

Experimental Design Vocabulary

1. variable - a factor that can be changed in an experiment
2. independent variable (IV) - the factor (variable) that is purposely changed by the experimenter; the factor the experimenter decides to change
3. levels of the independent variable - the changes that are made in the independent variable
4. **control** - the level of the independent variable chosen as the standard of comparison; this can be decided in one of three ways: (1) the level at which the IV factor is omitted (0 of the IV) (2) the level suggested by an outside standard (for example, according to package directions) (3) in the case of comparisons, the level selected by the experimenter (your choice)
5. repeated trials - the number of times the experiment is done for each level of the independent variable; repeated trials are done to find average results and so to reduce the effect of errors
6. dependent variable (DV) - the factor (variable) that responds to the changes in the independent variable; it is measured, counted, or observed objectively
7. constants - all factors which remain the same for each repeated trial for all levels of the independent variable
8. **title** - a statement describing an experiment or data table; it may be written in the form:

The Effect of (Changes in the Independent Variable)
on the (Dependent Variable)

9. **hypothesis** - a prediction about the outcome of the experiment which states the relationship between the independent variable and the dependent variable, written as an "If... then ..." statement.

If the independent variable (IV) is how the IV is changed
then the dependent variable (DV) will the predicted effect

10. experimental design diagram (EDD) - a diagram that summarizes the plan for an experiment and includes all of the parts defined above