

LCCS 8th Grade Algebra Math Curriculum Overview

Month	Unit
September	Unit 1: Expressions
October	Unit 2: Equations in One Variable
November	Unit 3: Relations and Functions
December	Unit 4: Linear and Nonlinear Functions
January	Unit 5: Creating Linear Equations
February	Unit 6: Linear Inequalities
March	Unit 7: Systems of Linear Equations and Inequalities
March	Unit 8: Exponents and Roots
April	Unit 9: Exponential Functions
May	Unit 10: Polynomials
May	Unit 11: Quadratic Functions
June	Unit 12: Statistics

Unit 1: Expressions

At a Glance:

In this unit students will write and evaluate numerical and algebraic expressions, simplify expressions using the distributive property, and evaluate absolute value expressions.

Timeline:

14 Days

Unit 2: Equations with One Variable

At a Glance:

In this unit students solve linear equations in one variable, solve proportions and use formulas to solve real world problems.

Timeline:

14 Days

Unit 3: Relations and Functions**At a Glance:**

In this unit students will represent relations and determine whether a relation is a function. Students will also use function notation, find function values, graph linear and nonlinear functions and identify attributes of each type of function.

Timeline:

14 Days

Unit 4: Linear and Non-Linear Functions**At a Glance:**

In this unit students will graph linear, piecewise-defined, step, and absolute value functions. Students will also find and interpret the rate of change and slope of lines and identify the effects of transformations on the graphs of linear and absolute value functions.

Timeline:

15 Days

Unit 5: Creating Linear Equations**At a Glance:**

In this unit students will create linear equations in slope-intercept, point-slope, and standard forms. They will use scatter plots to make and evaluate predictions, and use best-fit lines and correlation coefficients to determine how well linear functions fit sets of data. Students determine whether a situation illustrates correlation or causation and find inverses of functions.

Timeline:

13 Days

Unit 6: Linear Inequalities**At a Glance:**

In this unit students will write and solve linear inequalities, graph linear inequalities in two variables and apply linear inequalities in problem-solving situations.

Timeline:

11 days

Unit 7: Systems of Linear Equations and Inequalities

At a Glance:

In this unit students will solve systems of equations using a variety of methods and graphing technology. They will also graph the solution sets of systems of linear inequalities.

Timeline:

11 Days

Unit 8: Exponents and Roots

At a Glance:

In this unit students will apply the properties of exponents to simplify expressions, radical expressions and exponential equations.

Timeline:

15 Days

Unit 9: Exponential Functions

At a Glance:

In this unit students will write, solve, graph and transform exponential functions. Students will also understand geometric shapes.

Timeline:

14 Days

Unit 10: Polynomials

At a Glance:

In this unit students will add, subtract and multiply polynomials. They will also factor polynomials, including the case of special products and understand how polynomials are related to special products.

Timeline:

15 Days

Unit 11: Quadratic Functions

At a Glance:

In this unit students will graph quadratic functions and their transformations, solve quadratic equations using a variety of methods and solve systems of linear and quadratic equations.

Timeline:

17 Days

Unit 12: Statistics

At a Glance:

In this unit students will represent data using numerical statistics and graphical methods. They will also analyze the shapes of distributions and summarize and interpret categorical data using frequency tables.

Timeline:

11 Days