Unit 8 Linear Relationships

Content Area: **Special Education**
Course(s):
Time Period: **September**
Length: **6 weeks**
Status: **Published**

Enduring Understandings

Functions can be represented in a variety of ways, such as graphs, tables, equations, or words. Each representation is particularly useful in certain situations

A function that models a real-world situation can then be used to make estimates or predictions about future occurrences

Essential Questions

How do you use an equation to make predictions about data?

How do you use scatter plots to find correlations between variables?

Content

Vocabulary

Slope

Parallel

Perpendicular

Reciprocal

System

Linear

Line of best fit

Scatter Plot

Skills

Graph parallel and perpendicular lines in a coordinate plane.

Use a graphing calculator to investigate changes in slope on a linear function.

Graph systems of equations to find the solution.

Solve real world applications of systems of linear equations.

Create and analyze scatter plots.

Use a trend line and a line of best fit to make predictions.

Resources

Standards

CCSS: Mathematics

CCSS: Grade 8

Expressions & Equations

8.EE.C. Analyze and solve linear equations and pairs of simultaneous linear equations.

8.EE.C.8. Analyze and solve pairs of simultaneous linear equations.

8.EE.C.8a. 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.8b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6.

8.EE.C.8c. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.

CCSS: HS: Algebra

Creating Equations

HSA-CED.A. Create equations that describe numbers or relationships.

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.

MA.8.EE	Expressions and Equations
MA.8.EE.A	Work with radicals and integer exponents.
MA.8.EE.A.1	Know and apply the properties of integer exponents to generate equivalent numerical expressions.
MA.8.EE.C	Analyze and solve linear equations and pairs of simultaneous linear equations.
MA.8.EE.C.7	Solve linear equations in one variable.