Common Core Lesson Planning Template

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Grade Level 10th-12th	**Teacher/Room**: Daniels 214 Week of: February 6-10, 2017			
Unit Vocabulary: Systems of Equations- Chapter 3 Algebra ll				
Instructional Strategies Used: direct instruction, independent study, interactive instruction				
Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**
Georgia Standards of Excellence **MGSE9-12.A.REI.11** Represent and solve equations and inequalities graphically **MGSE9-12.A.CED.3** Represent constraints by equations or inequalities, and by systems of equation and/or inequalities, and interpret data points as possible (i.e. a solution) or not possible (i.e. a non-solution) under the established constraints	**Georgia Standards of Excellence** **MGSE9-12.A.REI.11** Represent and solve equations and inequalities graphically **MGSE9-12.A.CED.3** Represent constraints by equations or inequalities, and by systems of equation and/or inequalities, and interpret data points as possible (i.e. a solution) or not possible (i.e. a non-solution) under the established constraints	**Georgia Standards of Excellence** **MGSE9-12.A.REI.11** Represent and solve equations and inequalities graphically **MGSE9-12.A.CED.3** Represent constraints by equations or inequalities, and by systems of equation and/or inequalities, and interpret data points as possible (i.e. a solution) or not possible (i.e. a non-solution) under the established constraints	**Georgia Standards of Excellence** **MGSE9-12.A.REI.11** Represent and solve equations and inequalities graphically **MGSE9-12.A.CED.3** Represent constraints by equations or inequalities, and by systems of equation and/or inequalities, and interpret data points as possible (i.e. a solution) or not possible (i.e. a non-solution) under the established constraints	**Georgia Standards of Excellence** **MGSE9-12.A.REI.11** Represent and solve equations and inequalities graphically **MGSE9-12.A.CED.3** Represent constraints by equations or inequalities, and by systems of equation and/or inequalities, and interpret data points as possible (i.e. a solution) or not possible (i.e. a non-solution) under the established constraints
EQ Question: 1.How can I graph and solve systems of linear equations in two variables?	**EQ Question:** 1.How can I use algebraic methods to solve linear systems?	**EQ Question:** 1.How can I graph a system of linear inequalities to find the solutions of the system?	**EQ Question:** 1.How can I solve systems of linear equations in three variables?	**EQ Question:** 1. How can I demonstrate mastery of systems of equation
Mini Lesson: Warm Up- Number talk-Races **Activating Strategies:** Review week 1/30-2/3 And Friday's quiz Youtube video on solutions **Lesson: 1.** Solving Linear Systems by graphing **Resource/Materials:** Graph paper, rulers, examples	**Mini Lesson:** Warm Up- Number talk-Races **Activating Strategies:** Check homework Youtube teacher-made music "graphing" **Lesson:** Solving Linear Systems Algebraically **Resource/Materials:** P148, youtube, Puzzle, rulers	**Mini Lesson:** Warm up- Number talk-Races **Activating Strategies:** Check homework, Moose nutritional requirements **Lesson**: Graphing and Solving Systems of Linear Inequalities **Resource/Materials:** Practice packet, rulers, P156 Task and examples	**Mini Lesson:** Warm Up- Number talk-Races **Activating Strategies:** Check homework 3-D design **Lesson1.** Graphing linear equations in three variables **Resource/Materials:** Textbook, sample problems	**Mini Lesson:** Warm Up- Number talk-Races **Activating Strategies:** Check homework/Review **Lesson:** Review/ weekly test USA Test Prep cmptr lab **Resource/Materials:** Review, test, cmptr lab
Differentiation: *Content/Process/Product: groups* *Grouping Strategy: Basic slope intercept for group A* *Advanced "Standard" form graphing*	**Differentiation:** *Content/Process/Product:* *Grouping Strategy: Practice with simple elimination (group A) and more advanced (Group B)*	**Differentiation:** *Content/Process/Product:* *Grouping Strategy: Basic slope intercept form (inequalities)for group A*	**Differentiation:** *Content/Process/Product:* *Grouping Strategy: lesson is mainly for Group B. Students in group A continue finding solutions using all*	**Differentiation:** *Content/Process/Product:* *Grouping Strategy:* *USA Test Prep in Computer lab after test/quiz*

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for Group B *Assessment:TOD*	*AssessmentTOD*	*Advanced "Standard" form (Inequalities) graphing for Group B* *Assessment:TOD*	*three forms with two variable* *Assessment:TOD*	*Assessment:TOD*
Assessment : **weekly test**	**Assessment:** **Weekly test**	**Assessment:** **Weekly test**	**Assessment:** **Weekly test**	**Assessment:** **Weekly test** **Chapter 3 :** **3.1-3.5**
Homework: Graphing Packet slope intercept	**Homework:** Graphing packet standard form Puzzle solving systems using algebra/substitution method	**Homework:** Graphing Inequality packet	**Homework:** Algebra ll book page 181-82 12-29	**Homework:** No homework

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GSE Algebra II/ Advanced Algebra
Unit 6: Mathematical Modeling

Vocabulary:

Absolute Value: The absolute value of a number is the distance the number is from zero on the number line.
• **Base** (of a Power): The number or expression used as a factor for repeated multiplication
• **Geometric Sequence**: is a sequence with a constant ratio between successive terms
• **Geometric Series**: the expression formed by adding the terms of a geometric sequence
• **Degree**: The exponent of a number or expression
•
Degree of a Polynomial: The largest exponent of x which appears in the polynomial
• **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.
• **Estimate**: A guess about the size, cost, or quantity of something.
• **Exponential**: A number written with an exponent. For example, 6,3 is called an exponential expression.
• **Factor**: When two or more integers are multiplied, each integer is a factor of the product. "To factor" means to write the number or term as a product of its factors.
• **Function**: A rule of matching elements of two sets of numbers in which an input value from the first set has only one output value in the second set.
• **Graph of a Function**: The set of all the points on a coordinate plane whose coordinates make the rule of function true.
• **Integer**: The set of numbers ...,-3,-2,-1,0,1,2,3,…
• **Interest**: The percent of the money on deposit (the principal) paid to a lender for the use of the principle
• **Interval**: A regular distance or space between values. The set of points between two numbers.
• **Pattern**: A set of numbers or objects that are generated by following a specific rule.
• **Power**: The exponent of a number or expression, which indicates the number of times the number or expression is used as a factor.

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ESSENTIAL QUESTIONS

- How can an appropriate equation be built by looking at a mathematical pattern?
- How can prior knowledge of functions be used to build precise and efficient models?
- How do the multiple representation of functions aid in building more efficient and more accurate models?
- How can technology be employed to help build mathematical models, and how can it be used to assess the appropriateness of a specific model?
- How can we derive and apply the formula for the sum of a finite geometric series?
- How can both algebraic and geometric models optimize particular important values?
- How can systems of equations and inequalities be used to define feasible regions of solutions to solve problems?
- What is the purpose of building constraints for a model, including using constraints to define feasible solutions and using domain restrictions when analyzing graphs to ensure validity of a function?
- Why is revision necessary in model building?
- Why is a deep knowledge of the various types of basic mathematical functions absolutely necessary in order to build models for real-world phenomena?
- Why is building functions, including combining and composing functions, important in the process of mathematical modeling?

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