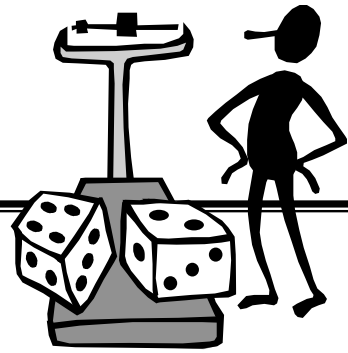


Chapter 13: Experiments



Key Vocabulary:

- 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

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*?

