Unit 1 :
July 31-Sept 1

Mathematical Practices

These 8 Mathematical Practices and the overarching Practice Standard are essential to the instruction in this unit.

8.MP: **Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.**

8.MP.1: Make sense of problems and persevere in solving them.

8.MP.2: Reason abstractly and quantitatively.

8.MP.3: Construct viable arguments and critique the reasoning of others.

8.MP.4: Model with mathematics.

8.MP.5: Use appropriate tools strategically.

8.MP.6: Attend to precision.

8.MP.7: Look for and make use of structure.

8.MP.8: Look for and express regularity in repeated reasoning.

Investigating Linear Expressions, Equations, and Inequalities in One Variable

8.PAR.3 **Create and interpret expressions within relevant situations. Create, interpret, and solve linear equations and linear inequalities in one variable to model and explain real phenomena.**

8.PAR.3.1 Interpret expressions and parts of an expression, in context, by utilizing formulas or expressions with multiple terms and/or factors.

8.PAR.3.2 Describe and solve linear equations in one variable with one solution ($x = a$), infinitely many solutions ($a = a$), or no solutions ($a = b$). Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).

8.PAR.3.3 Create and solve linear equations and inequalities in one variable within a relevant, real-life application.

8.PAR.3.4 Using algebraic properties and the properties of real numbers, justify the steps of a one-solution equation or inequality.

8.PAR.3.5 Solve linear equations and inequalities in one variable with coefficients represented by letters and explain the solution based on the contextual, mathematical situation.

8.PAR.3.6 Use algebraic reasoning to fluently manipulate linear and literal equations expressed in various forms to solve relevant, mathematical problems.