PCSD Lesson Planning Template

Grade Level 9th Algebra I	**Teacher/Room**: S.Pinson/Room 182	Week of: December 5-9, 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**
Common Core Standard(s): **MGSE9-12.A.CED.2** Create linear, quadratic, and exponential 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 linear, quadratic, and exponential equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	**Common Core Standard(s)**: **MGSE9-12.A.CED.2** Create linear, quadratic, and exponential equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Common Core Standard(s): MGSE9-12.A.CED.2 Create linear, quadratic, and exponential equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	**Common Core Standard(s)**: **MGSE9-12.A.CED.2** Create linear, quadratic, and exponential equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
EQ Question: Can I write an equation of a line when given a graph?	**EQ Question:** Can I write an equation of a line when given two points?	**EQ Question:** How do I graph a linear equation in one and two variables?	EQ Question: How do I graph a linear equation in one and two variables?	**EQ Question:**
Mini Lesson: 24 **Activating Strategies:** Matching Lines with Equations Activity (Partners) **Lesson:** Graphing Linear Equations and Writing Equations of Lines in Slope-Intercept Form 1. Guided Notes 2. Guided Practice 3. Assignment **Resource/Materials:** Powerpoint, Worksheets	**Mini Lesson:** computer lab **Activating Strategies:** What are the different methods to find slope? **Lesson:** Writing Equations given Two Points 1. Computer Lab 2. Guided Notes 3. Guided Practice 4. Classwork (partners) **Resource/Materials:** Powerpoint, worksheets	**White Christmas** **Mini Lesson:** Warm Up – Slope PPT **Activating Strategies:** instructions for activity **Lesson:** Computer Lab **Classwork:** Stained Glass Activity **Resource/Materials:** Powerpoint, Worksheets	Mini Lesson: graphing lines **Activating Strategies:** instructions for activity Lesson: Practice Graphing Linear Equations Classwork: Stained Glass Activity Resource/Materials: Powerpoint, Worksheets	**Mini Lesson:** 24 **Activating Strategies:** Instructions for the Activity **Lesson**: 1. Graphing Stories http://graphingstories.com/ 2. Classwork **Resource/Materials:** Powerpoint, Worksheets
Differentiation: *Content/Process/Product:* Guided Notes, Guided Practice *Grouping Strategy:* Partners *Assessment:* Teacher Observation	**Differentiation:** *Content/Process/Product:* USATestPrep *Grouping Strategy:* Partners *Assessment:* teacher observation	**Differentiation:** *Content/Process/Product:* *Grouping Strategy:* *Assessment:*	**Differentiation:** *Content/Process/Product:* *Grouping Strategy:* *Assessment:*	**Differentiation:** *Content/Process/Product:* *Grouping Strategy:* *Assessment:*
Assessment : *Formative:* thumbs up/down, monitoring classwork *Summative:*	**Assessment :** *Formative:* thumbs up/down, monitoring classwork *Summative:*	**Assessment :** *Formative:* thumbs up/down, monitoring classwork *Summative:*	*Assessment :* *Formative:* thumbs up/down, monitoring classwork *Summative:*	**Assessment :** *Formative:* thumbs up/down, monitoring classwork *Summative:*
Homework: Slope-Intercept Form WS, Writing Equations of Lines Given a Graph	**Homework:** Writing Equations from Two Points WS	**Homework:** Finish picture	Homework: Finish picture	**Homework:** none

- **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