Unit 1 Foundations for Algebra

Content Area: **Math**
Course(s): **CP Algebra 1**
Time Period: **Marking Period 1**
Length: **1**
Status: **Published**

Unit Overview

This unit allows students to master representing quantities, patterns, and relationships. Students will also see how to relate certain algebraic properties.

Link to optional Desmos lesson for Chapter 1:
https://teacher.desmos.com/activitybuilder/custom/60f992a83364e8691e116e98?collections=60f9919b8ff90d67bf67ecb0

Link to optional Desmos Curriculum resource:
https://teacher.desmos.com/collection/61bcc95700581818dff1d4d7?intro-banner-expanded=true

Enduring Understandings

- Students will understand how to apply the rules of algebra to manipulate variables.
- Students will understand how to combine like terms, work with the real number system, and properly perform order of operations.

Essential Questions

How can we write an unknown as an algebraic expression?

How can we evaluate algebraic expressions?

How can we use the properties of algebra to simplify expressions?

How can we isolate an unknown quantity?

How are properties related to algebra?

How can you represent quatities, patterns, and relationships?

New Jersey Student Learning Standards (No CCS)

MA.F-IF.B.4	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship.
MA.F-IF.C.8	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
MA.F-BF.A.1b	Combine standard function types using arithmetic operations.
MA.F-LE.B	Interpret expressions for functions in terms of the situation they model

Interdisciplinary Connections

LA.W.9-10.6	Use technology, including the Internet, to produce, share, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
SCI.HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
TECH.8.1.12.C.CS4	Contribute to project teams to produce original works or solve problems.

Technology Standards

TECH.8.1.12.C.CS4	Contribute to project teams to produce original works or solve problems.
TECH.8.1.12.D.CS3	Exhibit leadership for digital citizenship.
TECH.8.1.12.E.CS4	Process data and report results.
TECH.8.1.12.F.CS3	Collect and analyze data to identify solutions and/or make informed decisions.
TECH.8.1.12.F.CS4	Use multiple processes and diverse perspectives to explore alternative solutions.
TECH.8.2.12.C.CS2	The application of engineering design.

21st Century Themes/Careers

CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.

Financial Literacy Integration

PFL.9.1.12.C.1	Compare and contrast the financial benefits of different products and services offered by a variety of financial institutions.
PFL.9.1.12.C.2	Compare and compute interest and compound interest and develop an amortization table using business tools.
PFL.9.1.12.C.3	Compute and assess the accumulating effect of interest paid over time when using a variety of sources of credit.