**Variables**

Variables are an important part of science projects and experiments. What is a variable? Basically, a variable is any factor that can be controlled or changed in an experiment. Scientific experiments have three types of variables.

**Types of Variables**

* **Independent Variable**

The independent variable is the one condition that you change in an experiment. To insure a [fair test](http://www.sciencebuddies.org/science-fair-projects/project_experiment_fair_test.shtml), a good experiment has only one independent variable. As the scientist changes the independent variable, he or she **observes** what happens.

*Example:* In an experiment measuring the effect of temperature on solubility, the independent variable is temperature.

* **Dependent Variable**

The dependent variable is the variable that you measure or observe. The dependent variable gets its name because it is the factor that is *dependent* on the state of the independent variable.

*Example:* In the experiment measuring the effect of temperature on solubility, solubility would be the dependent variable.

* **Controlled Variable**

A controlled variable or constant variable is a variable that does not change during an experiment.