

Name: _____ Date: _____ Period: _____

Experimental Design Quiz 1

Part 1: Label the steps of the scientific method below (1-5) in the order that they occurs. 1 represents what would happen first and 5 represents the last step.

- ___ 2 ___ Form a hypothesis
- ___ 5 ___ Analyze Data/ Draw a conclusion
- ___ 1 ___ Make an observation and pose a question
- ___ 3 ___ Make a prediction
- ___ 4 ___ Design an experiment

Part 2: Fill in the blank using the word bank provided. Words may be used once, more than once or not at all.

Prediction	Scientific Theory	Experimental Group	Qualitative
Controlled	Experiment	Independent Variable	Bias
Control Group	Quantitative	Dependent Variable	Hypothesis

- A. When designing an experiment scientists make a statement that forecasts what would happen if the hypothesis were true this is called the prediction. In order to determine this scientists design a(n) experiment. If the experiment is controlled it will have a(n) control group or the group that provides a standard for comparison.
- B. Also, the scientists will have another group called the experimental group which have the changed factors or the independent variable applied to it. When collecting the data scientist will measure or count how the independent variable responds. The Measured or counted variable is called the dependent variable.
- C. During the experimentation that scientist will collect two types of data: quantitative or data that is measurable with instruments or qualitative which is gathered through your senses.
- D. After all of the data collection, analysis and repeatedly testing scientists may be able to acquire a well-substantiated explanation of some aspect of the natural world called a scientific theory.