PCSD Lesson Planning Template

Grade Level 9th Algebra I	**Teacher/Room**: S. Pinson/Room 182			Week of: October 10-14, 2016
Unit Vocabulary: see attached				
Instructional Strategies Used: direct instruction, independent study, interactive instruction, partners				
Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**
GSE/GPS Standard(s): **MGSE9-12.A.CED.2** Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	**GSE/GPS Standard(s)**: **MGSE9-12.A.CED.2** Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	**GSE/GPS Standard(s)**: **MGSE9-12.A.REI.12** Graph the solution set to a linear inequality in two variables.	**GSE/GPS Standard(s)**: **MGSE9-12.A.REI.12** Graph the solution set to a linear inequality in two variables.	**GSE/GPS Standard(s)**: **MGSE9-12.A.REI.6** Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
EQ Question: How do I graph equations on coordinate axes with the correct labels and scales?	**EQ Question**: How do I graph equations on coordinate axes with the correct labels and scales?	**EQ Question**: How do I graph a linear inequality in two variables?	**EQ Question**: How do I graph a linear inequality in two variables?	**EQ Question:** How do I solve a system of linear equations by substitution?
Mini Lesson: 24 **Activating Strategies:** How would you graph this? x + y = 8 **Lesson:** Graphing, by t-table method 1. Computer Lab 2. Pretest 3. Introduction of Graphing with t-table 4. Guided Practice with Graph Boards 5. Assignment-including Friday WS **Resource/Materials:** Graphs, Markers, Power Point, graphic organizers, worksheets	**Mini Lesson**: Computer Lab **Activating Strategies:** Solve for y: 3x – 15y + 21 + 4x = 42 -16y– 2x – x + 3 **Lesson:** Graphing by slope-intercept method 1. Powerpoint with Cornell Notes 2. Guided Practice with White Boards 3. Assignment 4. Ticket out the door **Resource/Materials:** Graphs, Markers, Power Point, graphic organizers, worksheets	**Mini Lesson:** Quiz **Activating Strategies:** Solving inequalities **Lesson:** Graphing inequalities 1. Notes with Graphic Organizer 2. Guided Practice 3. Assignment **Resource/Materials:** Graphs, colored pencils, graphic organizers, Power Point, worksheets	**Mini Lesson**: Computer Lab **Activating Strategies:** Solving inequalities **Lesson:** Graphing inequalities and Solving Systems by Graphing 1. Notes on Solving Inequalities with Graphic Organizer 2. Guided Practice 3. Notes: Solving Systems by Graphing 4. Guided Practice with White Board 5. Assignment **Resource/Materials:** Graph Boards, markers, graphic organizers, Power Point, worksheets	**Mini Lesson:** Solving Systems by Graphing **Activating Strategies:** Right/Wrong: Solving by substitution **Lesson**: Solving Systems by Substitution 1. Quiz on Friday WS 2. Powerpoint with guided notes 3. Graphic Organizer 4. Practice Problems (Partners) 5. Assignment **Resource/Materials:** Powerpoint, Graphic Organizers, Guided Notes, Worksheet
Differentiation: *Content/Process/Product:* graphic organizer, graphing boards *Grouping Strategy:* *Assessment:*	**Differentiation:** *Content/Process/Product:* Cornell notes, white boards, USATestPrep *Grouping Strategy:* *Assessment:*	**Differentiation:** *Content/Process/Product:* Partners *Grouping Strategy:* random *Assessment:*	**Differentiation:** *Content/Process/Product:* graphic organizer, graph boards, USATestPrep *Grouping Strategy:* *Assessment:*	**Differentiation:** *Content/Process/Product:* graphic organizer, guided notes *Grouping Strategy: Partners* *Assessment:* teacher observation
Assessment : *Formative:* graph boards, thumbs up/down *Summative:*	**Assessment :** *Formative:* white boards, ticket-out-the-door *Summative:*	**Assessment :** *Formative:* quiz on graphing equations *Summative:*	**Assessment :** *Formative:* thumbs up/down *Summative:*	**Assessment :** *Formative:* thumbs up/down, monitoring classwork *Summative:*
Homework: worksheets	**Homework:** worksheets	**Homework:** worksheets	**Homework:** worksheets	**Homework**: Solving by Substitution WS

• **Algebra**. The branch of mathematics that deals with relationships between numbers, utilizing letters and other symbols to represent specific sets of numbers, or to describe a pattern of relationships between numbers.

• **Arithmetic Sequence**. A sequence of numbers in which the difference between any two consecutive terms is the same.

• **Average Rate of Change**. The change in the value of a quantity by the elapsed time. For a function, this is the change in the y-value divided by the change in the x-value for two distinct points on the graph.

• **Coefficient**. A number multiplied by a variable in an algebraic expression.

• **Constant Rate of Change**. With respect to the variable x of a linear function y = f(x), the constant rate of change is the slope of its graph.

• **Continuous**. Describes a connected set of numbers, such as an interval.

• **Discrete**. A set with elements that are disconnected.

• **Domain**. The set of x-coordinates of the set of points on a graph; the set of x-coordinates of a given set of ordered pairs. The value that is the input in a function or relation.

• **End Behaviors**. The appearance of a graph as it is followed farther and farther in either direction.

• **Equation**. A number sentence that contains an equals symbol.

• **Explicit Formula**. A formula that allows direct computation of any term for a sequence $a_1, a_2, a_3, \ldots, a_n, \ldots$.

• **Expression**. Any mathematical calculation or formula combining numbers and/or variables using sums, differences, products, quotients including fractions, exponents, roots, logarithms, functions, or other mathematical operations.

• **Factor**. For any number x, the numbers that can be evenly divided into x are called factors of x. For example, the number 20 has the factors 1, 2, 4, 5, 10, and 20.

• **Inequality**. Any mathematical sentence that contains the symbols > (greater than), < (less than), ≤ (less than or equal to), or ≥ (greater than or equal to).

• **Interval Notation**. A notation representing an interval as a pair of numbers. The numbers are the endpoints of the interval. Parentheses and/or brackets are used to show whether the endpoints are excluded or included.

- **Linear Function**. A function with a constant rate of change and a straight line graph.

- **Linear Model**. A linear function representing real-world phenomena. The model also represents patterns found in graphs and/or data.

- **Ordered Pair**. A pair of numbers, (x, y), that indicate the position of a point on a Cartesian plane.

- **Parameter**. The independent variable or variables in a system of equations with more than one dependent variable.

- **Range**. The set of all possible outputs of a function.

- **Recursive Formula**. A formula that requires the computation of all previous terms to find the value of an.

- **Slope**. The ratio of the vertical and horizontal changes between two points on a surface or a line.

- **Substitution**. To replace one element of a mathematical equation or expression with another.

- **Term**. A value in a sequence--the first value in a sequence is the 1st term, the second value is the 2nd term, and so on; a term is also any of the monomials that make up a polynomial.

- **Variable**. A letter or symbol used to represent a number.

- **X-intercept**. The point where a line meets or crosses the x-axis

- **Y-intercept**. The point where a line meets or crosses the y-axis