



Algebra Concepts and Connections Unit 7: Investigating Data



Overview:

In this unit, students will collect, analyze, and interpret univariate quantitative data to answer statistical investigative questions that compare groups to solve real-life problems. Students will represent bivariate data on a scatter plot and fit a function to the data to answer statistical questions and solve real-life problems.

Learning Targets:

In Unit 7, students will:

- Interpret and analyze univariate and bivariate data using center and variability
- Compare and represent center (median and mean) and variability (interquartile range, standard deviation) or two or more distributions by and using technology
- Represent data on a scatter plot
- Use the line of best fit and the correlation coefficient, r , to make predictions and describe the reasonableness of the prediction in the investigation of a practical, real-life situation
- Distinguish between correlation and causation

Key Vocabulary: (linked to GA DOE Interactive Glossary)

Association	Correlation Coefficient	Intercept	Outlier	Shape (Symmetry, Number of Peaks, Direction of Skew, Uniformity)
Bivariate Data	Data Distribution	Interquartile Range	Quantitative Data	Slope
Box Plot	Deviation	Joint Frequencies	Quantitative Variables	Standard Deviation
Categorical Values		Line of Best Fit	Range	Third Quartile
Causation	Dot Plot	Linear Model	Rate of Change	Trend
Center	First Quartile (Q1)	Linear Fit	Regression	Univariate Data
Conditional Frequencies	Five-Number Summary	Marginal Frequencies	Scatter Plot	Variability
Constant	Frequency Table (Two-Way Table)	Mean Absolute Deviation (MAD)	Second Quartile (Q2)	
Correlation	Histogram	Prediction	Shape of Data Distribution	

Supporting Resources:

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

[Center and spread | Worked example](#)

[GA Virtual - Investigating Data](#)

[Use a Scatter Plot to Find a Line of Fit](#)

[Box and whisker plot](#)