**Middle School Math  
Essential Standards**

**6th Grade Math**

* **Expressions and Equations**
  + 6.EE.A: Apply and extend previous understandings of arithmetic to algebraic expressions
    - Write and evaluate numerical expressions involving whole-number exponents
    - Write, read and evaluate expressions in which letters stand for numbers
    - Apply the properties of operations to generate equivalent expressions
    - Identify when two expressions are equivalent
  + 6.EE.B: Reason about and solve one-variable equations and inequalities.
    - Use substitution to determine whether a given number in a specified set makes an equation or inequality true
    - Use variables to represent numbers and write expressions when solving a real-world or mathematical problem
    - Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers
    - Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem
  + 6.EE.C: Represent and analyze quantitative relationships between dependent and independent variables

**7th Grade Math**

* **Expressions and Equations**
  + 7.EE.A: Use properties of operations to generate equivalent expressions
    - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients
  + 7.EE.B: Solve real-life and mathematical problems using numerical and algebraic expressions and equations
    - Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically
    - Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities
  + 6.EE.C: Represent and analyze quantitative relationships between dependent and independent variables

**8th Grade Math**

* **Expressions and Equations**
  + 8.EE.B: Understand the connections between proportional relationships, lines and linear equations
    - Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
    - Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b
  + 8.EE.C: Analyze and solve linear equations and pairs of simultaneous linear equations
    - Solve linear equations in one variable.
    - Analyze and solve pairs of simultaneous linear equations