increases when multiplied by fraction - Compare features and costs of checking account, debit card - Distinguish between credit and debit cards - Solve problems using addition, subtraction, multiplication and division of rational numbers - Add, subtract, multiply and divide rational numbers fluently <u>Equivalent expressions, graphing in coordinate plane (9 days)</u> - Graph points in all 4 quadrants - Use order of operations and prime factorization to generate equivalent expressions - Determine if two expressions are equivalent using models. - Generate equivalent expressions using properties of operation including inverse, identity, commutative, associative <u>Ratios, Rates, Proportions (21 days)</u> - Solve prediction and comparison using ratios and rates. - Ratios vs Rates - Use ratios to define two quantities describing the same attribute - Use rates to compare by division two quantities having different attributes. - Use scale factors, tables, graphs and proportions to represent math and real world problems. - Calculate unit rates from rates in math and real-world problems - Solve problems involving ratio, rate and proportion, - Solve math problem involving similar shape and scale drawings	<u>Simplify expressions, Solve equations and inequalities (21 days)</u> - Distinguish between expressions and equations verbally, numerically, and algebraically - Generate equivalent expressions using distributive property - Model and solve one-variable one-step equations - Write one-variable, one-step equations and inequalities to represent constraints or conditions - Represent solutions of equations and inequalities on number lines - Write a real-world problem given an equation or inequality - Determine if a value makes an equation or inequality true - Model and solve one-variable two step equations and inequalities - Determine if the given value makes one-variable, two step equations and inequalities true - Represent solutions for one-variable two step equations and inequalities on number line - Write one variable two step equations and inequalities <u>Geometry and Measurement (21 days)</u> - Conversions within a measurement system - Model area formulas by decomposing and rearranging - Area of rectangles, parallelograms, trapezoids, triangles, Volume of rectangular prisms - Triangles and their properties - Convert between measurement systems - Write and solve equations involving geometry concepts - Circles including pi, circumference and area - Area of composite figures	<u>Multiple Representations (13 days)</u> - Represent a situation using verbal description, table, graph and equation in form $y = kx$ or $y = x+b$ - Identify independent and dependent quantities - Write an equation from a table with the notion of independent and dependent quantities. - Compare two rules verbally, numerically, graphically and symbolically - Identify the difference between an additive and multiplicative relationship - Determine the constant of proportionality - Represent linear relationships for $y = mx + b$ using tables, graphs, equations, words - Represent constant rates of change <u>Data Analysis (16 days)</u> - Measures of Central Tendency including mean, median, mode and range. - Measures of Spread- range and IQR - Data collection-dot plot, box plot - Data Collection-dot plot, box plot, stem and leaf plot, histogram, percent bar graph - Compare shape, center and spread of data - Use data to make inferences - Compare two populations - Solve problems using bar graphs, dot plots, box plots <u>STAAR BLITZ (12 days)</u> - Review targeted TEKS from assessed curriculum - Utilize data from benchmark to identify weaknesses. - Close gaps. STAAR EXAM is May 13