Unit 12:Statistics

Content Area: **Mathematics**
Course(s): **Generic Course**
Time Period: **Semester 2**
Length: **3 weeks**
Status: **Published**

Standards - NJCCS/CCSS

MA.S-IC.A.1	Understand statistics as a process for making inferences about population parameters based on a random sample from that population.
MA.S-IC.B.3	Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.
MA.S-IC.B.5	Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.
MA.S-IC.B.6	Evaluate reports based on data.
MA.S-CP.A.5	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.

Enduring Understandings

Inferences and conclusions can be made from sample surveys, experiments, and observational studies.

The way that data is collected, organized and displayed influences interpretation.

Essential Questions

Why is data collected and analyzed?

What are the ways collected data can be organized and presented?

What are the different calculations used in statistics?

How do people use data to influence others?

How can predictions be made based on data?

Knowledge and Skills

- Calculate the mean, median and mode of a data set
- Create a stem and leaf plot, frequency tables, histograms and ogives
- Use range, standard deviation and variance to make informed decisions

- Interpret normal distribution and non-standard distribution
- Calculate confidence intervals to make informed decisions
- Calculate and interpret regression and r-values

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.

Resources

Precalculus: Graphical, Numerical, Algebraic 10th Edition

Desmos/Amplify

Problem-Attic

Deltamath

Geogebra