

Scientific Method

A way of thinking in which scientists follow steps to
answer questions and
solve problems.

Problem (ask a question)

(conduct research)

Hypothesis (formulate an educated guess)

Experiment (test hypothesis)

Observation (collect data)

Conclusion (analyze and report results)

Retest (retest based on results)

Start with a PROBLEM (What is it that we are trying to figure out?)

* usually stated as a question NEVER yes or no types of questions

The form of the question should be: Which or How will the
(IV) independent variable affect the
(DV) dependent variable.

Examples:

How will the ^{IV} height of the ramp affect the ^{DV} distance the car will travel from the end of the ramp?

Which ^{IV} ratio of salt to water will freeze in the shortest ^{DV} amount of time?