Scientific Method

-Logical approach to the solution of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ problems

-Useful for solving many kinds of problems

Steps in the Scientific Method

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 -Information obtained through the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 -Often involve a measurement

2. Hypothesis

 -Proposed explanation for observations.

 -Most contain both an\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable.

 -Independent variable

 -What \_\_\_\_\_\_\_\_ manipulate to test the reaction

 -Dependent variable

 -What changes as a result of your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Example:

 It was hypothesized that as the temperature of a solvent increases, the rate at which a solute will dissolve in that solvent increases.

 Independent variable= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Dependent variable = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Experiment

 - Carefully controlled, \_\_\_\_\_\_\_\_\_\_\_\_ procedure for gathering data to test a hypothesis.

 -For the results of an \_\_\_\_\_\_\_\_\_\_\_\_\_ to be accepted, the experiment must produce the same results no matter how many times it is \_\_\_\_\_\_\_\_\_ or by whom.

 Control group

 -Group not exposed to the test condition.