

Observations and Experiments Practice Worksheet

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1. Fill in the blank(s):
Complete the sentence using one of the following words: *dependent*, *control*, or *experimental*.
The _____ group is the group that is not subjected to the independent variable.
2. An experiment should be used to collect data when a test can be done in the field or in a laboratory.
 - a. TRUE
 - b. FALSE
3. A researcher has a cold and isn't doing her best work. What type of error is this?
 - a. Systematic error
 - b. Random error
 - c. Experimental error
 - d. Controlled error
4. Complete the sentence using one of the following words: *experiment*, *observation*, or *hypothesis*.
A(n) _____ is a designed scientific test done under controlled conditions that may be performed in the field or in a laboratory.

Answer:
5. Random error and systematic error are two types of measurement error in an experiment.
 - a. TRUE
 - b. FALSE
6. The _____ is the factor that is manipulated or changed.
 - a. independent variable
 - b. dependent variable
 - c. control group
7. Fill in the blank(s):
Complete the sentence using the words **observations**, **lab work**, or **hypotheses**.
Scientists rely on _____ when it is not possible to perform experiments directly.
8. Experiments are performed in:

- a. Fields
 - b. Space
 - c. Laboratories
 - d. All of the above
9. Scientists use observations to test hypotheses when experiments do not provide the best source of data.
- a. True
 - b. False
10. In an experiment to test whether vitamin C prevents getting a cold or not, the sample population is divided into two groups so that one group receives the vitamin C dose and one group does not. Which of these is a control group?
- a. The group that doesn't receive vitamin C
 - b. The group that receives vitamin C
 - c. All the sample population
 - d. None of the above

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