

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

TEACHER: Ashleigh Richardson

SUBJECT: Mathematics

DATE: December 11-15, 2023

GRADE: 8<sup>th</sup>

CCSS: Common Core Learning Standard(s) Addressed:

**MATH**

8.G.A.3-Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates. (Rotations are only about the origin, dilations only use the origin as the center of dilation, and reflections are only over the y-axis and x-axis in Grade 8.)

8.G.A.4-Explain that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. (Rotations are only about the origin, dilations only use the origin as the center of dilation, and reflections are only over the y-axis and x-axis in Grade 8.)

8.G.A.5-Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.

**ALGEBRA 1**

A1.A-REI.D.11-Explain why the x-coordinates of the points where the graphs of the equations  $y = f(x)$  and  $y = g(x)$  intersect are the solutions of the equation  $f(x) = g(x)$ ; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where  $f(x)$  and/or  $g(x)$  are linear, polynomial, rational, piecewise linear (to include absolute value), and exponential functions.

A1.F-IF.B.4-For linear, piecewise linear (to include absolute value), quadratic, and exponential functions that model a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; and end behavior.

A1.F-IF.C.9-Compare properties of two functions (linear, quadratic, piecewise linear [to include absolute value] or exponential) each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).

*Danielson, 1c*

**Monday 12/11/23**

Algebra I

- Bellringer: Checking Possible Solutions to Systems of Equations
- We Will: Solve equations of the form  $f(x) = g(x)$  graphically by looking for the intersection points of the graphs of  $y=f(x)$  and  $y=g(x)$ .
- Eureka Math<sup>2</sup> Module 3: Lesson 10: Using Graphs to Solve Equations
- I Will: Solve both familiar and unfamiliar types of equations.

Regular Math

- Bellringer: Solve Equations
- We Will: Precisely describe a dilation given a figure and its image.
- Eureka Math<sup>2</sup> Module 3: Lesson 9: Describing Dilations
- I Will: Study dilations to precisely describe them by using the center and scale factor.

**Tuesday 12/12/23**

Algebra I

- Bellringer: Graph Linear Functions Represented by a Table
- We Will: Compare properties of functions that are represented in different ways.
- Eureka Math<sup>2</sup> Module 3: Lesson 11: Comparing Functions
- I Will: Develop and compare strategies as we practice comparing functions represented in different ways.

Regular Math

- Bellringer: Apply Transformations.
- We Will: Apply sequences of transformations.
- Eureka Math<sup>2</sup> Module 3: Lesson 10: Sequencing Transformations
- I Will: Recognize a sequence that involves a dilation and a translation as a single dilation.

### Wednesday 12/13/23

#### Algebra I

- Bellringer: Identify the Key Features of Functions in Context
- We Will: Engage in the modeling cycle to represent a real-world context with a graph.
- Eureka Math<sup>2</sup> Module 3: Lesson 12: Mars Curiosity Rover
- I Will: Experience the modeling cycle by exploring the landing of the Mars Curiosity rover.

#### Regular Math

- Bellringer: Describe a Sequence of Rigid Motions
- We Will: Identify properties of similar figures.
- Eureka Math<sup>2</sup> Module 3: Lesson 11: Similar Figures
- I will: Describe a sequence of rigid motions or dilations, or both, to show that two figures are similar

### Thursday 12/14/23

#### Algebra I

- Bellringer: Study for Quiz
- We Will: Review Study Guide and Ask Question for Eureka Math2 Module 3: Topic B Quiz
- Eureka Math<sup>2</sup> Module 3: Topic B Quiz
- I Will: Take the Eureka Math2 Module 3: Topic B Quiz

#### Regular Math

- Bellringer: Finding the Missing Angle Measure
- We Will: Recognize that triangles with two pairs of congruent angles are similar.
- Eureka Math<sup>2</sup> Module 3: Lesson 12: Exploring Angles in Similar Triangles
- I Will: Determine whether two triangles are similar by the angle-angle criterion and explain.

### Friday 12/15/23

#### Algebra I

- Bellringer: Write solutions in set Notation
- We Will: Create a graph and an equation of a piecewise linear function to model a situation.
- Eureka Math<sup>2</sup> Module 3: Lesson 13: Modeling Elevation as a Function of Time
- I Will: Apply what they know about intervals on which functions increase, decrease, and are constant to make sense of how to represent the piecewise linear function with an equation.

#### Regular Math

- Bellringer: Determine Similarity
- We Will: Determine whether two triangles are similar by the angle-angle criterion.
- Eureka Math<sup>2</sup> Module 3: Lesson 13: Similar Triangles
- I Will: Describe how we can use angle relationships to help us show that two triangles are similar.

*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*