Module 1: Patterns and Expressions					
Topic/Title	Message	Assignment/Call To Action	Content Directions.	Content URL	Alternative to IOS
Module 1: Patterns and Expressions	In this module, students operate on polynomial expressions including adding, subtracting, multiplying, and dividing them. Students also learn to factor algebra expressions beginning with the use of algebra tiles. **Module 1 Focus Standards:** CC.2.2.HS.D.1 - Interpret the structure of expressions to represent a quantity in terms of its context CC.2.2.HS.D.2 - Write expressions in equivalent forms to solve problems. CC.2.2.HS.D.3 - Extend the knowledge of arithmetic operations and apply to polynomials. **Module 1 Objectives:** 1 Add, subtract, and/or multiply polynomial expression. (nothing larger than a binomial multiplied by a trinomial.) 2 Factor algebraic expressions, including difference of squares and trinomials. 3 Simplify/reduce a rational algebraic expression. **Standards for Mathematical Practice** MP# 1. Make sense of problems and persevere in solving them. MP# 2. Reason abstractly and quantitatively. MP# 3. Construct viable arguments and critique the reasoning of others. MP# 4. Model with mathematics. MP# 5. Use appropriate tools strategically. MP# 6. Attend to precision. MP# 7. Look for and make use of structure. MP# 8. Look for and make sense of regularity in repeated reasoning. Mathematical Practices resource page on SAS				
		ACCESS and REVIEW Algebra I keystone Assessment Anchors and Eligible Content		http://static.pdesas.org/Content/Documents/Algebra%20I%20Assessment%20Anchors%20and%20Eligible%20Content%20April%202014.pdf	
Patterns and Polynomial Expressions	In this lesson, you will generate a polynomial expression to describe the nth figure in a visual pattern.	**SOLVE** the Squares to Stairs task to generate an polynomial expression.	**Create** the 5th figure in the pattern for the Squares to Stairs Task, using the small square from the Algebra Tile app. Take a screen shot and import into Explain Everything. Complete the remainder of the task in Explain Everything.	http://youcubed.stanford.edu/task/squares-to-stairs	
				https://itunes.apple.com/us/app/algebra-tiles/id568896224?mt=8	http://technology.cpm.org/general/tiles/
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
Polynomials	In this lesson, you will learn about the aspects of polynomials. They are algebraic expressions that include real numbers and variables.	READ to review polynomials and PRACTICE identifying polynomials.	After reading the information, complete the "Your Turn" exercises at the bottom of the page.	http://www.mathsisfun.com/algebra/polynomials.html	
Add, Subtract, and Multiply Polynomials	In this lesson, you will add, subtract, and/or multiply polynomial expressions which includes nothing larger than a binomial multiplied by a trinomial.	LEARN about algebra tiles.	After clicking Next, choose algebra tile pieces to get acquainted with the tools.	http://mathbits.com/MathBits/AlgebraTiles/AlgebraTiles/AlgebraTiles.html	
		LEARN to use algebra tiles to add polynomials.	After clicking Next, choose Adding Polynomials and watch the tutorial.	http://mathbits.com/MathBits/AlgebraTiles/AlgebraTiles/AlgebraTiles.html	
		LEARN to use algebra tiles to subtract polynomials.	After clicking Next, choose Subtracting Polynomials and watch the tutorial.	http://mathbits.com/MathBits/AlgebraTiles/AlgebraTiles/AlgebraTiles.html	

		READ to learn how to add and subtract polynomials.	Use the Algebra Tile app to help complete the practice exercises.	https://mathbitsnotebook.com/Algebra1/Polynomials/POaddsubtract.html	
		PRACTICE adding and subtracting polynomials using algebra tiles.		https://mathbitsnotebook.com/Algebra1/Polynomials/POAddPractice.html	
				https://itunes.apple.com/us/app/algebra-tiles/id568896224?mt=8	http://technology.cpm.org/general/tiles/
		PRACTICE adding and subtracting polynomials.		http://www.ixl.com/math/algebra-1/add-and-subtract-polynomials	
		LEARN how to multiply polynomials using algebra tiles.		https://www.youtube.com/watch?v=1CSP7xkLMGE	
		PRACTICE multiplying polynomials using algebra tiles.	Click on the Expand icon and work through at least 5 rounds of multiplying polynomials.	http://illuminations.nctm.org/Activity.aspx?id=3482	
		READ to learn how to multiply polynomials and APPLY your knowledge.	Complete the entire sequence of activities including reading the lessons and trying the practice exercises. Use the Algebra Tile app to help complete the practice exercises.	https://mathbitsnotebook.com/Algebra1/Polynomials/POmultiply.html	
				https://mathbitsnotebook.com/Algebra1/Polynomials/POMultMonPractice.html	
				https://mathbitsnotebook.com/Algebra1/Polynomials/PObinomial.html	
				https://mathbitsnotebook.com/Algebra1/Polynomials/POMultBinPractice.html	
				https://mathbitsnotebook.com/Algebra1/Polynomials/POobispecial.html	
				https://mathbitsnotebook.com/Algebra1/Polynomials/POpolynomial.html	
				https://mathbitsnotebook.com/Algebra1/Polynomials/POMultPolyPractice.html	
				https://itunes.apple.com/us/app/algebra-tiles/id568896224?mt=8	http://technology.cpm.org/general/tiles/
		PRACTICE multiplying polynomials.	Complete the "Your Turn" exercises at the bottom of the page.	http://www.mathsisfun.com/algebra/polynomials-multiplying.html	
		PRACTICE using symbolic algebra to represent and explain mathematical relationships.	Demonstrate and explain your thinking within the Explain Everything app.	http://www.insidemathematics.org/assets/common-core-math-tasks/expressions.pdf	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
Factoring	In this lesson, you will factor algebraic expressions, including difference of squares and trinomials.	LEARN how to use algebra tiles for factoring polynomials.		https://www.youtube.com/watch?v=YAlMWv7dOqM	

				https://www.youtube.com/watch?v=54L7hXmPJYw	
		LEARN how to use algebra tiles for factoring additional polynomials.	After clicking Next, choose Factoring Polynomials and watch the tutorial.	http://mathbits.com/MathBits/AlgebraTiles/AlgebraTiles/AlgebraTiles.html	
		LEARN about and PRACTICE factoring trinomials using algebra tiles.	Import the worksheet into Explain Everything and annotate over it. Use the Algebra Tile app to complete the worksheet.	http://dmc122011.delmar.edu/math/MLC/QEPMathSeminars/FactoringTrinomialsAlgebraTilesStudentActivity.pdf	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
				https://itunes.apple.com/us/app/algebra-tiles/id568896224?mt=8	http://technology.cpm.org/general/tiles/
		PRACTICE factoring polynomials using algebra tiles.	Click on the Factor icon and work through at least 5 rounds of factoring polynomials.	http://illuminations.nctm.org/Activity.aspx?id=3482	
		PRACTICE factoring polynomials.		https://www.khanacademy.org/math/algebra/introduction-to-polynomials-and-factorization/factoring-polynomials-2-quadratic-forms/e/factoring_polynomials_1	
				https://www.khanacademy.org/math/algebra/introduction-to-polynomials-and-factorization/factoring-polynomials-2-quadratic-forms/e/factoring_polynomials_by_grouping_1	
		LEARN about the difference between two squares and PRACTICE solving for the difference between two squares.		http://www.mathsteacher.com.au/year10/ch10_factorisation/03_dots/dots.htm	
		PRACTICE factoring using difference of squares.		https://www.khanacademy.org/math/algebra/introduction-to-polynomials-and-factorization/factoring-polynomials-3-special-product-forms/e/factoring_difference_of_squares_2	
		LEARN which factoring strategy to use.		http://www.virtualnerd.com/algebra-1/polynomials-and-factoring/factoring-strategy-solving-equations/choosing-strategy-grouping/determine-strategy	
Rational Algebraic Expressions	In this lesson, you will simplify/reduce a rational algebraic expression.	LEARN about dividing polynomials and APPLY your knowledge.		https://mathbitsnotebook.com/Algebra1/Polynomials/PODivideMon.html	
				https://mathbitsnotebook.com/Algebra1/Polynomials/PODivPolyPractice.html	
		PRACTICE multiplying and dividing polynomials.		http://www.ixl.com/math/grade-8/multiply-and-divide-monomials	

Module 2: Linear Equations					
Topic / Title	Message	Assignment/Call To Action	Content Directions	Content URL	Alternative to IOS
Module 2: Linear Equations	In this module, students analyze and explain the process of solving an equation. Students develop fluency writing, interpreting, and translating between various forms of linear equations, and using them to solve problems. Students will develop multiple strategies and apply them appropriately to solve linear equations and the laws of exponents to the creation and solution of simple exponential equations. **Module 2 Focus Standards:** CC.2.2.HS.D.7 - Create and graph equations or inequalities to describe numbers or relationships. CC.2.2.HS.D.9 - Use reasoning to solve equations and justify the solution method. CC.2.2.HS.D.10 - Represent, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically. **Module 2 Objectives:** 1. Write, solve, and/or apply a linear equation (including problem situations.) 2. Use and/or identify an algebraic property to justify any step in an equation-solving process. 3. Interpret solutions to problems in the context of the problem situation. **Standards for Mathematical Practice** MP# 1. Make sense of problems and persevere in solving them. MP# 2. Reason abstractly and quantitatively. MP# 3. Construct viable arguments and critique the reasoning of others. MP# 4. Model with mathematics. MP# 5. Use appropriate tools strategically. MP# 6. Attend to precision. MP# 7. Look for and make use of structure. MP# 8. Look for and make sense of regularity in repeated reasoning. Mathematical Practices resource page on SAS				
		ACCESS and REVIEW Keystone Anchors and Eligible Content.		http://static.pdesas.org/Content/Documents/Algebra%20I%20Assessment%20Anchors%20and%20Eligible%20Content%20April%202014.pdf	
Linear Equations: What Do You Know? What Do You Need to Know?	In this lesson, you will find out what you know and need to learn about linear equations and test your skills for solving linear equations. You should review your test results and make notes about your answers so you know your strengths and areas where you need to strengthen skills. When you are ready….begin the Linear Equations lesson. Have fun!	APPLY what you know to solve linear equations.		http://www.mathportal.org/math-tests/linear-equations/solving-linear-equations.php	
Solving Linear Equations	In this lesson, you will strengthen your skills for solving linear equations. Based on what you currently understand, what do you still need to learn to help solve linear equations and arrive at the correct answer? Select the learning activities that will help you strengthen the skills you identified from your test results.	REVIEW any topics that are still confusing.	Scroll through the videos and watch any that will help you with skills you don't yet understand.	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/v/simple-equations	
		PRACTICE solving two-step linear equations.		http://www.ixl.com/math/algebra-1/solve-two-step-linear-equations	
		PLAY a game to practice solving equations.	Choose two step and distributive.	http://www.shodor.org/interactivate/activities/AlgebraFour/	
Equations with Variables on Both Sides	In this lesson, you will explore how to solve equations with variables on both sides.	REVIEW and EXTEND your understanding of the rules for solving equations in playing a game.		https://itunes.apple.com/us/app/dragonbox-algebra-12+-award/id634444186?mt=8	https://play.google.com/store/apps/details?id=com.wewanttoknow.DragonBox2
		REVIEW and PRACTICE solving equations using a pan balance.	Work through level 1 to solidify your understanding of how to solve an equation.	https://itunes.apple.com/us/app/hands-on-equations-1-fun-way/id505948222?mt=8	https://play.google.com/store/apps/details?id=com.handsonequationslite1

		LEARN how to solve equations using algebra tiles.		https://www.youtube.com/watch?v=CpnzNmw1Mg8	
		PRACTICE solving equations using algebra tiles.	Choose the Solve option.	http://illuminations.nctm.org/Activity.aspx?id=3482	
		REVIEW any topics that are still confusing.	Scroll through the videos and watch any that will help you with skills you don't yet understand.	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/basic-equation-practice/v/equations-3	
		PLAY a game to practice solving equations.	Choose variables on both sides.	http://www.shodor.org/interactivate/activities/AlgebraFour/	
Equations with Variables in the Denominator	In this lesson, you will explore solving equations with variables in the denominator.	LEARN how to solve equations with variables in the denominator on both sides.		https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/complicated_equations/v/ex-2-multi-step-equation	
		PRACTICE solving advanced linear equations.		http://www.ixl.com/math/algebra-1/solve-advanced-linear-equations	
		PRACTICE solving advanced linear equations.		http://math.ly/algebra/linear-equations/pfbhnrfgdkg/	
Rearranging an Equation to Isolate a Varible	In this lesson, you will explore rearranging an equation to isolate a variable.	LEARN how to rearrange an equation to isolate a variable.		https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/solving_for_variable/v/rearrange-formulas-to-isolate-specific-variables	
		PRACTICE rearranging equations to isolate a variable.		https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/solving_for_variable/e/solving_for_a_variable	
Linear Equations: What did you learn?	In this lesson, you will take the a quiz to see if you can apply what you learned about solving linear equations and inequalities. Record your “Sum” for each test. Compare your scores with your previous test “Sums.” How did you do?	ASSESS whether you improved your skills with solving linear equations.		http://www.mathportal.org/math-tests/linear-equations/solving-linear-equations.php	
Linear Equation in the Real World	In this lesson, you will write, solve, and/or apply a linear equation (including problem situations.) You will also interpret solutions to problems in the context of the problem situation.	WATCH these podcasts about real world scenarios.		https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/More-equation-practice/v/mixture-problems-2	
		CONSTRUCT and SOLVE linear equations in the real world.		https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/super-yoga/e/equations-in-one-variable-1	
		PRACTICE creating equations to solve a real world problem.	Demonstrate and explain your thinking within the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSA/CED/A/1/tasks/582	Buying a Car task on wikispace
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app

Module 3: Linear Functions					
Topic / Title	Message	Call To Action	Content Directions	Content URL	Alternative to IOS
Module 3: Linear Functions	This module builds upon students' prior experiences with univariate and bivariate data. Students learn to represent and interpret distributions graphically and numerically. Students write and use linear models to make predictions for bivariate. **Module 4 Focus Standards** CC.2.4.HS.B.1 - Summarize, represent, and interpret data on a single count or measurement variable CC.2.4.HS.B.2 - Summarize, represent, and interpret data on two categorical and quantitative variables. CC.2.4.HS.B.3 - Analyze linear models to make interpretations based on the data. CC.2.4.HS.B.7 - Apply the rules of probability to compute probabilities of compound events in a uniform probability model. **Module 4 Objectives** 1. Estimate or calculate to make predictions based on a circle, line, bar graph, measure or central tendency, or other representation. 2. Analyze data, make prediction, and/or answer questions based on displayed data (box and whisker plots, stem-and-leaf plots, scatterplots, measures of central tendency, or other representations.) 3. Calculate and/or interpret the range, quartiles, and interquartile range of data. 4. Draw, identify, find, and/or write an equation for the line of best fit for a scatter plot. 5. Make predictions using the equations or graphs or best-fit lines of scatter plots. 6. Find probabilities for compound events and represent as a fraction, decimal, or percent. **Standards for Mathematical Practice** MP# 1. Make sense of problems and persevere in solving them. MP# 2. Reason abstractly and quantitatively. MP# 3. Construct viable arguments and critique the reasoning of others. MP# 4. Model with mathematics. MP# 5. Use appropriate tools strategically. MP# 6. Attend to precision. MP# 7. Look for and make use of structure. MP# 8. Look for and make sense of regularity in repeated reasoning. Mathematical Practices resource page on SAS				
		ACCESS and REVIEW Keystone Anchors and Eligible Content.		http://static.pdesas.org/Content/Documents/Algebra%20I%20Assessment%20Anchors%20and%20Eligible%20Content%20April%202014.pdf	
Pattern Tasks	In this lesson, students will analyze a set of data for the existence of a pattern and represent the pattern algebraically, and/or graphically.	SOLVE two pattern tasks.	Import a screenshot of the patterns into Explain Everything. Use the colored tiles to represent the next figure for patterns 4.0 and 4.2. Import a screen shot into Explain Everything. Use Explain Everything to demonstrate your thinking for the questions below the patterns.	https://www.youcubed.org/task/number-transformer-challenge/	
				https://itunes.apple.com/us/app/number-pieces-by-math-learning/id605433778?mt=8	http://www.mathlearningcenter.org/web-apps/number-pieces/
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app

		SOLVE four pattern tasks.	Use the pattern block app to replicate the first four patterns. Build the 4th train for the first four patterns. Take a screenshot and import it into Explain Everything. Determine the equation to relate the figure number to the number of tiles for each pattern.	http://www.visualpatterns.org	
				https://itunes.apple.com/us/app/pattern-shapes-by-math-learning/id908511013?mt=8	http://www.mathlearningcenter.org/web-apps/pattern-shapes
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		SOLVE the pattern task by using a table to relate the two attributes.	Import the task into Explain Everything and annotate over it.	http://www.mathwire.com/algebra/tableschairs.pdf	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		PRACTICE generating the rule for an input-output machine.	Enter input values of your choice. After looking at the table of values, determine the rule and check your rule.	http://www.shodor.org/interactivate/activities/NumberCruncher/	
		PRACTICE generating a rule for the given tables.	Import the task into Explain Everything and annotate over it.	https://bhi61nm2cr3mkdgk1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/Math-8-Function-Unit-Final-Draft-1.0.pdf page 25-30 only	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
Functions	In this lesson, students will determine whether a relation is a function, given a set of points or a graph.	READ about determining if relations are functions as well as function notation.		https://mathbitsnotebook.com/Algebra1/Functions/FNFuncBasics.html	
				https://mathbitsnotebook.com/Algebra1/Functions/FNNotationEvaluation.html	
		DESCRIBE what a function is in your own words and give an example and a non-example.		https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		ASSESS your understanding of determining when a relation is a function.		https://learnzillion.com/lesson_plans/8313-identify-functions-using-tables-and-graphs#fndtn-lesson	
		PRACTICE determining if relations are functions. EVALUATE functions at a given value.		https://mathbitsnotebook.com/Algebra1/Functions/FNFunctionsPractice.html	
				https://mathbitsnotebook.com/Algebra1/Functions/FNNotationEvaluationPractice.html	
		DETERMINE if a graph represents a function.		https://www.ixl.com/math/algebra-1/identify-functions-vertical-line-test	
Slope	In this lesson, students will describe, compute, and/or use the rate of change (slope) of a line.	LEARN how to determine the slope when given two points.		https://itunes.apple.com/us/podcast/find-slope-through-two-points/id404713117?i=89025778&mt=2	https://www.khanacademy.org/math/algebra-home/alg-linear-eq-func/alg-slope/v/slope-of-a-line-2
		PRACTICE determining the slope given two points.		http://www.ixl.com/math/algebra-1/find-slope-from-two-points	

		PRACTICE identifying the slope of a line.		https://www.khanacademy.org/math/algebra-basics/core-algebra-graphing-lines-slope/core-algebra-slope/e/slope-from-two-points	
		LEARN how to find the slope of a line from a graph.		http://www.khanacademy.org/math/algebra/linear-equations-and-inequalitie/slope-and-intercepts/v/slope-of-a-line	
		PRACTICE finding the slope from a graph.		https://www.ixl.com/math/algebra-1/find-the-slope-of-a-graph	
		LEARN how to write the equation of a line given the slope and a point on the line.		https://itunes.apple.com/us/podcast/find-equation-line-given-point/id404713117?i=89025758&mt=2	https://www.khanacademy.org/math/algebra-home/alg-linear-eq-func/alg-writing-slope-intercept-equations/v/equation-of-a-line-1
		PRACTICE with slope and equations of lines.		https://mathbitsnotebook.com/Algebra1/LinearEquations/LECreateEquationPractice.html	
		LEARN how to graph a line given the equation of the line.		https://itunes.apple.com/us/podcast/find-slope-y-intercept-from/id404713117?i=89025713&mt=2	https://www.khanacademy.org/math/algebra-home/alg-linear-eq-func/alg-graphing-slope-intercept-equations/v/graphing-a-line-in-slope-intercept-form
		PRACTICE graphing lines given an equation.		http://www.thatquiz.org/tq/practicetest?mx3th0ox6v3o	
		MATCH the correct equations to the graphs.		http://www.math.com/school/subject2/practice/S2U4L2/S2U4L2Pract.html	ONe part doens;t work
		ASSESS your skills of graphing linear equation.		http://www.mathsisfun.com/quiz/linear_equation_test.html	
		LEARN how to graph a translation of a function.		http://www.virtualnerd.com/algebra-2/linear-equations-functions/transformations-parent-functions/transformations-translations/graph-translation	
Linear Functions	In this lesson, students will interpret and/or use linear functions and their equations, graphs, or tables.	LEARN how to create an equation, table and graph from a situation.		https://learnzillion.com/lessons/1836-create-equation-table-and-graph-from-a-situation	
		PRACTICE writing and graphing linear equations in the real world.		http://www.mathwarehouse.com/algebra/linear_equation/real-world-application.html	
		APPLY your knowledge of creating and graphing equations.	Use the Desmos app to graph your solution to part b. Import the graph into the Explain Everything app to complete the remainder of the task.	https://www.illustrativemathematics.org/content-standards/HSA/CED/A/1/tasks/581	Paying the Rent task
				https://itunes.apple.com/us/app/graphing-calculator-by-desmos/id653517540?mt=8	https://www.desmos.com
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		APPLY your knowledge of creating and graphing equations.	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSA/REI/D/10/tasks/243	Taxi task

				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app

Module 4: Descriptive Statistics					
Topic / Title	Topic Description	Assignment/Call to Action	Content Directions	Content URL	Alternative to IOS
Module 4: Descriptive Statistics	This module builds upon students' prior experiences with univariate and bivariate data. Students learn to represent and interpret distributions graphically and numerically. Students write and use linear models to make predictions for bivariate. **Module 4 Focus Standards** CC.2.4.HS.B.1 - Summarize, represent, and interpret data on a single count or measurement variable CC.2.4.HS.B.2 - Summarize, represent, and interpret data on two categorical and quantitative variables. CC.2.4.HS.B.3 - Analyze linear models to make interpretations based on the data. CC.2.4.HS.B.7 - Apply the rules of probability to compute probabilities of compound events in a uniform probability model. **Module 4 Objectives** 1. Estimate or calculate to make predictions based on a circle, line, bar graph, measure or central tendency, or other representation. 2. Analyze data, make prediction, and/or answer questions based on displayed data (box and whisker plots, stem-and-leaf plots, scatterplots, measures of central tendency, or other representations.) 3. Calculate and/or interpret the range, quartiles, and interquartile range of data. 4. Draw, identify, find, and/or write an equation for the line of best fit for a scatter plot. 5. Make predictions using the equations or graphs or best-fit lines of scatter plots. 6. Find probabilities for compound events and represent as a fraction, decimal, or percent. **Standards for Mathematical Practice** MP# 1. Make sense of problems and persevere in solving them. MP# 2. Reason abstractly and quantitatively. MP# 3. Construct viable arguments and critique the reasoning of others. MP# 4. Model with mathematics. MP# 5. Use appropriate tools strategically. MP# 6. Attend to precision. MP# 7. Look for and make use of structure. MP# 8. Look for and make sense of regularity in repeated reasoning. Mathematical Practices resource page on SAS				
		ACCESS and REVIEW Keystone Anchors and Eligible Content.		http://static.pdesas.org/Content/Documents/Algebra%20I%20Assessment%20Anchors%20and%20Eligible%20Content%20April%202014.pdf	
Circle, Line, and Bar Graphs	In this lesson, students estimate or calculate to make predictions based on a circle, line, bar graph, measure or central tendency, or other representation.	READ about and PRACTICE interpreting bar graphs.		http://www.mathgoodies.com/lessons/graphs/bar_graph.html	
		PRACTICE interpreting bar graphs, line graphs, and histograms.		https://www.ixl.com/math/algebra-1/interpret-bar-graphs-line-graphs-and-histograms	
		PRACTICE interpreting circle graphs.		https://www.ixl.com/math/algebra-1/circle-graphs	

Box and Whisker Plots, Stem-and-Leaf Plots	In this lesson, students will analyze data, make predicition, and/or answer questions based on displayed data (box and whisker plots, stem-and-leaf plots, scatterplots, measures of central tendency, or other representations.)	PRACTICE interpreting stem and leaf plots.		https://www.ixl.com/math/algebra-1/interpret-stem-and-leaf-plots	
		PRACTICE creating and interpreting box plots	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSS/ID/A/1/tasks/1027	Speed Trap task
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		PRACTICE interpreting box and whisker plots.		https://www.ixl.com/math/algebra-1/interpret-box-and-whisker-plots	
Measures of Spread	In this lesson, students will calculate and/or interpret the range, quartiles, and interquartile range of data.	LEARN how to describe data using measures of center and measures of spread.		https://learnzillion.com/lesson_plans/7521-describe-data-using-measures-of-center-and-spread#fndtn-lesson	
		PRACTICE finding interquartile range to determine the presense of outliers.	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSS/ID/A/3/tasks/1888	Identifying Outliers
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
Scatterplots and Lines of Best Fit	In this lesson, students will draw, identify, find, and/or write an equation for the line of best fit for a scatter plot.	LEARN about and PRACTICE constructing scatterplots.	Import the worksheet into Explain Everything and annotate over it to create the scatter plots.	http://www.charleston.k12.il.us/cms/Teachers/math/PreAlgebra/paunit9/L9-1.PDF	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		READ about scatter plots and line of best fit.		http://www.mathbits.com/MathBits/TISection/Statistics1/LineFit.htm	
		PRACTICE determining lines of best fit.		http://www.ixl.com/math/algebra-1/scatter-plots-line-of-best-fit	
		LEARN the differences between linear and non linear modes of data.		https://learnzillion.com/lessons/1201-interpret-and-distinguish-linear-and-non-linear-scatter-plots	
		LEARN about correlation versus causation.		http://www.statisticslectures.com/topics/correlationcausation/	
Making Predictions from Lines of Best Fit	In this lesson, students will make predications using the equations or graphs or best-fit lines of scatter plots.	LEARN about and PRACTICE making predictions using the equations or graphs or best-fit lines of scatter plots.	After reading the lesson, engage in the "Your Turn" practice exercises.	http://www.mathsisfun.com/data/scatter-xy-plots.html	
		PRACTICE making predictions using the equations or graphs or best-fit lines of scatter plots.	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSS/ID/B/6/tasks/1554	Olympic Mens 100 Meter Dash task
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		PRACTICE making predictions using the equations or graphs or best-fit lines of scatter plots.	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSS/ID/C/7/tasks/940	Used Subaru Forester task
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
Exploring Probability	In this lesson, students will find probabilities for compound events and represent them as a fraction, decimal, or percent.	READ to learn about sample space.		http://www.analyzemath.com/statistics/introduction_probability.html#sample_space	

		LEARN how to find probabilities of events based on the deteremined sample space.	Try the problems and then read through the solutions.	http://www.analyzemath.com/statistics/probability_questions.html	
		LEARN how to find the probability of independent events.		http://www.brightstorm.com/math/algebra-2/combinatorics/probability-of-independent-events/	
		READ about and PRACTICE finding the probability of independent events related to real world situations.		http://www.mathgoodies.com/lessons/vol6/independent_events.html	
		LEARN how to find the probability of dependent events.		https://www.khanacademy.org/math/probability/independent-dependent-probability/dependent_probability/v/introduction-to-dependent-probability	
		PRACTICE dependent probablities.		https://www.khanacademy.org/math/probability/independent-dependent-probability/dependent_probability/e/dependent_probability	
		PRACTICE identifying dependent and independent events.		http://www.softschools.com/quizzes/math/independent_or_dependent_events/quiz5232.html	
		PRACTICE finding the probability of compound independent and dependent events.		https://www.ixl.com/math/algebra-1/probability-of-independent-and-dependent-events	
		PRACTICE finding the probability of compound independent and dependent events.	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSS/CP/B/9/tasks/1035	Alex, Mel, and Chelsea Play a Game
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?	any creation app

Module 5: Systems of Equations					
Topic Title	Topic Description	Assignment/Call To Action	Content Directons	Content URL	Alternative to IOS
Module 5: Systems of Equations	In this module, students explore systems of equations and inequalities, and they find and interpret their solutions. **Module 5 Focus Standards:** CC.2.2.HS.D.7 - Create and graph equations or inequalities to describe numbers or relationships. CC.2.2.HS.D.9 - Use reasoning to solve equations and justify the solution method. CC.2.2.HS.D.10 - Represent, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically. **Module 5 Objectives** 1. Write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimination. 2. Interpret solutions to problems in the context of the problem situation. **Standards for Mathematical Practice** MP# 1. Make sense of problems and persevere in solving them. MP# 2. Reason abstractly and quantitatively. MP# 3. Construct viable arguments and critique the reasoning of others. MP# 4. Model with mathematics. MP# 5. Use appropriate tools strategically. MP# 6. Attend to precision. MP# 7. Look for and make use of structure. MP# 8. Look for and make sense of regularity in repeated reasoning. Mathematical Practices resource page on SAS				
		ACCESS and REVIEW Keystone Anchors and Eligible Content.		http://static.pdesas.org/Content/Documents/Algebra%20I%20Assessment%20Anchors%20and%20Eligible%20Content%20April%202014.pdf	
Solving Systems of Equations	In this lesson, you will write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimation.	LEARN about a system of equations.		http://www.virtualnerd.com/algebra-1/systems-equations-inequalities/graphing/graphing-solutions/equations-definition	
		LEARN ways to solve systems of equations.		http://www.virtualnerd.com/algebra-2/linear-systems/equations-solution-methods.php	
		LEARN how to solve linear systems by graphing.		https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/fast-systems-of-equations/v/solving-linear-systems-by-graphing	
		PRACTICE solving linear equations by graphing.		https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/fast-systems-of-equations/e/graphing_systems_of_equations	
		PRACTICE solving system of linear equations by graphing.		http://www.ixl.com/math/algebra-1/solve-a-system-of-equations-by-graphing	
		LEARN about using the substitution method for solving linear systems.		http://www.mathplanet.com/education/algebra-1/systems-of-linear-equations-and-inequalities/the-substitution-method-for-solving-linear-systems	
		PRACTICE solving linear systems using substitution.		https://mathbitsnotebook.com/Algebra1/Systems/SYAlgebraPractice.html	

		LEARN about using elimination to solve a system of linear equations.		https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/fast-systems-of-equations/v/solving-systems-of-equations-by-elimination	
		SOLVE problems using systems of elimination.		http://www.ixl.com/math/algebra-1/solve-a-system-of-equations-using-elimination	
		PRACTICE solving system of linear equations.	If you still need more practice, use chapter 2 in the following ibook.	https://itunes.apple.com/us/book/help!-algebra/id509914076?mt=11	
Systems of Equations Word Problems	In this lesson, you will interpret solutions to problems in the context of the problem situation.	LEARN how to solve real world problem using a system of equations.		http://www.algebra-class.com/solving-systems-of-equations.html	
		SOLVE a real world problem using a system of equations.	Demonstrate and explain your thinking in the Explain Everything app.	http://map.mathshell.org/download.php?fileid=1074	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		SOLVE a real world problem using a system of equations.	Demonstrate and explain your thinking in the Explain Everything app.	http://map.mathshell.org/download.php?fileid=772	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		SOLVE a real world problem using a system of equations.	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSA/CED/A/tasks/462	Cash Box task
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app

Module 6: Linear Inequalities

Topic / Title	Message	Assignment/Call To Action	Content Directions	Content URL	Alternative to IOS
Module 6: Linear Inequalities	In this module, students analyze and explain the process of solving an inequality. Students develop fluency writing, interpreting, and translating between various forms of linear inequalities, and using them to solve problems. Students will develop multiple strategies and apply them appropriately to solve linear inequalities. **Module 6 Focus Standards:** CC.2.2.HS.D.7 - Create and graph equations or inequalities to describe numbers or relationships. CC.2.2.HS.D.9 - Use reasoning to solve equations and justify the solution method. CC.2.2.HS.D.10 - Represent, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically. **Module 6 Objectives:** 1. Write, solve, and/or graph linear inequalities using various methods. 2. Write, solve, and or graph systems of linear inequalities using various methods. **Standards for Mathematical Practice** MP# 1. Make sense of problems and persevere in solving them. MP# 2. Reason abstractly and quantitatively. MP# 3. Construct viable arguments and critique the reasoning of others. MP# 4. Model with mathematics. MP# 5. Use appropriate tools strategically. MP# 6. Attend to precision. MP# 7. Look for and make use of structure. MP# 8. Look for and make sense of regularity in repeated reasoning. Mathematical Practices resource page on SAS				
		ACCESS and REVIEW Keystone Anchors and Eligible Content.		http://static.pdesas.org/Content/Documents/Algebra%20I%20Assessment%20Anchors%20and%20Eligible%20Content%20April%202014.pdf	
Inequalities	In this lesson, you will write, solve, and/or graph linear inequalities using various methods.	LEARN how to solve and graph a linear inequality.		https://mathbitsnotebook.com/Algebra1/Inequalities/IQRefresh.html	
		PRACTICE solving and graphing linear inequalities.	Once each problem is completed, graph the solution on the geogebra app and take a screenshot.	https://mathbitsnotebook.com/Algebra1/Inequalities/IQinequalityPractice.html	
				https://itunes.apple.com/us/app/geogebra/id687678494?mt=8	https://www.geogebra.org/download
		APPLY your knowledge of inequalities to real world problems.	Solve the first four problems only.	https://mathbitsnotebook.com/Algebra1/Inequalities/IQAppliedPractice.html	
System of Linear Inequalities	In this lesson, you will write, solve, and/or graph systems of linear inequalities using various methods.	LEARN how to graph and solve a system of linear inequalities.		https://www.khanacademy.org/math/algebra2/systems_eq_ineq/systems_inequalities_precalc/v/graphical-system-of-inequalities	
		ENGAGE in solving systems of inequalities.		https://www.ixl.com/math/algebra-2/solve-systems-of-linear-inequalities-by-graphing	
		PRACTICE interpreting solutions to a system of linear inequalities.	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSA/REI/D/12/tasks/1205	Solution Sets task
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app

		PRACTICE solving a real world problem involing a system of linear inequalities.	Demonstrate and explain your thinking in the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSA/REI/D/12/tasks/644	Fishing Adventures 3 task
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app

Module 7: Exponential Functions					
Topic / Title	Message	Assignment/Call To Action	Content Directions	Content URL	Alternative to IOS
Module 7: Exponential Functions	In this module, students build on and informally extend their understanding of integer exponents to consider exponential functions. They compare and contrast linear and exponential functions, distinguishing between additive and multiplicative change. They interpret arithmetic sequences as linear functions and geometric sequences as exponential functions. **Module 7 Focus Standards** CC.2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents. CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real-world or mathematical problems. CC.2.2.HS.C.1 - Use the concept and notation of functions to interpret and apply them in terms of their context. CC.2.2.HS.C.2 - Graph and analyze functions and use their properties to make connections between the different representations. CC.2.2.HS.C.6 - Interpret functions in terms of the situation they model. **Module 7 Objectives** 1. Use exponents, roots, and/or absolute values to solve problems. 2. Compare and/or order any real numbers. 3. Simplify square roots. 4. Compare and contrast linear and exponential functions. 5. Interpret arithmetic sequences as linear functions and geometric sequences as exponential functions. **Standards for Mathematical Practice** MP# 1. Make sense of problems and persevere in solving them. MP# 2. Reason abstractly and quantitatively. MP# 3. Construct viable arguments and critique the reasoning of others. MP# 4. Model with mathematics. MP# 5. Use appropriate tools strategically. MP# 6. Attend to precision. MP# 7. Look for and make use of structure. MP# 8. Look for and make sense of regularity in repeated reasoning. Mathematical Practices resource page on SAS				
		ACCESS and REVIEW Keystone Anchors and Eligible Content.		http://static.pdesas.org/Content/Documents/Algebra%20I%20Assessment%20Anchors%20and%20Eligible%20Content%20April%202014.pdf	
Exponents, Roots, and Absolute Values	In this lesson, you will use exponents, roots, and/or absolute values to solve problems.	REVIEW and PRACTICE working with exponents.	Read through the lessons and engage in the practice activities.	https://mathbitsnotebook.com/Algebra1/Exponents/EXBasics.html	
				https://mathbitsnotebook.com/Algebra1/Exponents/EXRules.html	
				https://mathbitsnotebook.com/Algebra1/Exponents/EXiPracIntNum.html	
				https://mathbitsnotebook.com/Algebra1/Exponents/EXPracIntAlgebra.html	
		LEARN about and PRACTICE working with cube roots.	Read through the information sheet and engage in the "Your Turn" exercises.	http://www.mathsisfun.com/numbers/cube-root.html	
		LEARN about and PRACTICE working with nth roots.	Read through the information sheet and engage in the "Your Turn" exercises.	http://www.mathsisfun.com/numbers/nth-root.html	
		REVIEW and PRACTICE working with absolute value.	Read through the lessons and engage in the practice activities.	https://mathbitsnotebook.com/Algebra1/RealNumbers/RNAbsoluteValue.html	

				https://mathbitsnotebook.com/Algebra1/RealNumbers/RNAbsoluteValuePractice.html	
Rational and Irrational Numbers	In this lesson, you will compare and order any real numbers.	LEARN how to put real numbers in order.		http://www.virtualnerd.com/algebra-2/equations-inequalities/real-numbers/number-types/order-real-numbers-example	
		READ about comparing and ordering irrational numbers and PRACTICE ordering irrational numbers on a number line.	Import into Explain Everything app and annotate over it.	http://www.charleston.k12.il.us/cms/Teachers/math/PreAlgebra/paunit7/L7-4.PDF	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
Simplifying Square Roots	In this lesson, you will explore simplifying square roots.	LEARN about and PRACTICE simplifying square roots.	After reading the information, engage in the "Your Turn" practice exercises.	http://www.mathsisfun.com/numbers/simplify-square-roots.html	
Arithmetic and Geometric Sequences	In this lesson, you will interpret arithmetic sequences as linear functions and geometric sequences as exponential functions.	LEARN about geometric sequences and expontential functions.	Read and work through all activities in the ibook.	https://itunes.apple.com/us/book/exploring-exponential-function/id642041857?mt=11	
		LEARN how to write and graph an exponential function.		https://learnzillion.com/lessons/2767-write-and-graph-an-exponential-function-by-examining-a-reallife-scenario	
		PRACTICE with applications of exponential functions.		https://mathbitsnotebook.com/Algebra1/FunctionGraphs/FNGTypeGrowthDecayPractice.html	
		PRACTICE interpreting exponential functions in real world situations.	Demonstrate and explain your thinking within the Explain Everything app.	https://www.illustrativemathematics.org/content-standards/HSF/LE/A/tasks/213	Comparing Exponentials
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
Linear and Exponential Functions	In this lesson, you will compare and contrast linear and exponential functions	PRACTICE recognizing the difference between linear and exponential functions.	Import the task into the Explain Everything app and annotate over it.	http://map.mathshell.org/download.php?fileid=844	
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		PRACTICE recognizing the difference between linear and exponential functions.	Import the task into the Explain Everything app and annotate over it.	https://www.illustrativemathematics.org/content-standards/HSF/LE/A/1/tasks/1910	Finding Linear and Exponential Models
				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app
		APPLY your knowledge of linear and exponential functions to solve a word problem.	Use the Desmos app to graph your solution. Import an image of the graph into Explain Everything to answer the questions.	https://www.illustrativemathematics.org/content-standards/HSF/LE/A/2/tasks/645	Population and Food Supply
				https://itunes.apple.com/us/app/graphing-calculator-by-desmos/id653517540?mt=8	www.desmos.com

				https://itunes.apple.com/us/app/explain-everything-interactive/id431493086?mt=8	any creation app

Teacher Resources				
Module 1		PRACTICE game on multiply polynomials.		http://www.teachforever.com/2009/03/two-review-games-multiplying.html
Module 3		PRACTICE determining a functional rule for a pattern task.		http://www.insidemathematics.org/assets/common-core-math-tasks/conference%20tables.pdf
Module 4		LEARN about normal distrubutions.		http://www.pbs.org/newshour/extra/lessons_plans/research-methods-and-statistics-through-kickball/
		PRACTICE linear functions with a Barbie Bungee jump.		http://illuminations.nctm.org/Lesson.aspx?id=2157