

Berryville–Middle School Lesson Plan

Teacher Name: Ashley Hill (Stracener)

Grade Level and Content: 8th Grade Math

Unit Title: Ch. 4 Functions

Lesson(s): Non-Linear and Quadratic Functions

Timeline of Lesson Plan: Start Date: 4/27/15 End Date: 5/1/15

GOALS: Common Core State Standards/AR Frameworks

Number	Description
8.F.4	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values. (A). Construct a linear function. (B). Determine and interpret the slope and y-intercept
8.F.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
8.F.3	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. (A). Interpret slope/y-intercept (B). Analyze linear/non-linear functions
8.F.2	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
8.F.5	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

Enduring Understandings and Essential Questions

Enduring Understandings for Content or Grade Level	Essential and Guiding Questions for Content or Grade Level
How can we model relationships between quantities?	How can you use a graph to write an equation?
	How do tables and graphs represent relations?
	How can you determine if a relation is a function?
	How do you determine whether a function is linear or nonlinear

Learning Activities:

Day	Instructional Plan	Resources	DOK Level
Monday 4/27	Ch. 4, Lesson 7: Linear and Non-Linear Functions (p. 327) HW: P. 315 #1-5 DUE WEDNESDAY 4/29	Workbooks Vol. 1	1
			2
Tuesday 4/28	Ch. 4, Lesson 7: Linear and Non-Linear Functions (p. 327)	Workbooks Vol. 1	1
			2
Wednesday 4/29	Grade HW P. 315 Ch. 4, Lesson 8: Quadratic Functions (p. 335)	Workbooks Vol. 1	1
			2
Thursday 4/30	EOY Math PARCC Test	Workbooks Vol. 1	1
			2
Friday 5/1	EOY English PARCC Test	Workbooks Vol. 1	1
			2

Assessment Evidence

Type and Tools	DOK Level
Formative: Classroom Discussions and Questions	1,2
Formative: Practice Problems and Examples	1,2
Formative: Bell Ringers	
Summative:	1
Summative: Independent Practice	2
Summative:	

Differentiated Instruction Techniques When Applicable:

- Small Group Work
- Repeated Instructions
- Visual Aids
- Extended Time
- Peer/Teacher Tutor
- Enrichment Activities
- Deeper Questioning Techniques
- Critical Thinking Problems