

AP Statistics Summer Assignment

Summer 2020

Design: Collecting Samples and Conducting Experiments

***The completed notecards will represent the first quiz grade of the marking period. The first test of the marking period will be based on the concepts covered on the summer packet.**

- 1) Read and annotate the following excerpts from some selected published AP Statistics books.
- 2) Create flash cards (notecards for each word with the word on the front and definition on the back) for the following words using the excerpts from the reading.

Population	Sample	Randomization	Census
Sampling	Experiment	Observational Study	Simple Random Sample (SRS)
Stratified Sampling	Cluster Sampling	Systematic Sampling	Bias
Voluntary Response	Response variable	Undercoverage	Nonresponse
Explanatory variable	Treatments	Factors	Levels
Control Group	Placebo	Experimental Units	Random Assignment
Replication	Completely Randomized Design	Blocked Design	Matched Pairs
Confounding Variables	Cause and Effect	Convenience sampling	Double-blind
Response bias	Wording of questions	inference	

3) (Optional but recommended)

- a) Create a chart that compares good sampling methods and bad sampling methods.
- b) Write 2-3 sentences that show that you know the difference between the types of sampling designs vs. experimental designs.
- c) Know the difference between observational studies and experiments. Know which of the two allows us to make cause and effect inferences.
- d) Know the difference between a sample and a population.

Excerpts were taken from the following publications:

- A Cartoon Guide to Statistics by Gonick and Smith. Chapter 6.
- Stats: Modeling the World, Third Edition, by Bock, Velleman, and De Veaux. Chapters 11-13
- The Practice of Statistics, AP Edition, Fourth Edition, by Starnes, Yates, and Moore. Chapter 4