Geary Lesson Plans

Teacher Name	Subject	Grade Level
Danny Blackshear	Algebra II	10-11

Title of Unit/Lesson		
Unit 1: Systems and Functions		

Duration of Lesson	Date(s)
35 Days – October 2	9/21/20 – 9/25/20

Learning Goals/Objectives	Language Objectives	Standards
- I can specify domain and range using: ✓ Algebraic notation ✓ Set notation ✓ Interval notation - I can evaluate a function at a given point in its domain. - I can perform the following operations using function notation: ✓ Add ✓ Subtract ✓ Multiply - I can recognize restrictions on the domain. - I can combine functions by composition.	Teacher - I will use the proper vocabulary and language of mathematics. Student - My students will be reminded to use proper vocabulary at all times.	- A2.F.1.1 – Use algebraic, interval, and set notations to specify domain and range of functions of various types and evaluate a function at a given point in its domain. - A2.F.2.1 – Add, subtract, multiply, and divide functions using function notation and recognize domain restrictions. - A2.F.2.2 – Combine functions by composition and recognize that $g(x) = f^{-1}(x)m$ is the inverse function of $f(x)$, if and only if $f(g(x)) = g(f(x)) = x$ - A2.A.1.8 – Represent real-world and mathematical problems using systems of linear equations with a maximum of three variables and solve using various methods that may include substitution, elimination, and graphing (may include graphing calculators or other appropriate technology). - A2.F.1.2 – Recognize the graphs of exponential, radical (square and cube root only), quadratic, and logarithmic functions.

		Predict the effects of transformations algebraically and graphically, using various methods and tools that may include graphing calculators or other appropriate technology.

Learning Targets (list what students should be able to do or understand at each level)

2.0 Foundational Skills	3.0 Learning Goal/Objective	4.0 More Complex Knowledge

Can the student:
 	
● I can simplify linear polynomial expressions.
● I can simplify absolute value and radical expressions with help.
	Can the student:
	
	● I can simplify and evaluate linear, absolute value and radical expressions.
		Can the student:
		
		● I can simplify and evaluate any algebraic expression to include:
		  ✓ Linear expressions
		  ✓ Radical expressions
		  ✓ Absolute Value expressions
		  ✓ Non-standard expressions
		● I can interpret the solutions in context.

Assessment & Monitoring (How will you know you've attained the desired effect?)

Constant monitoring. Can the student explain their reasoning? Can the student reproduce independent work?

Instructional Strategies/Lesson Activities/Transitions

Anticipated Date	Assignments	Resources, Materials and Technology Needed
9.21.20	Review 20 min: ● Domain and range using various styles of notation ● Evaluating a function at a given point in the domain New material: ● Determining restrictions on the domain	N/A
9.22.20	Review 10-15 minutes: ● Domain and range ● Evaluating a function at a given point in the domain ● Determining restrictions on the domain New material: ● Composition of functions	N/A

9.23.20	Guided practice for 20 minutes: • Composition of functions Independent practice for the remainder.	N/A
9.24.20	Quiz: • Domain and range	N/A
9.25.20	Substitute: • Revolving review: due Monday when you walk in the door.	N/A

Adaptations and Accommodations (ELL, Special Education, Gifted, Those without Support)

Hand-picked elbow partners, calculators, additional time on assignments, reduced number of items.

Vocabulary:
- Relation
- Domain
- Function rule
- Function notation
- Output
- Transformation
- Simplify
- System
- Equivalent equations
- Function
- Range
- Restriction
- Inverse
- Vertical line test
- Piecewise function
- Evaluate
- Solution
- Ordered pair
- Set
- Composite
- Input
- Solve
- Equation
- Inverse operation