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| **Lesson Plan:** **Expression & Equations & Inequalities** | Grade: 7th and 8th  Class: |
| Standards: (**7.EE.B.3**,**7.EE.B.4**).  Students use linear equations and inequalities to solve problems algebraically.  Solving equations with a variable - students are challenged with the goal of finding the number that makes the equation true.   1. When given in context, students recognize that a value exists, and it is simply their job to discover what that value is. 2. Students solve problems involving consecutive numbers, total cost, age comparisons, distance/rate/time, area and perimeter, and missing angle measures | **Prior Knowledge:** (6.EE.B.6, 6.EE.B.7)   * Associative Property– the **way** in which numbers are grouped doe not change the sum **(2+3)+4 2+(3+4)** . The **way** factors are grouped does not change the product **(2x3)x4 = 2(3x4).** * Commutative Property: The **order** in which numbers are added does not change the sum 5+3=3+5 & The order in which numbers are multiplied does not product 2x4=4x2 * Distributive Property allows you to combine addition and multiplication. For example 5(3+2). * Order of operations (**PEMDAS**) * Combining Like terms |
| **Learning Target:**  **7.EE.1 I** can use operations to simplify linear expressions. **7.EE.2 I** can write an expression multiple ways. **7.EE.3 I** can solve real-world problems using equivalent forms (fraction, decimal, percent) of rational numbers. **7.EE.4a I** can construct and solve equations to represent a problem. **7.EE.4b I** can construct and solve inequalities to represent a problem. | **Task: Solve Equations involving real world applications.**  Sanford and Audrey are driving 65 miles per hour. If they travel 358 miles without stopping or slowing down, about how long will their trip take? **5.5 hours.** |
| **Vocabulary:**  An **algebraic** **expression** is a combination of **variables**, **numbers**, and at least one operation. To evaluate an algebraic expression, replace the variable(s) with numbers and follow the order of operations.  **Simplest Form:** An expression is in its simplest form when it has no like terms and no parentheses.  When you **evaluate** an expression, you find its numerical value.  A **term** without a variable is called a constant. | **Standardized Test Practice:** Juana is 4 feet 8 inches tall. She won 1st place in a cross-country race. To receive her medal, she stood on a platform that was 18 inches tall. What was the total distance from the top of Juana’s head to the ground when she was standing on the platform? **Ans:** 6 feet 2 inches |
| An expression such as 5x + 7x has **two terms**. These terms are called **like terms** because they have the same variable. You can use the Distributive Property to simplify expressions that have like terms. |  |