

Cycle 1	27 Days Aug. 23 - Oct. 1, 2021	<i>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.</i>
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
		<p><i>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 to each unit, but these process standards should not be the only process standards associated with the daily lessons.</i></p> <p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ MATH.8.1A Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟ MATH.8.1B 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.8.1C 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.8.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. Ⓟ MATH.8.1E Create and use representations to organize, record, and communicate mathematical ideas. Ⓟ MATH.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas. Ⓟ MATH.8.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.
<p>Unit 1: College Planning with Financial Literacy Students apply financial literacy concepts to calculate simple and compound interest earnings, while making decisions on future plans, including attending a 2-year or 4-year college.</p>	<p>3 class periods (90-min. each) or 6 class periods (45-min. each)</p>	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ MATH.8.1A Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟ MATH.8.1B 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.8.1E Create and use representations to organize, record, and communicate mathematical ideas. <p>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:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.12A Solve real-world problems comparing how interest rate and loan length affect the cost of credit.

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Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
		<p>Ⓢ MATH.8.12B Calculate the total cost of repaying a loan, including credit cards and easy access loans, under various rates of interest and over different periods using an online calculator.</p> <p>Ⓢ MATH.8.12C Explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time.</p> <p>Ⓡ MATH.8.12D Calculate and compare simple interest and compound interest earnings.</p> <p>Ⓢ MATH.8.12E Identify and explain the advantages and disadvantages of different payment methods.</p> <p>Ⓢ MATH.8.12F Analyze situations to determine if they represent a financially responsible decision and identify the benefits of financial responsibility and the costs of financial irresponsibility</p> <p>Ⓢ MATH.8.12G Estimate the cost of a 2-year and 4-year college education including family contribution and devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college.</p>
<p>Unit 2: Real Numbers including Scientific Notation Students focus on the set of real numbers and its various subsets, including integers and rational numbers. Students convert between standard notation and scientific notation, as well as approximate the value of irrational numbers and locate those values on a number line.</p>	<p>2 class periods (90 min. each) or 4 class periods (45 min. each)</p>	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓢ MATH.8.1A Apply mathematics to problems arising in everyday life, society, and the workplace.</p> <p>Ⓢ MATH.8.1E Create and use representations to organize, record, and communicate mathematical ideas.</p> <p>Numbers and Operations. The student applies mathematical process standards to represent and use real numbers in a variety of forms. The student is expected to:</p> <p>Ⓢ MATH.8.2A Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers.</p> <p>Ⓢ MATH.8.2B Approximate the value of an irrational number, including π and square roots of numbers less than 225, and locate that rational number approximation on a number line.</p> <p>Ⓢ MATH.8.2C Convert between standard decimal notation and scientific notation.</p> <p>Ⓡ MATH.8.2D Order a set of real numbers arising from mathematical and real-world contexts.</p>

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	Aug. 23 - Oct. 1, 2021	
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
<p>Unit 3: Properties of Expressions, Equations, and Inequalities Students learn the properties of real numbers, including the distributive property, and use those properties to simplify expressions, equations, and inequalities.</p>	<p>2 class periods (90 min. each) or 4 class periods (45 min. each)</p>	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ MATH.8.1C 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.8.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication. <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to use one-variable equations or inequalities in problem situations. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.8A Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants. Ⓢ MATH.8.8B Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants. Ⓡ MATH.8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants.
<p>Unit 4: One-Variable Equations and Inequalities and their Applications Students model, write, and solve multi-step equations and inequalities in application situations using mathematical properties and operations.</p>	<p>4 class periods (90 min. each) or 8 class periods (45 min. each)</p>	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ MATH.8.1B 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.8.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to use one-variable equations or inequalities in problem situations. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.8A Write one-variable equations or inequalities with variables on both sides that represent problems using rational number coefficients and constants. Ⓢ MATH.8.8B Write a corresponding real-world problem when given a one-variable equation or inequality with variables on both sides of the equal sign using rational number coefficients and constants. Ⓡ MATH.8.8C Model and solve one-variable equations with variables on both sides of the equal sign that represent mathematical and real-world problems using rational number coefficients and constants.

Cycle 2	29 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 instructional planning information and support are in the HISD Curriculum documents.
	Oct. 5 - Nov. 12, 2021	
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 5: Angles, Triangles, and Transversal Relationships Students use informal arguments to connect mathematical relationships about angles, triangles, parallel lines, and transversals.	3 class periods (90-min. each) or 6 class periods (45-min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓟ MATH.8.1B 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.</p> <p>Ⓟ MATH.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas.</p> <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to use one-variable equations or inequalities in problem situations. The student is expected to:</p> <p>Ⓢ MATH.8.8D Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.</p>
Unit 6: Pythagorean Theorem Students use squares, square roots, and irrational numbers in models and diagrams to explain the Pythagorean theorem. They also use the Pythagorean theorem and its converse to solve problems, as well as calculate the distance between two coordinate points on the coordinate plane.	4 class periods (90 min. each) or 8 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓟ MATH.8.1B 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.</p> <p>Ⓟ MATH.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas.</p> <p>Numbers and Operations. The student applies mathematical process standards to represent and use real numbers in a variety of forms. The student is expected to:</p> <p>Ⓢ MATH.8.2B Approximate the value of an irrational number, including π and square roots of numbers less than 225, and locate that rational number approximation on a number line.</p> <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to develop mathematical relationships and make connections to geometric formulas. The student is expected to:</p> <p>Ⓢ MATH.8.6C Use models and diagrams to explain the Pythagorean theorem.</p> <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to use geometry to solve problems. The student is expected to:</p> <p>Ⓡ MATH.8.7C Use the Pythagorean theorem and its converse to solve problems.</p>

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	Oct. 5 - Nov. 12, 2021	
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
		<p>Ⓢ MATH.8.7D Determine the distance between two points on a coordinate plane using the Pythagorean theorem.</p>
<p>Unit 7: Surface Area Students make concrete connections to formulas for lateral and total surface area and apply those formulas to solve problems in mathematical and real-world situations.</p>	<p>4 class periods (90 min. each) or 8 class periods (45 min. each)</p>	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓢ MATH.8.1C 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.</p> <p>Ⓢ MATH.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas.</p> <p>Numbers and Operations. The student applies mathematical process standards to represent and use real numbers in a variety of forms. The student is expected to:</p> <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to use geometry to solve problems. The student is expected to:</p> <p>Ⓡ MATH.8.7B Use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders.</p>

Cycle 3	30 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 instructional planning information and support are in the HISD Curriculum documents.
	Nov. 15, 2021 - Jan. 14, 2022	
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 8: Volume Students solve problems involving volume in mathematical and real-world situations.	3 class periods (90 min. each) or 6 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ MATH.8.1B 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.8.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. <p>Numbers and Operations. The student applies mathematical process standards to represent and use real numbers in a variety of forms. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.2B Approximate the value of an irrational number, including π and square roots of numbers less than 225, and locate that rational number approximation on a number line. <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to develop mathematical relationships and make connections to geometric formulas. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.6A Describe the volume formula $V = Bh$ of a cylinder in terms of its base area and its height. Ⓢ MATH.8.6B Model the relationship between the volume of a cylinder and a cone having both congruent bases and heights and connect that relationship to the formulas. <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to use geometry to solve problems. The student is expected to:</p> <ul style="list-style-type: none"> Ⓡ MATH.8.7A Solve problems involving the volume of cylinders, cones, and spheres.

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	Nov. 15, 2021 - Jan. 14, 2022	
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 9: Properties of Transformations Students generalize the properties of orientation and congruence of translations, reflections, and rotations and differentiate between transformations that preserve congruence.	5 class periods (90 min. each) or 10 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ MATH.8.1C 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.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>Two-dimensional Shapes. The student applies mathematical process standards to develop transformational geometry concepts. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.10A Generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane. Ⓢ MATH.8.10B Differentiate between transformations that preserve congruence and those that do not. Ⓡ MATH.8.10C Explain the effect of translations, reflections over the x- or y-axis, and rotations limited to 90°, 180°, 270°, and 360° as applied to two-dimensional shapes on a coordinate plane using an algebraic representation.
Unit 10: Similarity and Scale Factor Students compare and contrast the attributes of similar shapes.	4 class periods (90 min. each) or 8 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓟ MATH.8.1C 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.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>Proportionality. The student applies mathematical process standards to use proportional relationships to describe dilations. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.3A Generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation. Ⓢ MATH.8.3B Compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane.

Cycle 4	27 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 instructional planning information and support are in the HISD Curriculum documents.
	Jan. 19 - Feb. 25, 2022	
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 11: Dilations Students compare and contrast the attributes of a figure and its image under a dilation. They also model and analyze the effect dilation has on the area and perimeter of two-dimensional figures.	3 class periods (90-min. each) or 6 class periods (45-min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.1C 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.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas. <p>Proportionality. The student applies mathematical process standards to use proportional relationships to describe dilations. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.3A Generalize that the ratio of corresponding sides of similar shapes are proportional, including a shape and its dilation. Ⓢ MATH.8.3B Compare and contrast the attributes of a shape and its dilation(s) on a coordinate plane. Ⓢ MATH.8.3C Use an algebraic representation to explain the effect of a given positive rational scale factor applied to two-dimensional figures on a coordinate plane with the origin as the center of dilation. <p>Two-dimensional Shapes. The student applies mathematical process standards to develop transformational geometry concepts. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.10A Generalize the properties of orientation and congruence of rotations, reflections, translations, and dilations of two-dimensional shapes on a coordinate plane. Ⓢ MATH.8.10D Model the effect on linear and area measurements of dilated two-dimensional shapes.
Unit 12: Functions Students identify functional relationships from multiple representations while distinguishing between proportional and non-proportional situations.	2 class periods (90 min. each) or 4 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.1B 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.8.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. <p>Proportionality. The student applies mathematical process standards to use proportional and non-proportional relationships to develop foundational concepts of functions. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.5G Identify functions using sets of ordered pairs, tables, mappings, and graphs.

Cycle 4	27 Days Jan. 19 - Feb. 25, 2022	<i>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.</i>
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
		<p>Ⓢ MATH.8.5H Identify examples of proportional and non-proportional functions that arise from mathematical and real-world problems.</p>
<p>Unit 13: Interpreting Proportional and Nonproportional Relationships Students use proportional and nonproportional relationships to recognize that the slope of a line is constant and use direct variation to write and solve real-world problems.</p>	<p>6 class periods (90 min. each) or 12 class periods (45 min. each)</p>	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓢ MATH.8.1B 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.</p> <p>Ⓢ MATH.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas.</p> <p>Proportionality. The student applies mathematical process standards to use proportional and non-proportional relationships to develop foundational concepts of functions. The student is expected to:</p> <p>Ⓢ MATH.8.4A Use similar right triangles to develop an understanding that slope, m, given as the rate comparing the change in y-values to the change in x-values, $(y_2 - y_1)/(x_2 - x_1)$, is the same for any two points (x_1, y_1) and (x_2, y_2) on the same line.</p> <p>Ⓢ MATH.8.4B Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship.</p> <p>Ⓢ MATH.8.4C Use data from a table or graph to determine the rate of change or slope and y-intercept in mathematical and real-world problems.</p> <p>Proportionality. The student applies mathematical process standards to use proportional and non-proportional relationships to develop foundational concepts of functions. The student is expected to:</p> <p>Ⓢ MATH.8.5A Represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$.</p> <p>Ⓢ MATH.8.5B Represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$, $b \neq 0$.</p> <p>Ⓢ MATH.8.5E Solve problems involving direct variation.</p> <p>Ⓢ MATH.8.5F Distinguish between proportional and non-proportional situations using tables, graphs, and equations in the form $y = kx$ or $y = mx + b$, where $b \neq 0$.</p> <p>Ⓢ MATH.8.5I Write an equation in the form $y = mx + b$ to model a linear relationship between two quantities using verbal, numerical, tabular, and graphical representations.</p>

Cycle 5	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 instructional planning information and support are in the HISD Curriculum documents.
	Feb. 28 - Apr. 22, 2022	
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
Unit 14: Solving Systems by Graphing Students use the intersections of graphed lines to determine the values of x and y that simultaneously satisfy the two linear equations.	1 class period (90 min. each) or 2 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓢ MATH.8.1B 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.</p> <p>Ⓢ MATH.8.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.</p> <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to use multiple representations to develop foundational concepts of simultaneous linear equations. The student is expected to:</p> <p>Ⓢ MATH.8.9A Identify and verify the values of x and y that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations.</p>
Unit 15: Scatterplots and Trend Lines Students construct and describe scatterplots, use trend lines to fit lines to data and analyze linear relationships to make predictions.	2 class periods (90 min. each) or 4 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓢ MATH.8.1A Apply mathematics to problems arising in everyday life, society, and the workplace.</p> <p>Ⓢ MATH.8.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.</p> <p>Proportionality. The student applies mathematical process standards to use proportional and non-proportional relationships to develop foundational concepts of functions. The student is expected to:</p> <p>Ⓢ MATH.8.5C Contrast bivariate sets of data that suggest a linear relationship with bivariate sets of data that do not suggest a linear relationship from a graphical representation.</p> <p>Ⓡ MATH.8.5D Use a trend line that approximates the linear relationship between bivariate sets of data to make predictions.</p> <p>Measurement and Data. The student applies mathematical process standards to use statistical procedures to describe data. The student is expected to:</p> <p>Ⓢ MATH.8.11A Construct a scatterplot and describe the observed data to address questions of association such as linear, non-linear, and no association between bivariate data.</p>

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Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:	
Unit 16: Data Students use bivariate sets of data to determine the mean absolute deviation and analyze linear relationships to make predictions.	2 class periods (90 min. each) or 4 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓢ MATH.8.1B 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.</p> <p>Ⓢ MATH.8.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.</p> <p>Measurement and Data. The student applies mathematical process standards to use statistical procedures to describe data. The student is expected to:</p> <p>Ⓢ MATH.8.11B Determine the mean absolute deviation and use this quantity as a measure of the average distance data are from the mean using a data set of no more than 10 data points.</p> <p>MATH.8.11C Simulate generating random samples of the same size from a population with known characteristics to develop the notion of a random sample being representative of the population from which it was selected.</p>	
Unit 17: Readiness and Supporting Standards Review Students use appropriate problem-solving strategies and skills to review relevant Readiness and Supporting Standards (based on individual student diagnostic data).	6.5 class periods (90 min. each) or 13 class periods (45 min. each)	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <p>Ⓢ MATH.8.1A Apply mathematics to problems arising in everyday life, society, and the workplace.</p> <p>Ⓢ MATH.8.1B 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.</p> <p>Ⓢ MATH.8.1C 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.</p> <p>Ⓢ MATH.8.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.</p> <p>Ⓢ MATH.8.1E Create and use representations to organize, record, and communicate mathematical ideas.</p> <p>Ⓢ MATH.8.1F Analyze mathematical relationships to connect and communicate mathematical ideas.</p> <p>Ⓢ MATH.8.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.</p>	

Cycle 6	31 Days Apr. 25 - June 7, 2022	<i>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.</i>
Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
<p>Unit 18: Bridge to Algebra 1 Students reinforce their understanding of proportional and non-proportional relationships involving slope, solve real-world problems and justify solutions.</p>	<p>12.5 class periods (90-min. each) or 25 class periods (45-min. each)</p>	<p>Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.1B 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.8.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. <p>Proportionality. The student applies mathematical process standards to explain proportional and non-proportional relationships involving slope. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.4A Use similar right triangles to develop an understanding that slope, m, given as the rate comparing the change in y-values to the change in x-values, $(y_2 - y_1)/(x_2 - x_1)$, is the same for any two points (x_1, y_1) and (x_2, y_2) on the same line. Ⓡ MATH.8.4B Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship. Ⓡ MATH.8.4C Use data from a table or graph to determine the rate of change or slope and y-intercept in mathematical and real-world problems. <p>Expressions, Equations, and Relationships. The student applies mathematical process standards to use multiple representations to develop foundational concepts of simultaneous linear equations. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ MATH.8.9A Identify and verify the values of x and y that simultaneously satisfy two linear equations in the form $y = mx + b$ from the intersections of the graphed equations. <p>Linear Functions, Equations, and Inequalities. The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. The student is expected to:</p> <ul style="list-style-type: none"> Ⓢ ALGI.2B Write linear equations in two variables in various forms, including $y = mx + b$, $Ax + By = C$, and $y - y_1 = m(x - x_1)$, given one point and the slope and given two points. Ⓡ ALGI.2C Write linear equations in two variables given a table of values, a graph, and a verbal description. Ⓢ ALGI.2E Write the equation of a line that contains a given point and is parallel to a given line. Ⓢ ALGI.2F Write the equation of a line that contains a given point and is perpendicular to a given line.

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Unit	# Class Periods	Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:
		<p>Ⓢ ALGI.3A Determine the slope of a line given a table of values, a graph, two points on the line, and an equation written in various forms including $y = mx + b$, $Ax + By = C$, and $y - y_1 = m(x - x_1)$.</p> <p>Ⓡ ALGI.3B Calculate the rate of change of a linear function represented tabularly, graphically, or algebraically in context of mathematical and real-world problems.</p> <p>Ⓡ ALGI.5C Solve systems of two linear equations with two variables for mathematical and real-world problems.</p>