

SCIENCE

Science Process Skills Outline (9/20)

I. Scientifically testable questions

- A. Questions we can answer by conducting scientific experiments (Will Brand X paint last longer than Brand Y?)
- B. Based on data, not opinion “Should New Hampshire raise the speed limit to 70 mph? “ is opinion--not science.

II. Variables

- A. Something changed in experiment
 - 1. Change only one at a time
- B. Types
 - 1. Independent: does not rely on another variable.
 - a. Example: Pendulum length
 - 2. Dependent: is affected by the independent variable.
 - a. Example: Pendulum frequency

III. Controls

- A. Something you keep the same throughout an experiment.
 - 1. Example: Pendulum weight if investigating length.

IV. Steps in experiment

- A. **Prediction:** Educated guess based on what you know. Use If, then format. (***If*** a mask is worn, ***then*** fewer droplets will escape a person’s mouth.)
- B. **Data Table:** Organized place to record data. (Independent variable usually in left column)
- C. **Conclusion:** A statement explaining the results of experiment. Use when, then format. (When the mask was worn, then fewer bacteria grew on the plates.)
- D. **Graph:** A more visual way of displaying data than a table.