

BIO 111 Experimental Design Homework Assignment

Below, you will find two columns, one with experimental design terms, and the second with a corresponding letter. Before you leave the first BIO 111 lab, you will be assigned a letter (A-D). Between the first and second lab, based on the letter you were assigned, follow the instructions below to come prepared to your second laboratory meeting.

Concept	Group
Observation Inductive Reasoning Deductive Reasoning Biological Hypotheses Population	A
Sample Independent Sampling Paired Sampling Randomization Replication	B
Variation Bias Statistics Null Hypothesis Alternate Hypothesis	C
Hypothesis Testing Control Group Experimental Group Independent variable Dependent variable	D

Each letter assigned to a student has five terms associated with it in the table above. Prior to our second lab meeting, based on the letter you were assigned:

- 1) Define/identify each concept in the associated group.
- 2) Explain why each concept is an important component of designing an experiment and describe how it is used in biological experiments.
- 3) Be able to provide an example of each concept.
- 4) Describe the relationships between the 5 concepts

Bring this with you to lab next week!

You should also read the [Bean Beetle Handbook](#), which is located on Moodle.