

Name: _____

Date: _____ Core: _____

Experimental Design

Show What You Know

1. The variable that the experimenter changes or controls in the experiment is the _____.
2. The variable that responds to or depends on the IV is the _____.
3. The correct way to write your prediction or _____ is to use an "If..., then..." statement and exclude using any personal pronouns (I, we, us, they, our, etc.).
4. The _____ variables of an experiment stay the same through every level of the independent variable and for all repeated trials.
5. The _____ of an experiment should show the relationship between the IV and DV and begin with, "The Effect of....".
6. Repeated trials are done for 2 reasons:
 - a. _____
 - b. _____
7. Scientists use a variety of tools to make accurate measurements.
8. The data from these measurements are called _____ because they involve the use of numbers or words to describe how much of something there is.
9. Observations can be _____--using words to describe what is seen, felt, heard, smelled, or tasted.
10. Observations lead us to _____ which is an attempt to explain or interpret observations or to identify the cause of what was observed. They answer "why" questions about that object, may be facts known about the object, descriptions of where that object can be found, or how it might be used.

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Practice. Answer the questions below using the following problem question:

Does the temperature of reptile eggs affect the gender of the baby reptile?

IV: _____

DV: _____

Title: _____

Hypothesis: _____

Observations--

Qualitative Complete the following qualitatively—use a variety of properties & senses	Quantitative Complete the following quantitatively—use a variety of measurements/quantities (metric)
Camels are	Hair:
When I walk into the cafeteria,	Desk:
Looking out the window I see	Ceiling Tiles:
The shorts I'm wearing are	Temperature:
My alarm clock	Free choice:

Inference: Choose an observation above to make an inference about.