

**Math Grade 6
Scope and Sequence 2024-2025**

Mathematical Process Standards: The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

- 6.1A Apply mathematics to problems arising in everyday life, society, and the workplace
- 6.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution
- 6.1C Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems
- 6.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate
- 6.1E Create and use representations to organize, record, and communicate mathematical ideas
- 6.1F Analyze mathematical relationships to connect and communicate mathematical ideas
- 6.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

Grading Period 1

Unit 1: Integer Operations

Estimated Date Range: Aug. 8-Sept. 6

Estimated Time Frame: 21 days

Note: Includes 2 days for Re-engagement and Assessment

Concepts within the Unit	TEKS
Establishing a Positive Mathematics Community Suggested Days: 2	<u>Process Standards:</u> 6.1A Apply mathematics to problems arising in everyday life, society, and the workplace 6.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution 6.1C Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems 6.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate 6.1E Create and use representations to organize, record, and communicate mathematical ideas 6.1F Analyze mathematical relationships to connect and communicate mathematical ideas 6.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

<p>Concept #1: Integers and Absolute Value Suggested Days: 4</p>	<p><u>Integrated Standards:</u> 6.2B identify a number, its opposite, and its absolute value 6.2C locate, compare, and order integers and rational numbers using a number line 6.2D Order a set of rational numbers arising from mathematical and real-world contexts.</p>
<p>Concept #2: Add and Subtract Integers Suggested Days: 5</p>	<p><u>Priority Standards:</u> 6.3D Add, subtract, multiply, and divide integers fluently</p> <p><u>Important Standards</u> 6.7A generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization</p> <p><u>Integrated Standards:</u> 6.3C represent integer operations with concrete models and connect the actions with the models to standard algorithms</p>
<p>Concept #3: All Operations of Integers Suggested Days: 8</p>	<p><u>Priority Standards</u> 6.3D Add, subtract, multiply, and divide integers fluently</p> <p><u>Important Standards</u> 6.7A generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization</p> <p><u>Integrated Standards</u> 6.2C locate, compare, and order integers and rational numbers using a number line 6.2E extend previous representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$ 6.3C represent integer operations with concrete models and connect the actions with the models to standard algorithms</p>

Unit 2: Rational Number Operations

Estimated Date Range: Sept. 9 – Oct. 9

Estimated Time Frame: 21 days

Note: Includes 2 days for re-engagement and assessment

Concepts within the Unit	TEKS
<p>Concept #1: Understanding Rational Numbers Sequences Suggested Days: 4</p>	<p><u>Integrated Standards</u> 6.2A classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers 6.2B identify a number, its opposite, and its absolute value 6.2C locate, compare, and order integers and rational numbers using a number line 6.2D order a set of rational numbers arising from mathematical and real-world contexts.</p>
<p>Concept #2: Multiplying Positive Rational Numbers Suggested Days: 7</p>	<p><u>Priority Standards</u> 6.3E multiply and divide positive rational numbers fluently</p> <p><u>Important Standards</u> 6.7A generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization</p> <p><u>Integrated Standards</u> 6.3B determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one</p>
<p>Concept #3: Dividing Positive Rational Numbers Suggested Days: 8</p>	<p><u>Priority Standards</u> 6.3E multiply and divide positive rational numbers fluently</p> <p><u>Important Standards</u> 6.7A generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization</p> <p><u>Integrated Standards</u> 6.3A recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values 6.2E extend representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$</p>

Grading Period 2

Unit 3: Ratios and Rates

Estimated Date Range: Oct. 16 - Nov. 8

Estimated Time Frame: 17 days

Note: Includes 3 days for re-engagement and assessment

Concepts within the Unit	TEKS
Unit 3: Ratios and Rates Estimated Date Range: Oct. 16 - Nov. 8 Estimated Time Frame: 17 days Note: Includes 3 days for re-engagement and assessment	
Concept #1: Representing Ratios Suggested Days: 4	<u>Priority Standards</u> 6.4E represent ratios and percents with concrete models, fractions, and decimals <u>Integrated Standards</u> 6.4C give examples of ratios as multiplicative comparisons of two quantities describing the same attribute
Concept #2: Understanding Rates Suggested Days: 5	<u>Integrated Standards</u> 6.4D give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients 6.4H convert units within a measurement system, including the use of proportions and unit rates.
Concept #3: Applying Rates and Ratios to Solve Problems Suggested Days: 5	<u>Priority Standards</u> 6.4B apply qualitative and quantitative reasoning to solve prediction and comparison of real world problems involving ratios and rates <u>Integrated Standards</u> 6.5A represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions
Unit 4: Percentages Estimated Date Range: Nov. 12 – Dec. 6 Estimated Time Frame: 14 days Note: Includes 2 days for re-engagement and assessment Includes 1 day DLA 1 testing (Units 1, 2, & 3) DLA 1 Window: Nov. 8-22	
Concepts within the Unit	TEKS

<p>Concept #1: Equivalent Forms of Fractions, Decimals, and Percent Suggested Days: 6</p>	<p><u>Priority Standards</u> 6.4G Generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money</p> <p><u>Important Standards:</u> 6.4E Represent ratios and percents with concrete models, fractions, and decimals</p> <p><u>Integrated Standards</u> 6.2E extend previous representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$. 6.4F represent benchmark fractions and percents such as 1%, 10%, 25%, $33 \frac{1}{3}\%$, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers. 6.5C Use equivalent fractions, decimals, and percents to show equal parts of the same whole</p>
<p>Concept #2: Percent Application Suggested Days: 5</p>	<p><u>Integrated Standards</u> 6.5B Solve real-world problems to find the whole given the part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models.</p>

Unit 5: Multiple Representations (Continued in Grading Period 3)

Estimated Date Range: Dec. 9- 20 and Jan. 9 – Jan. 28

Estimated Time Frame: 23 days

Note: Includes 4 days for re-engagement and assessment

Concepts within the Unit	TEKS
<p>Concept #1: Graphing on the Coordinate Plane Suggested Days: 5</p>	<p>Priority Standards 6.11A Graph points in all four quadrants using ordered pairs of rational numbers.</p> <p><u>Integrated Standards</u> 6.6A Identify independent and dependent quantities from tables and graphs</p>
<p>Concept #2: Additive vs. Multiplicative Suggested Days: 6</p>	<p><u>Important Standards</u> 6.4B Apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates</p> <p><u>Integrated Standards</u> 6.4A Compare two rules verbally, numerically, graphically, and symbolically in the form $y=ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships 6.5A Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions 6.6A Identify independent and dependent quantities from tables and graphs</p>
<p>Concept #3: Writing Equations and Translating Between Views Suggested Days: 8</p>	<p>Priority Standards 6.6C Represent a given situation using verbal descriptions, table, graphs, and equations in the form $y=kx$ or $y=x+b$</p> <p><u>Important Standards</u> 6.4B Apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates</p> <p><u>Integrated Standards</u> 6.6B Write an equation that represent the relationship between independent and dependent quantities from a table</p>

Grading Period 3

Unit 5: Multiple Representations (Continued)

See Grading Period 2 for details

Unit 6: Equations and Inequalities

Estimated Date Range: Jan. 29 – Feb 27

Estimated Time Frame: 20 days

Note: Includes 3 days for re-engagement and assessment

Includes 2 days TELPAS testing

Concepts within the Unit	TEKS
<p>Concept #1: Generating Equivalent Expressions Suggested Days: 4</p>	<p>Priority Standards 6.7D Generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties</p> <p><u>Important Standards</u> 6.7A generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization</p> <p><u>Integrated Standards</u> 6.7C Determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations</p>
<p>Concept #2: Representing Equations and Inequalities Suggested Days: 5</p>	<p><u>Important Standards</u> 6.10A Model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts</p> <p><u>Integrated Standards</u> 6.7B Distinguish between expressions and equations verbally, numerically, and algebraically; 6.9A write one-variable, one-step equations and inequalities to represent constraints or conditions within problems 6.9C write corresponding real-world problems given one-variable, one-step equations or inequalities</p>
<p>Concept #3: Solving Equations and Inequalities Suggested Days: 6</p>	<p>Priority Standards 6.10A Model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts</p>

	<p><u>Integrated Standards</u> 6.9A write one-variable, one-step equations and inequalities to represent constraints or conditions within problems 6.9B represent solutions for one-variable, one-step equations and inequalities on number lines 6.10B Determine if the given value(s) make(s) one-variable, one-step equations or inequalities true</p>
<p>Unit 7: Geometric Application of Equations Estimated Date Range: Mar. 3 – Mar. 28 Estimated Time Frame: 15 days Note: Includes 2 days for re-engagement and assessment Includes 2 days STAAR Interim testing Testing Window: Feb. 24 – Mar. 7</p>	
Concepts within the Unit	TEKS
<p>Concept #1: Properties of Triangles Suggested Days: 2</p>	<p><u>Important Standards</u> 6.10A model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts</p> <p><u>Integrated Standards</u> 6.8A extend previous knowledge of triangles and their properties to include the sum of angles in a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle</p>
<p>Concept #2: 2D Measurement Suggested Days: 6</p>	<p><u>Priority Standards</u> 6.8D determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.</p> <p><u>Important Standards</u> 6.10A model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts.</p> <p><u>Integrated Standards</u> 6.8B model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes. 6.8C write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.</p>

<p>Concept #3: 3D Measurement Suggested Days: 3</p>	<p><u>Priority Standards</u> 6.8D determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.</p> <p><u>Important Standards</u> 6.10A model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts.</p> <p><u>Integrated Standards</u> 6.8C write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.</p>
<p>Grading Period 4</p>	
<p>Unit 7 Geometric Application of Equations (Continued) See Grading Period 3 for details</p>	
<p>Unit 8: Data and Statistics Estimated Date Range: April 1 – May 9 Estimated Time Frame: 27 days Note: Includes 8 days for re-engagement and assessment Includes 4 days for state testing</p>	
<p>Concepts within the Unit</p>	<p>TEKS</p>
<p>Concept #1: Analyzing and Interpreting Categorical Data Suggested Days: 7</p>	<p><u>Priority Standards</u> 6.12D Summarize categorical data with numerical and graphical summaries, including the mode, the percent of values in each category (relative frequency table), and the percent bar graph, and use these summaries to describe the data distribution.</p> <p><u>Integrated Standards</u> 6.13B Distinguish between situations that yield data with and without variability.</p>
<p>Concept #2: Representing, Analyzing and Interpreting Numerical Data Suggested Days: 8</p>	<p><u>Priority Standards</u> 6.12C Summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution</p> <p><u>Integrated Standards</u> 6.12A Represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots.</p>

	<p>6.12B Use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution.</p> <p>6.13A Interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots.</p> <p>6.13B Distinguish between situations that yield data with and without variability.</p>
<p>Unit 9: Financial Literacy Estimated Date Range: May 12 – May 29 Estimated Time Frame: 13 days Note: Includes 5 days for re-engagement and assessment</p>	
Concepts within the Unit	TEKS
<p>Concept #1: Credit Cards vs Debit Cards and Checking Accounts Suggested Days: 3</p>	<p><u>Integrated Standards</u> 6.14A compare the features and costs of a checking account and a debit card offered by different local financial institutions 6.14B distinguish between debit cards and credit cards 6.14C balance a check register that includes deposits, withdrawals, and transfers</p>
<p>Concept #2: Credit Reports Suggested Days: 2</p>	<p><u>Integrated Standards</u> 6.14D explain why it is important to establish a positive credit history 6.14E describe the information in a credit report and how long it is retained 6.14F describe the value of credit reports to borrowers and to lenders</p>
<p>Concept #3: Paying for College and Jobs and Income Suggested Days: 3</p>	<p><u>Integrated Standards</u> 6.14G explain various methods to pay for college, including through savings, grants, scholarships, student loans, and work study 6.14H compare the annual salary of several occupations requiring various levels of post-secondary education or vocational training and calculate the effects of the different annual salaries on lifetime income</p>