2022-2023 Scope and Sequence
Mathematics – 6th Grade

Cycle 1	29 Days Aug. 22-Sept. 30, 2022	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
		The Mathematical Process Standards are integrated throughout the course in all activities and lessons. Teachers should refer to these standards for instructional strategies and depth of rigor. Specific process standards have been highlighted for each unit, but these process standards should not be the only process standards associated with the daily lessons. **Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1D** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. Ⓟⓢ **MATH.6.1F** Analyze mathematical relationships to connect and communicate mathematical ideas. Ⓟⓢ **MATH.6.1G** Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.
Unit 1: Factors and Multiples Students write equivalent expressions using the distributive property, identify common factors, common multiples, least common multiples, and greatest common factors.	**3** class periods (90-min. each) or **6** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1F** Analyze mathematical relationships to connect and communicate mathematical ideas. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:

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Cycle 1	29 Days Aug. 22-Sept. 30, 2022	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
		Ⓡ **MATH.6.7A** Generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization. Ⓡ **MATH.6.7D Generate equivalent expressions using operations**, the inverse, identity, **commutative, associative, and distributive properties**.
Unit 2: Positive Rational numbers Students divide a whole number into fractional parts using fraction strips, benchmark fractions, multiply fractions using area models, divide fractions by fractions, and connect multiplication to division.	**4** class periods (90-min. each) or **8** class periods (45-min. each) *Teachers Report to Campuses Aug. 8* *Teacher Service Days Aug. 8-12, Aug. 16-19* *Teacher Prep Day (no students) Aug. 15* *Labor Day Sept. 5*	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1D** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. **Number and Operations.** The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to: Ⓡ **MATH.6.2D** Order a set of rational numbers arising from mathematical and real-world contexts. Ⓢ **MATH.6.2E** Extend representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$. **Number and Operations.** The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to: Ⓢ **MATH.6.3A** Recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values. Ⓢ **MATH.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. Ⓡ **MATH.6.3E** Multiply and divide positive rational numbers fluently. **Proportionality.** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to: Ⓢ **MATH.6.4F** Represent benchmark fractions and percents such as 1%, 10%, 25%, 33 1/3%, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers.

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Cycle 1	29 Days Aug. 22-Sept. 30, 2022	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
		Proportionality. The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to: Ⓢ **MATH.6.5C** Use equivalent fractions, decimals, and percents to show equal parts of the same whole.
Unit 3: Shapes and Solids Students construct triangles given sides, explore side-angle relationships, and investigate areas of parallelograms, triangles, and trapezoids. Students also calculate volume of prisms and solve real-world problems.	**4** class periods (90-min. each) or **8** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use geometry to represent relationships and solve problems. The student is expected to: Ⓢ **MATH.6.8A** Extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle and determining when three lengths form a triangle. Ⓢ **MATH.6.8B** Model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes. Ⓢ **MATH.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. Ⓡ **MATH.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.

2022-2023 Scope and Sequence
Mathematics – 6th Grade

Cycle 2	23 Days Oct. 3 - Nov. 4, 2022	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
Unit 4: Decimals Students investigate place values by using number lines to plot, compare, and order rational numbers. Students also add, subtract, multiply decimals, including dividing whole numbers by decimals and solving area and volume problems requiring decimal division.	**3** class periods (90-min. each) or **6** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Number and Operations.** The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to: Ⓢ **MATH.6.2C** Locate, compare, and order integers and rational numbers using a number line. Ⓡ **MATH.6.2D** Order a set of rational numbers arising from mathematical and real-world contexts. **Number and Operations.** The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to: than or less than one. Ⓡ **MATH.6.3E** Multiply and divide positive rational numbers fluently. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use geometry to represent relationships and solve problems. The student is expected to: Ⓡ **MATH.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.

2022-2023 Scope and Sequence
Mathematics – 6th Grade

Cycle 2	23 Days Oct. 3 - Nov. 4, 2022	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
Unit 5: Ratios Students differentiate between additive and multiplicative reasoning as they study ratios where they compare and represent ratios using formal strategies, including pictures, diagrams, tables, graphs, and number lines. (continues in cycle 3)	**8** class periods (90-min. each) or **16** class periods (45-min. each) *Teacher Service Day (no students) Oct. 4* *Fall Holiday Oct. 5*	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Proportionality.** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to: Ⓢ **MATH.6.4A** Compare two rules verbally, numerically, graphically, and symbolically in the form of $y = ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships. Ⓡ **MATH.6.4B** Apply qualitative and quantitative reasoning to solve prediction and comparison real-world problems involving ratios and rates. Ⓢ **MATH.6.4C** Give examples of ratios as multiplicative comparisons of two quantities describing the same attribute. Ⓢ **MATH.6.4D** Give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients. Ⓢ **MATH.6.4E** Represent ratios and percents with concrete models, fractions, and decimals. **Proportionality.** The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to: Ⓢ **MATH.6.5A** Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use multiple representations to describe algebraic relationships. The student is expected to: Ⓡ **MATH.6.6C** Represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$.

Cycle 3	28 Days Nov. 15-Dec. 21, 2022	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
Unit 5: Ratios Students differentiate between additive and multiplicative reasoning as they study ratios where they compare and represent ratios using formal strategies, including pictures, diagrams, tables, graphs, and number lines. (continued from cycle 2)	**8** class periods (90-min. each) or **16** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Proportionality.** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to: Ⓢ **MATH.6.4A** Compare two rules verbally, numerically, graphically, and symbolically in the form of $y = ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships. Ⓡ **MATH.6.4B** Apply qualitative and quantitative reasoning to solve prediction and comparison real-world problems involving ratios and rates. Ⓢ **MATH.6.4C** Give examples of ratios as multiplicative comparisons of two quantities describing the same attribute. Ⓢ **MATH.6.4D** Give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients. Ⓢ **MATH.6.4E** Represent ratios and percents with concrete models, fractions, and decimals. **Proportionality.** The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to: Ⓢ **MATH.6.5A** Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use multiple representations to describe algebraic relationships. The student is expected to: Ⓡ **MATH.6.6C** Represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$.

Cycle 3	28 Days Nov. 15-Dec. 21, 2022	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
Unit 6: Percents Students extend previous knowledge of percent equivalence to show equal parts of the same whole in mathematical and real-world contexts.	**4** class periods (90-min. each) or **8** class periods (45-min. each) *Thanksgiving Break* *Nov. 21-22* *Winter Break (students)* *Dec. 22 - Jan. 6* *Winter Break (teachers)* *Dec. 22 - Jan. 4*	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟⓢ **MATH.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. **Number and Operations.** The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to: Ⓡ **MATH.6.2D** Order a set of rational numbers arising from mathematical and real-world contexts. **Proportionality.** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to: Ⓢ **MATH.6.4E Represent** ratios and **percents with concrete models, fractions, and decimals.** Ⓢ **MATH.6.4F** Represent benchmark fractions and percents such as 1%, 10%, 25%, 33 1/3%, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers. Ⓡ **MATH.6.4G** Generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money. **Proportionality.** The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to: Ⓡ **MATH.6.5B** Solve real-world problems to determine the whole given a part and the percent, to determine the part given the whole and the percent, and to determine the percent given the part and the whole including the use of concrete and pictorial models. Ⓢ **MATH.6.5C** Use equivalent fractions, decimals, and percents to show equal parts of the same whole.
Unit 7: Unit Rates and Conversions Students develop an understanding of proportionality by representing	**4** class periods (90-min. each) or **8** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace.

Cycle 3	28 Days Nov. 15-Dec. 21, 2022	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
and solving ratios, rates, factors of change (scale factor) problems, and converting units within measurement systems.		Ⓟⓢ **MATH.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. **Proportionality.** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to: Ⓡ **MATH.6.4B** Apply qualitative and quantitative reasoning to solve prediction and comparison real-world problems involving ratios and rates. Ⓢ **MATH.6.4D** Give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients. Ⓡ **MATH.6.4H** Convert units within a measurement system, including the use of proportions and unit rates. **Proportionality.** The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to: Ⓢ **MATH.6.5A** Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions.

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Mathematics – 6th Grade

Cycle 4	33 Days Jan. 9 - Feb. 24, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
Unit 8: Signed Numbers and the Four Quadrants Students understand the relationships between rational numbers and their subsets through the use of visual representations such as number lines and Venn diagrams.	**5** class periods (90-min. each) or **10** class periods (45-min. each) *Winter Break (students)* *Dec. 22 - Jan. 6* *Winter Break (teachers)* *Dec. 22 - Jan. 4* *MLK Jr. Day* *Jan. 16* *Teacher Prep Day (no students)* *Jan. 5* *Teacher Service Day (no students)* *Jan. 6, Feb. 20*	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Number and Operations.** The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to: Ⓢ **MATH.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. Ⓢ **MATH.6.2B** Identify a number, its opposite, and its absolute value. Ⓢ **MATH.6.2C** Locate, compare, and order integers and rational numbers using a number line. Ⓡ **MATH.6.2D** Order a set of rational numbers arising from mathematical and real-world contexts. **Measurement and Data.** The student applies mathematical process standards to use coordinate geometry to identify locations on a plane. The student is expected to: Ⓡ **MATH.6.11A** Graph points in all four quadrants using ordered pairs of rational numbers.
Unit 9: Operating with Integers Students use models to solve real-world problems involving addition, subtraction, multiplication, and division of integers.	**5** class periods (90-min. each) or **10** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Number and Operations.** The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:

Cycle 4	33 Days Jan. 9 - Feb. 24, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
		Ⓢ **MATH.6.3C** Represent integer operations with concrete models and connect the actions with the models to standardized algorithms. Ⓡ **MATH.6.3D** Add, subtract, multiply, and divide integers fluently.
Unit 10: Expressions Students simplify and generate equivalent algebraic expressions using the order of operations and properties such as the distributive property of multiplication over addition. Equivalent expressions will include the use of whole number exponents as well as prime factorization. (continues in cycle 5)	**5** class periods (90-min. each) or **10** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1D** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. **Number and Operations.** The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to: Ⓡ **MATH.6.3D** Add, subtract, multiply, and divide integers fluently. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to: Ⓡ **MATH.6.7A** Generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization. Ⓢ **MATH.6.7B** Distinguish between expressions and equations verbally, numerically, and algebraically. Ⓢ **MATH.6.7C** Determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations. Ⓡ **MATH.6.7D Generate equivalent expressions using operations**, the inverse, identity, **commutative, associative, and distributive properties**.

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Cycle 5	28 Days Feb. 27 - Apr. 14, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
Unit 10: Expressions Students simplify and generate equivalent algebraic expressions using the order of operations and properties such as the distributive property of multiplication over addition. Equivalent expressions will include the use of whole number exponents as well as prime factorization. (continued from cycle 4)	**5** class periods (90-min. each) or **10** class periods (45-min. each) *Spring Break* *Mar. 13-17* *Chávez-Huerta Day* *Mar. 31* *Spring Holiday* *Apr. 7*	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1D** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. **Number and Operations.** The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to: Ⓡ **MATH.6.3D** Add, subtract, multiply, and divide integers fluently. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to: Ⓡ **MATH.6.7A** Generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization. Ⓢ **MATH.6.7B** Distinguish between expressions and equations verbally, numerically, and algebraically. Ⓢ **MATH.6.7C** Determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations. Ⓡ **MATH.6.7D Generate equivalent expressions using operations**, the inverse, identity, **commutative, associative, and distributive properties**.
Unit 11: Equations and Inequalities Students model and solve one-variable, one-step equations/inequalities to represent situations, including geometric concepts, and determine if a value makes an	**5** class periods (90-min. each) or **10** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Number and Operations.** The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:

Cycle 5	28 Days Feb. 27 - Apr. 14, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
equation true when substituted.		Ⓡ **MATH.6.3D** Add, subtract, multiply, and divide integers fluently. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to: Ⓡ **MATH.6.7D Generate equivalent expressions using operations**, the inverse, identity, **commutative, associative, and distributive properties**. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use geometry to represent relationships and solve problems. The student is expected to: Ⓢ **MATH.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. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use equations and inequalities to represent situations. The student is expected to: Ⓢ **MATH.6.9A** Write one-variable, one-step equations and inequalities to represent constraints or conditions within problems. Ⓢ **MATH.6.9B** Represent solutions for one-variable, one-step equations, and inequalities on number lines. Ⓢ **MATH.6.9C** Write corresponding real-world problems given one-variable, one-step equations or inequalities. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use equations and inequalities to solve problems. The student is expected to: Ⓡ **MATH.6.10A** Model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts. Ⓢ **MATH.6.10B** Determine if the given value(s) make(s) one- variable, one-step equations or inequalities true.
Unit 12: Graphing Quantitative relationship Students describe algebraic relationships using multiple	**5** class periods (90-min. each) or **10** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1D** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

Cycle 5	28 Days Feb. 27 - Apr. 14, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
representations such as verbal descriptions, tables, graphs, and equations in the form of $y = kx$ or $y = x + b$.		Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use multiple representations to describe algebraic relationships. The student is expected to: Ⓢ **MATH.6.6A** Identify independent and dependent quantities from tables and graphs. Ⓢ **MATH.6.6B** Write an equation that represents the relationship between independent and dependent quantities from a table. Ⓡ **MATH.6.6C** Represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$. **Measurement and Data.** The student applies mathematical process standards to use coordinate geometry to identify locations on a plane. The student is expected to: Ⓡ **MATH.6.11A** Graph points in all four quadrants using ordered pairs of rational numbers.

Cycle 6	31 Days Apr. 17 - May 31, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
Unit 13: Financial Literacy, Accounts, Credits, and Careers Students develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor, with the aid of calculation devices.	**3** class periods (90-min. each) or **6** class periods (45-min. each) *Memorial Day* *May 29* *Teacher Prep Day (no students)* *June 1*	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟⓢ **MATH.6.1F** Analyze mathematical relationships to connect and communicate mathematical ideas. **Personal Financial Literacy.** The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to: Ⓢ **MATH.6.14A** Compare the features and costs of a checking account and a debit card offered by different local financial institutions. Ⓢ **MATH.6.14B** Distinguish between debit cards and credit cards. Ⓢ **MATH.6.14C** Balance a check register that includes deposits, withdrawals, and transfers. Ⓢ **MATH.6.14D** Explain why it is important to establish a positive credit history. Ⓢ **MATH.6.14E** Describe the information in a credit report and how long it is retained. Ⓢ **MATH.6.14F** Describe the value of credit reports to borrowers and to lenders. Ⓢ **MATH.6.14G** Explain various methods to pay for college, including through savings, grants, scholarships, student loans, and work-study. Ⓢ **MATH.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.

2022-2023 Scope and Sequence
Mathematics – 6th Grade

Cycle 6	31 Days Apr. 17 - May 31, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
Unit 14: The Statistical Process Students use graphical representations to describe, represent, analyze, interpret and summarize numerical data and data distribution, including a description of the center, spread, and shape.	**3** class periods (90-min. each) or **6** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Measurement and Data.** The student applies mathematical process standards to use numerical or graphical representations to analyze problems. The student is expected to: Ⓢ **MATH.6.12A** Represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots. Ⓢ **MATH.6.12B** Use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution. Ⓡ **MATH.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. **Measurement and data.** The student applies mathematical process standards to use numerical or graphical representations to solve problems. The student is expected to: Ⓡ **MATH.6.13A** Interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots. Ⓢ **MATH.6.13B** Distinguish between situations that yield data with and without variability.
Unit 15: Numerical Summaries of Data Students use graphical representations to describe, represent, analyze, interpret, and summarize numerical data and data distribution, including	**3** class periods (90-min. each) or **6** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Measurement and Data.** The student applies mathematical process standards to use numerical or graphical representations to analyze problems. The student is expected to:

Cycle 6	31 Days Apr. 17 - May 31, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
measures of center and measures of spread. Students also analyze univariate data by looking at the measures of center, the measures of spread, and distribution summaries to describe what they indicate about the data.		Ⓢ **MATH.6.12A** Represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots. Ⓢ **MATH.6.12B** Use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution. Ⓡ **MATH.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. Ⓡ **MATH.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. **Measurement and data.** The student applies mathematical process standards to use numerical or graphical representations to solve problems. The student is expected to: Ⓡ **MATH.6.13A** Interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots.
Unit 16: End of Course Topic Students demonstrate their level of mastery of specific topics studied in grade 6 mathematics through successful completion of activities.	**3** class periods (90-min. each) or **6** class periods (45-min. each)	**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓟⓢ **MATH.6.1A** Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.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. Ⓟⓢ **MATH.6.1D** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. Ⓟⓢ **MATH.6.1E** Create and use representations to organize, record, and communicate mathematical ideas. **Number and Operations.** The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions. The student is expected to:

Cycle 6	31 Days Apr. 17 - May 31, 2023	*The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.*
Unit	**# Class Periods**	**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)** The **bold face** words in the TEKS/SEs indicate concepts addressed specifically in this unit; the unbolded concepts are addressed in other units of this course. **The student will:**
		Ⓡ **MATH.6.3E** Multiply and divide positive rational numbers fluently. **Proportionality.** The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to: Ⓡ **MATH.6.4B** Apply qualitative and quantitative reasoning to solve prediction and comparison real-world problems involving ratios and rates. **Proportionality.** The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to: Ⓢ **MATH.6.5A** Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions. Ⓡ **MATH.6.5B** Solve real-world problems to determine the whole given a part and the percent, to determine the part given the whole and the percent, and to determine the percent given the part and the whole including the use of concrete and pictorial models. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use equations and inequalities to represent situations. The student is expected to: Ⓢ **MATH.6.9A** Write one-variable, one-step equations and inequalities to represent constraints or conditions within problems. **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use equations and inequalities to solve problems. The student is expected to: Ⓡ **MATH.6.10A** Model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts.