Unit #5: Descriptive Statistics

Content Area: **Mathematics**
Course(s): **Algebra 1CP**
Time Period: **Semester 2**
Length: **6 weeks**
Status: **Published**

Standards

MA.S-ID.A.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).
MA.S-ID.A.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
MA.S-ID.A.3	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
MA.S-ID.A.4	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.
MA.S-ID.B.6c	Fit a linear function for a scatter plot that suggests a linear association.
MA.S-ID.C.7	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.

Enduring Understandings

1. Collecting and analyzing data can be used to answer questions.

2. Misuse of data and statistics is common, making it important to be well informed fo the appropriate ways to interpret data.

Essential Questions

1. How can mathematical representations be used to communicate information effectively?

2. When is mathematics an appropriate tool to use in problem solving?

3. How can the results of a statistical investigation be used to support an argument?

Knowledge and Skills

- Measures of center and spread
- data distributions and outliers
- histograms
- box plots
- two-way frequency tables

Transfer Goals

Recognize and solve practical or theoretical problems involving mathematics, including those for which the solution approach is not obvious, by using mathematical reasoning and strategic thinking.

In this unit students will be able to identify when to use core mechanics to solve problems and the proper implementation of these methods.

Resources

Holt Algebra 1, Nichols
Algebra Structure and Method Book 1

Khan Academy

PurpleMath

KutaSoftware

CK-12

Quizlet

Albert I/O

Desmos

Problem-Attic

Classkick