Geary Lesson Plans

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

Title of Unit/Lesson
Unit 2: Quadratic Functions

Duration of Lesson	Date(s)
15 Days – November 6	10/19/20 – 10/23/20

Learning Goals/Objectives	Language Objectives	Standards
• I can recognize that a quadratic function has different representations (standard form, vertex form, factored form). • I can graph a quadratic function, identify the x and y intercepts, identify the maximum or minimum value, the axis of symmetry, and the vertex using various methods and tools that may include a graphing calculator or appropriate technology. • Recognize the graphs of exponential, radical (square and cube root only), quadratic and logarithmic functions. • I can predict the effects of transformations ($f(x+c)$, $f(x)+c$, $f(cx)$, and $cf(x)$ where *c* is a positive or negative real-valued constant) algebraically and graphically, using various methods and tools that may include graphing calculators or other appropriate technology.	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.A.2.3 • A2.F.1.3 • A2.F.1.2

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
10.19.20	Fall Break	N/A
10.20.20	Quadratic functions: • Standard, vertex and factored forms ✓ What information do we know from the function rule? ✓ Can I recognize each form? ✓ Can I graph and identify critical information to include: ▪ Intercepts (x and y), maximum or minimum, the axis of symmetry, and the vertex.	N/A
10.21.20	Review Tuesday's material followed by an exit ticket.	N/A
10.22.20	Transformations: • $f(x+c)$ • $f(x)+c$ • $f(cx)$ • $cf(x)$	N/A
10.23.20	Review Thursday's material followed by an exit ticket.	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:

Quadratic	Minimum	Domain	Parabola
Axis of symmetry	Focus	Vertex	Maximum
Range	Standard form	Vertex form	Directrix
y-intercept	x-intercept	Set notation	Interval notation
Latus rectum			