**Algebra – Unit 4.1 Plan**

**Writing & Solving Equations**

**Big Ideas**

In this unit, you will focus on a few key course concepts. You will focus on solving equations. You will review how to solve an equation with a variable on both sides of the = sign. One purpose for this focus is in preparation for the Midterm Exam. Also, you will also build on those skills by learning how to solve one-variable equations containing products, and you will learn how to solve multi-variable equations for one of the variables. You will write and solve mathematical sentences (such as one- and two-variable equations) to solve situational word problems.

**In this chapter, you will learn:**

* Solving an algebraic equation means rewriting it as an equivalent equation, until the variable is isolated on one side of the equal sign.
* Interpret a minus sign outside of parentheses as multiplication by -1 using the distributive property –(x + 5) = -x - 5
* Solve simple equations involving multiplication.
* How to work with multi-variable equations

**DAY 1: Solving Equations with Multiplication**

Objectives

* Students will review solving linear equations and learn how to solve linear equations that involve multiplication.

Agenda

1. Warm-up - Stations Activity
2. Day One Handout

Homework

**DAY 2: Linear Equations – Slope-Intercept Form to Standard Form**

Objectives

* Students will be introduced to a different form of y = mx + b and practice solving multivariable equations for one of the variables.

Agenda

1. Review Homework
2. Lesson 3.3.2, problems 3-87 thru 91

Homework

3-93 thru 3-97

**DAY 3: Summary of Linear Equations**

Objectives

* To describe linear equations in Comic Strip form

Agenda

1. Review Homework
2. Mini Quiz #1
3. Comic Strip Activity

Homework

 None – have a great break!

**DAY 4: Solving Word Problems by Writing Equations**

Objectives

* Define variables, write equations and solve word problems. Review connections between a graph, table and the equations.

Agenda

1. Section 4.1.1 problem 4-1 thru 4-7

Homework

 4-8 thru 4-14

**DAY 5: Performance Task**

Objectives

* Use multiple representations (tables, rules, graphs) to solve a word problem

Agenda

1. Review Homework.
2. Warm-up: Solving Equations and Simplifying Expressions
3. The Environmental Club

Homework

4-15 thru 4-19

**DAY 6: How many equations do I need?**

Objectives

* Continue to learn how to write equations from word problems. Solve a system of equations by rewriting of the equations so that they can use the Equal Values Method.

Agenda

1. Review Homework
2. Intersection Wrap-Up
3. Review for Test

Homework

4-25 thru 4-30

**DAY 7: Unit Test**

Objectives

* Ace the unit test today!

Agenda

1. Review Homework.
2. Unit Test

Homework

**DAY 8: Review for Midterm**