2022-2023 Scope and Sequence

Mathematics – 6 ^{⁽ⁱ⁾ Grade Pre-AP/Honors}		
Cycle 1	29 Days Aug. 22-Sept. 30, 2	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/® MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace.
		 (*) MATH.6.1B/(*) MATH.7.1B 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/(*) MATH.7.1C 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/(*) MATH.7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. (*) MATH.6.1E/(*) MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas. (*) MATH.6.1F/(*) MATH.7.1F Analyze mathematical relationships to connect and communicate mathematical ideas. (*) MATH.6.1G/(*) MATH.7.1G 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	 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/ MATH.7.1C 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/® MATH.7.1F Analyze mathematical relationships to connect and communicate mathematical ideas.



- R State Readiness Standard
 Reg - Aligned to Upcoming State Readiness Standard (8) - State Supporting Standard
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2022-2023 Scope and Sequence

Mathematics – 6th Grade Pre-AP/Honors

Mathematics – 6 th Grade Pre-AP/Honors		
Cycle 1	29 Days Aug. 22-Sept. 30, 2	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:
multiples, and greatest common factors.		 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.6.7D 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)	Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: (*) MATH.6.1B/(*) MATH.7.1B 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/(*) MATH.7.1C 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. (*) MATH.6.2E Extend representations for division to include fraction notation such as <i>a/b</i> represents the same number as <i>a</i> + <i>b</i> where <i>b</i> ≠ 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.

GLOBAL GRADUATE ذ

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🕲 - State Process Standard

 R - State Readiness Standard
 Reg - Aligned to Upcoming State Readiness Standard (8) - State Supporting Standard

2022-2023 Scope and Sequence Mathematics – 6th Grade Pre-AP/Honors

		- 6" Grade Pre-AP/Honors
Cycle 1	29 Days Aug. 22-Sept. 30, 2	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 student will: (a) 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: (a) 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. Proportionality. The student applies mathematical process standards to solve problems involving proportional relationships. The student is expected to: (a) 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, including packing 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/[®] MATH.7.1C 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/[®] MATH.7.1E 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.6.8C 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.



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2022-2023 Scope and Sequence

Cycle 1	29 Days Aug. 22-Sept. 30, 2	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. CO22 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.6.8D 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. Expressions, Equations, and Relationships. The student applies mathematical process standards to solve geometric problems. MATH.7.9C Determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles.



2022-2023 Scope and Sequence

The recommended number of class periods is less than the number of days in the grading cycles		
Cycle 2	23 Days Oct. 3 - Nov. 4, 20	to accommodate differentiated instruction, extended learning time, and assessment days.
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 line 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.6.1D/@ MATH.7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. MATH.6.1F/@ MATH.7.1F Analyze mathematical relationships to connect 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.6.3E 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.6.3D 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. Expressions, Equations, and Relationships. The student applies mathematical process standards to solve geometry to represent relationships and solve problems. The student is expected to:

2022-2023 Scope and Sequence

	Mathematics -	- 6 th Grade Pre-AP/Honors
Cycle 2	23 Days	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.
Cycle Z	Oct. 3 - Nov. 4, 20	022 Complete instructional planning information and support are in the HISD Curriculum documents.
		Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)
Unit	# Class Periods	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:
	9 slass pariada	MATH.7.9D Solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shapes' net. Methematical Presses Standards, The student uses methematical presses.
Unit 5: Ratios Students	8 class periods (90-min. each)	Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is
differentiate	or	expected to:
between additive	16 class periods	MATH.6.1D/ MATH.7.1D Communicate mathematical ideas, reasoning,
and multiplicative reasoning as they	(45-min. each)	and their implications using multiple representations, including symbols,
study ratios where		diagrams, graphs, and language as appropriate.
they compare and represent ratios using formal		MATH.6.1E/ MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas.
strategies, including pictures, diagrams, tables, graphs, and		Proportionality. The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to:
number lines.		S MATH.6.4A Compare two rules verbally, numerically, graphically, and
(continues in cycle 3)		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.
		S MATH.6.4C Give examples of ratios as multiplicative comparisons of two
		quantities describing the same attribute.
		③ MATH.6.4D Give examples of rates as the comparison by division of two
		quantities having different attributes, including rates as quotients.
		S 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:
		SMATH.6.5A Represent mathematical and real-world problems involving
		ratios and rates using scale factors, tables, graphs, and proportions.



2022-2023 Scope and Sequence

Cycle 2	23 Days Oct. 3 - Nov. 4, 20	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. V22 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:
		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 $y = x + b$.



2022-2023 Scope and Sequence

		6" Grade Pre-AP/Honors
Cycle 3	28 Days Nov. 15-Dec. 21, 2	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. Ocomplete instructional planning information and support are in the HISD Curriculum documents.
Unit Unit 5: Ratios Students	# Class Periods 8 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: Mathematical Process Standards. The student uses mathematical processes
differentiate between additive and multiplicative reasoning as they study ratios where they compare and represent ratios	(90-min. each) or 16 class periods (45-min. each)	to acquire and demonstrate mathematical understanding. The student is expected to: (************************************
represent ratios using formal strategies, including pictures, diagrams, tables, graphs, and number lines. (continued from cycle 2)		 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.
		® MATH.6.6C Represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$.



2022-2023 Scope and Sequence

1	Mathematics – 6" Grade Pre-AP/Honors		
Cycle 3	28 Days Nov. 15-Dec. 21, 2	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)	 Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: MATH.6.1C/@MATH.7.1C 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/@MATH.7.1D 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. 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.6.4G 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.6.4B Solve real-world problems to determine the whole given a part and the pe	



2022-2023 Scope and Sequence

Mathematics – 6" Grade Pre-AP/Honors			
Cycle 3	28 Days	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.	
	Nov. 15-Dec. 21, 2		
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 7: Unit Rates and Conversions Students develop an understanding of proportionality by representing and solving ratios, rates, factors of change (scale factor) problems, and converting units within measurement systems.	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/@ MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace. MATH.6.1D/@ MATH.7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. 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. Proportionality. The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships. The student is expected to: MATH.7.4A Represent constant rates of change in mathematical and real-world problems involving ratio and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including <i>d = rt</i>. MATH.6.7.4B Calculate unit rates from rates in mathematical and real-world problems. MATH.6.7.4B Convert between measurement systems, including the use of proportions and the use of unit rates. 	



2022-2023 Scope and Sequence

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Cycle 4	33 Days Jan. 9 - Feb. 24, 2	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 using visual representations such as number lines and Venn diagrams.	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.6.1C/® MATH.7.1C 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/® MATH.7.1E 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.6.2D 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. Numbers 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.6.11A Graph points in all four quadrants using ordered pairs of rational numbers.



2022-2023 Scope and Sequence

	Mathematics – 6 ^m Grade Pre-AP/Honors			
Cycle 4	33 Days Jan. 9 - Feb. 24, 20	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.		
		Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The bold face words in the TEKS/SEs indicate concepts addressed specifically in this		
Unit	# Class Periods	unit; the unbolded concepts are addressed in other units of this course.		
		The student will:		
Unit 9: Operating with Integers and Rational Numbers Students use models to solve real-world problems involving addition, subtraction, and division of integers and rational numbers.	5 class periods (90-min. each) or 10 class periods (45-min. each)	 The student will: Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: MATH.6.1C/® MATH.7.1C 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/® MATH.7.1E 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: 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. Numbers 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.7.2A Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers. Numbers and Operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student applies mathematical process standards to add, subtract, multiply, and divide rational numbers. MATH.7.3B Add, subtract, multiply, and divide rational numbers fluently. MATH.7.3B Apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers. 		



2022-2023 Scope and Sequence

		Mathematics -	- 0	Grade Pre-AP/Honors
6	Cycle 4	33 Days		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
	Sycie 4	Jan. 9 - Feb. 24, 2	023	instructional planning information and support are in the HISD Curriculum documents.
	Unit	# Class Periods	unit	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) bold face words in the TEKS/SEs indicate concepts addressed specifically in this ; the unbolded concepts are addressed in other units of this course.
Exp Stu and equ nur alg exp the pro the pro the pro mu ado Equ exp inc who exp fac	it 10: pressions idents simplify d generate uivalent merical and ebraic pressions using order of erations and operties such as a distributive operty of litiplication over dition. uivalent pressions will lude the use of ole number ponents as well prime torization. entinues in cle 5)	5 class periods (90-min. each) or 10 class periods (45-min. each)	to a exp I ana solu the I ana solu I ana Solu Solu I ana Solu	 thematical Process Standards. The student uses mathematical processes acquire and demonstrate mathematical understanding. The student is sected to: WATH.6.1B/® MATH.7.1B Use a problem-solving model that incorporates alyzing given information, formulating a plan or strategy, determining a ution, justifying the solution, and evaluating the problem-solving process and reasonableness of the solution. MATH.6.1D/® MATH.7.1D Communicate mathematical ideas, reasoning, it their implications using multiple representations, including symbols, grams, graphs, and language as appropriate. mber and Operations. The student applies mathematical process and indras to represent addition, subtraction, multiplication, and division while ving problems and justifying solutions. The student is expected to: MATH.6.3D Add, subtract, multiply, and divide integers fluently. Doressions, Equations, and Relationships. The student applies thematical process standards to develop concepts of expressions and iations. The student is expected to: MATH.6.7A Generate equivalent numerical expressions using order of erations, including whole number exponents and prime factorization. MATH.6.7D Determine if two expressions are equivalent using concrete dels, pictorial models, and algebraic representations. MATH.6.7D Generate equivalent expressions using operations, the erse, identity, commutative, associative, and distributive properties. MATH.6.7D Generations. The student applies mathematical process and equations. The student is expected to: MATH.6.7D Generate equivalent expressions using operations, the erse, identity, commutative, associative, and distributive properties. MATH.6.7D Generate equivalent expressions using operations, the erse, identity, commutative, associative, and distributive properties.



2022-2023 Scope and Sequence

Cycle 4	33 Days Jan. 9 - Feb. 24, 2	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:
		 Expressions, Equations, and Relationships. The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to: MATH.7.10A Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems. Expressions, Equations, and Relationships. The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to: MATH.7.11A Model and solve one-variable, two-step equations and inequalities.



2022-2023 Scope and Sequence

Mathematics – 6th Grade Pre-AP/Honors

		- 6 th Grade Pre-AP/Hollors
Cycle 5	28 Days Feb. 27 - Apr. 14, 2	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 numerical and 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)	 Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: MATH.6.1B/@ MATH.7.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution. MATH.6.1D/@ MATH.7.1D 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.6.7D Generate equivalent expressions using operations, the inverse, identity, commutative, associative, and distributive properties. Numbers and Operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions.



2022-2023

2022-2023 Scope and Sequence

	Mathematics	- 6" Grade Pre-AP/Honors
Cycle 5	28 Days Feb. 27 - Apr. 14, 2	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:
		 Expressions, Equations, and Relationships. The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to: MATH.7.10A Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems. Expressions, Equations, and Relationships. The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to: MATH.7.11A Model and solve one-variable, two-step equations and inequalities.
Unit 11: Equations and Inequalities Students model and solve one- variable, one-step equations/inequaliti es to represent situations, including geometric concepts, and determine if a value makes an equation true when substituted.	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/® MATH.7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. MATH.6.1E/® MATH.7.1E 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: 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 expressions using operations, the inverse, identity, commutative, associative, and distributive properties. 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:



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		6" Grade Pre-AP/Honors
Cycle 5 28 Days		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
	Feb. 27 - Apr. 14, 2	2023 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:
		SMATH.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:
		S MATH.6.9A Write one-variable, one-step equations and inequalities to
		represent constraints or conditions within problems.
		S MATH.6.9B Represent solutions for one-variable, one-step equations, and
		inequalities on number lines.
		SMATH.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.
		SMATH.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 representations such as verbal descriptions, tables, graphs, and equations in the form of $y = kx$ or y = x + b.	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/(*) MATH.7.1B 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/(*) MATH.7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.



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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:
		Expressions, Equations, and Relationships. The student applies mathematical process standards to use multiple representations to describe algebraic relationships. The student is expected to:
		SMATH.6.6A Identify independent and dependent quantities from tables and graphs.
		SMATH.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.



2022-2023 Scope and Sequence

Mathematics – 6" Grade Pre-AP/Honors			
Cycle 6	31 Days Apr. 17 - May 31, 2	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) <i>Memorial Day</i> <i>May 29</i> <i>Teacher</i> <i>Prep Day</i> (<i>no students</i>) <i>June 1</i>	 Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: MATH.6.1A/® MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace. MATH.6.1F/® MATH.7.1F 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.6.14E 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.6.14H 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. 	



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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:	
		 (S) MATH.7.13B Identify the components of a personal budget, including income, planned savings for college, retirement, and emergencies, taxes, and fixed and variable expenses, and calculate what percentage each category comprises of the total budget. (S) MATH.7.13C Create and organize a financial assets and liabilities record and construct a net worth statement. (S) MATH.7.13D Use a family budget estimator to determine the minimum household budget and average hourly wage needed for a family to meet its basic needs in the student's city or another large city nearby. 	
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/ MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace. MATH.6.1E/@ MATH.7.1E 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, stemand-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. 	



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Mathematics – 6th Grade Pre-AP/Honors

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Oycle U	Apr. 17 - May 31, 2	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.6.13A Interpret numeric data summarized in dot plots, stem-and-lea
		plots, histograms, and box plots.
		SMATH.6.13B Distinguish between situations that yield data with and without variability.
Unit 15: Numerical Summaries of	3 class periods (90-min. each) or	Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
Data Students use	6 class periods	MATH.6.1A/ M MATH.7.1A Apply mathematics to problems arising in
graphical	(45-min. each)	everyday life, society, and the workplace.
representations to describe, represent, analyze,		MATH.6.1E/ MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas.
interpret, and summarize numerical data and		Measurement and Data. The student applies mathematical process standard to use numerical or graphical representations to analyze problems. The studen is expected to:
data distribution, including		S MATH.6.12A Represent numeric data graphically, including dot plots, stem
measures of center		and-leaf plots, histograms, and box plots.
and measures of		S MATH.6.12B Use the graphical representation of numeric data to describe
spread. Students also analyze		the center, spread, and shape of the data distribution.
univariate data by		MATH.6.12C Summarize numeric data with numerical summaries, includin
looking at the measures of center, the measures of		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.
spread, and		MATH.6.12D Summarize categorical data with numerical and graphical
distribution summaries to describe what they indicate about the data.		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 standard to use numerical or graphical representations to solve problems. The student i expected to:
		® MATH.6.13A Interpret numeric data summarized in dot plots, stem-and-lease
		plots, histograms, and box plots.

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Mathematics – 6 th Grade Pre-AP/Honors			
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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 16: End of	3 class periods	 Measurement and Data. The student applies mathematical process standards to use statistical representations to analyze data. The student is expected to: MATH.7.12A Compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads. Mathematical Process Standards. The student uses mathematical processes 	
Course Topic Students demonstrate their level of understanding of specific topics studied in grade 6 mathematics through successful completion of activities.	(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/® MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace. MATH.6.1G/® MATH.7.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication. 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.6.3E 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.6.5B Solve real-world problems involving ratios and rates. 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. 	



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		 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.



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