

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

TEACHER: Ashleigh Richardson

SUBJECT: Mathematics

DATE: April 8-12, 2024

GRADE: 8th

CCSS: Common Core Learning Standard(s) Addressed:

MATH

8.EE.C.8.c-Solve real-world and mathematical problems leading to two linear equations in two variables.

8.EE.C.8.a-Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.

8.EE.C.8.b-Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.

ALGEBRA 1

HSN-RN.A.1-Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.

HSN-RN.A.2-Rewrite expressions involving radicals and rational exponents using the properties of exponents.

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

HSF-BF.B.3-Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology.

HSF-LE.A.2-Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).

HSA-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, absolute value, exponential, and logarithmic functions.

HSA-SSE.A.1.b-Interpret complicated expressions by viewing one or more of their parts as a single entity.

Danielson, 1c

Monday 4/8/24

Algebra I

- Bellringer: Rewrite Exponential Expressions
- We Will: Extend exponent properties to rational exponents.
- Eureka Math² Module 5: Lesson 10: Rational Exponents
- I Will: Evaluate numerical expressions in the form $b^{\frac{m}{n}}$ for positive real numbers b , integers m , and where n is 2 or 3.

Regular Math

- Bellringer: Functions
- We Will: Discuss what a function.
- Lesson: What is a Function?
- I Will: Be able to recognize what is a function.

Tuesday 4/9/24

Algebra I

- Bellringer: Identify Key Features of a Function and Its Graph
- We Will: Graph exponential functions in the form $f(x) = b^x$ where $b > 0$ and $b \neq 1$.
- Eureka Math² Module 5: Lesson 11: Graphing Exponential Functions
- I Will: Identify key features of the graphs of exponential functions in the form $f(x) = b^x$.

Regular Math

- Bellringer: Find Slope
- We Will: Learn how to determine if a function is linear or nonlinear.
- Lesson: Linear vs. Nonlinear Functions
- I Will: I will be able to determine whether a function is linear or nonlinear without having a graph.

Wednesday 4/10/24

Algebra I

- Bellringer: Transform the Graph of a Quadratic Function
- We Will: Apply transformations of graphs of exponential functions in the form $f(x)=b^x$ where $b > 1$.
- Eureka Math² Module 5: Lesson 12: Using Transformations to Graph Exponential Functions (Bases Greater Than 1)
- I Will: Identify key features of the graphs of exponential functions.

Regular Math

- Bellringer: Functions
- We Will: Compare properties of functions using different representations of functions.
- Lesson: Comparing properties of functions.
- I Will: Be able to compare two functions that are represented in different ways.

Thursday 4/11/24

Algebra I

- Sub Work

Regular Math

- Sub Work

Friday 4/12/24

Algebra I

- Bellringer: Transform the Graph of the Absolute Value Function
- We Will: Graph transformations of the graphs of $f(x)=b^x$ where $0 < b < 1$.
- Eureka Math² Module 5: Lesson 13: Using Transformations to Graph Exponential Functions (Bases Between 0 and 1).
- I Will: Identify key features of exponential functions and their graphs.

Regular Math

- Bellringer: Functions
- We Will: Review any questions and discuss notes on functions.
- Functions Quiz
- I Will: Take the Quiz on Functions.

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