

S. P. ARNETT MIDDLE SCHOOL  
COMMON CORE ALIGNED LESSON PLAN TEMPLATE

TEACHER: Ashleigh Richardson

SUBJECT: Mathematics

DATE: February 5-9, 2024

GRADE: 8<sup>th</sup>

CCSS: Common Core Learning Standard(s) Addressed:

**MATH**

8.EE.B-Understand the connections between proportional relationships, lines, and linear equations.

8.EE.B.5-Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.

8.EE.B.6-Use similar triangles to explain why the slope  $m$  is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation  $y = mx$  for a line through the origin and the equation  $y = mx + b$  for a line intercepting the vertical axis at  $b$ .

**ALGEBRA 1**

HSA-SSE.A.2-Use the structure of an expression to identify ways to rewrite it.

For example, see  $x^4 - y^4$  as  $(x^2)^2 - (y^2)^2$ , thus recognizing it as a difference of squares that can be factored as  $(x^2 - y^2)(x^2 + y^2)$ .

HSA-CED.A.1-Create equations and inequalities in one variable and use them to solve problems.

Include equations arising from linear and quadratic functions, and simple rational and exponential functions.

HSA-CED.A.2-Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

HSA-SSE.B.3.a-Factor a quadratic expression to reveal the zeros of the function it defines.

HSF-IF.C.7.a-Graph linear and quadratic functions and show intercepts, maxima, and minima.

HSF-IF.C.8.a-Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.

HSA-REI.B.4.b-Solve quadratic equations by inspection (e.g., for  $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as  $a \pm bi$  for real numbers  $a$  and  $b$ .

*Danielson, 1c*

**Monday 2/5/24**

Algebra I

- Bellringer: Factor Out a Common Factor
- We Will: Through examining the process of multiplying binomials, we will learn how to reverse that process and factor by splitting the middle term.
- Eureka Math<sup>2</sup> Module 4: Lesson 7: Solving Quadratic Equations by Factoring: Splitting the Linear Term
- I Will: Solve quadratic equations by factoring by splitting the linear term.

Regular Math

- Bellringer: Evaluate Expressions
- We Will: Find solutions to linear equations in two variables.
- Eureka Math<sup>2</sup> Module 4: Lesson 12: Solutions to Linear Equations in Two Variables
- I Will: Graph the solutions in the coordinate plane

**Tuesday 2/6/24**

Algebra I

- Bellringer: Factor Quadratic Expressions
- We Will: Work in groups to choose which factoring method to use when solving four quadratic equations.
- Eureka Math<sup>2</sup> Module 4: Lesson 8: A Summary of Solving Quadratic Equations by Factoring
- I Will: Solve quadratic equations by strategically using a factoring method.

Regular Math

- Bellringer: Identify the Equation
- We Will: Graph several non-integer solutions, to conclude that the graph of the equation is a straight line.
- Eureka Math<sup>2</sup> Module 4: Lesson 13: The Graph of a Linear Equation in Two Variables
- I Will: Identify that the graph of a linear equation of the form  $Ax + By = C$  is a line.

### Wednesday 2/7/24

#### Algebra I

- Bellringer: Create Expressions to Represent Situations
- We Will: Work together as a class to move through the problem-solving process which includes writing and solving an equation.
- Eureka Math<sup>2</sup> Module 4: Lesson 9: Creating and Solving Quadratic Equations in One Variable
- I Will: Write and solve quadratic equations in one variable for a given context.

#### Regular Math

- Bellringer: Find Solutions to a Linear Equations in Two Variables
- We Will: Begin the lesson by making observations and asking questions about the equations  $0x + y = 5$  and  $x + 0y = 2$ .
- Eureka Math<sup>2</sup> Module 4: Lesson 14: Lines with Special Characteristics
- I Will: Graph linear equations of the form  $Ax = C$  and  $By = C$  where A and B are nonzeros.

### Thursday 2/8/24

#### Algebra I

- Bellringer: Find  $f(0)$  and Values of "x" where  $f(x) = 0$
- We Will: Find zeros of quadratic functions by factoring.
- Eureka Math<sup>2</sup> Module 4: Lesson 10: Zeros of Functions
- I Will: Write an equation for a quadratic function given its zeros

#### Regular Math

- Bellringer: Study for Quiz
- We Will: Review and ask any question from the Study Guide
- Eureka Math<sup>2</sup> Module 4: Topic C Quiz (Lesson 12-14)
- I Will: Take the Eureka Math<sup>2</sup> Module 4: Topic C Quiz

### Friday 2/9/24

#### Algebra I

- Bellringer: Factor Quadratic Expressions
- We Will: Write equations for a function in factored form to model a given context.
- Eureka Math<sup>2</sup> Module 4: Lesson 11: Graphing Quadratic Functions from Factored Form
- I Will: Use the factored form of a quadratic function to sketch its graph.

#### Regular Math

- Bellringer: Determine Values in a Proportional Relationship
- We Will: Graph two proportional relationships and use unit rate to compare the steepness of each line.
- Eureka Math<sup>2</sup> Module 4: Lesson 15: Comparing Proportional Relationships
- I Will: Compare proportional relationships represented in different ways.

*Danielson, 2c, 3b, 3c,*

Resources/Materials: (What texts, digital resources, & materials will be used for this lesson?)

1. Bellringer PDF
2. Other materials embedded in daily lesson/activity plan

*Danielson, 2c, 3c*