

Name_____ Date_____ Per_____

Chapter 12: Sample Surveys

Make flash cards for the following vocabulary words: population, sample, sample survey, biased, randomization, census, parameter, statistic, Simple Random Sample (SRS), sampling frame, sampling variability, homogeneous groups, heterogeneous groups, strata, stratified random sample, cluster sampling, multistage sampling, systematic sampling, respondents, voluntary response sample, convenience sampling, undercoverage, nonresponse bias

Guided Reading Questions:

1. Explain the difference between a population, a sampling frame, and a sample.
2. What does it mean for a sample to be representative of a population?
3. What is meant by a biased sample?
4. What is the role of randomization in selecting a sample?
5. What is meant by a census? Why is a census often impractical?
6. Explain the difference between a parameter and a statistic.
7. A Simple Random Sample (SRS) must satisfy what two conditions?
8. What is meant by sampling variability?
9. When is stratified random sampling useful?
10. When is cluster sampling useful?
11. What is meant by a multistage sampling?
12. When is systematic sampling appropriate?
13. In what way are voluntary response samples often biased?
14. Why is convenience sampling unreliable?
15. What is meant by undercoverage? Give an example.
16. Explain the difference between nonresponse bias and response bias.
17. How can the wording of questions cause bias in a survey?

Chapter 13: Experiments

Make flash cards for the following vocabulary words: observational study, retrospective study, prospective study, experiment, random assignment, subjects, participants, experimental units, factors, levels, treatment, block, completely randomized experiment, statistically significant, control, control group, single-blind, double-blind, placebo, placebo effect, matching, confounding.

Guided Reading Questions:

1. Explain the difference between an observational study and an experiment.
2. Explain the difference between experimental units and subjects.
3. Why is it necessary to assign subjects to treatments at random?
4. Describe the four Principles of Experimental Design.
 - Control
 - Randomization
 - Replication
 - Blocking
5. Explain what is meant by a control group.
6. Define statistically significant.
7. What is the purpose of using a single-blind or double-blind experiment?
8. What is a placebo? What is meant by the placebo effect?
9. What is the purpose of using blocking in an experiment?
10. How might confounding affect the results of an experiment?