



8th Grade Unit 3: Investigating Data & Statistical Reasoning



Overview:

In this third unit of eighth-grade math, students will extend the study of linear relationships by exploring models and tables. They will apply their functional and graphical reasoning to model relationships between quantities and describe the rate of change. The study of statistics expands from more simplistic samples and collections to bivariate data, which can be graphed and a line of best fit determined. They will also make predictions and answer statistical questions based on data distributions.

Learning Targets:

In Unit 3, students will:

- Show that straight lines are widely used to model relationships between two quantitative variables.
- For scatter plots that suggest a linear association, visually fit a straight line, and informally assess the model of fit by judging the closeness of the data points to the line of best fit.
- Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercepts.
- Explain the meaning of the predicted slope (rate of change) and the predicted intercept (constant term) of a linear model in the context of the data.
- Use appropriate graphical displays from data distributions involving lines of best fit to draw informal inferences.
- Answer the statistical investigative question posed in an unbiased statistical study.

Key Vocabulary: (linked to GA DOE Interactive Glossary)

Bivariate Quantitative Data	Deterministic interpretation	Informal Inferences	Line of Best Fit
Predicted Intercept (Constant term)	Predicted slope (rate of change)	Probabilistic Interpretation	Scatter Plot
Slope y-intercept	Statistical investigative question	Unbiased Statistical Study	x-intercept

Supporting Resources:

<http://ctlslearn.cobbk12.org/>

<https://gavirtual.instructure.com/courses/34331>

[Slope and Intercept](#)

[Graphing Linear Equations](#)

[Constructing a Scatter Plot](#)

[Estimating the Line of Best Fit](#)

[Fitting a Line to Data](#)

[Intro to Intercepts](#)