

Biology questions essay examples

[Sociology](#), [Community](#)



1. Why are observations important to science?

Observation refers to the practice of getting knowledge about the outer world through the senses (Marder, 170). Observation is significant in science because it makes it possible for scientists to explain the formation of various processes. Consequently, because of its accuracy, it allows scientists to make plans and initiate an organized method of solving problems. As such, observation may structure the foundation of theories which can later be tested (Marder, 170).

2. Name two (2) Qualities of a Good Hypothesis

A hypothesis refers to a tentative proposition regarding the relationship between two or more variables (Marder, 176). It can also be defined as a formal query to which the researcher aims to seek an answer for it. For a hypothesis to be considered good, it should adhere to certain qualities. First, a fine hypothesis should be rationally consistent with other theories and data in research (Marder, 176). Also, it should have the ability to be pragmatically testable. This means that it should allow for easy collection of data and the subjectivity of this data to test so as to realize objectivity.

3. Why is the hypothesis important to the scientific method?

Generally, scientific method can be said to be driven by hypothesis hence showing the importance of this stage. It follows that scientists try to find out the truth through a hypothesis (Marder, 178). This hypothesis usually has to undergo testing as universally acknowledged methodology to reach to a conclusion that is accepted universally.

4. Why is a control group necessary in an experiment?

A control group is group that is not subjected to the treatments of the

experiment(Marder, 182) . This group is important in any experiment as it enables a researcher to know if a certain outcome is caused by the variable being investigated or other factors rather than this(Marder, 182).

Additionally, a control group is necessary in an experiment as it enables the researcher to prove that the experimental design is able to produce results (Marder, 184).

Reference

Marder, Michael P. Research Methods for Science. Cambridge: Cambridge University Press, 2010. Print.