

Conducting Experiments



Testing Your Hypotheses with Experimentation

Devise experiments that will provide you with measurable evidence.

A valid experiment will provide you with evidence that will prove or disprove your hypothesis. The same results will occur each time the experiment is performed.

Test only one variable at a time. Measurements need to be taken as accurately as possible.



Testing
Tip 1:

Repeat Tests For Fairness

Repeating a test a number of times lets you see if your results are accurate.

If you get one result that is very different from all the rest it usually indicates that an error has been made.



Testing
Tip 2:

Averaging Your Results

Working out the average is a good way to simplify your results.

To work out the average:

Add the results of all your tests then divide that amount by the number of tests.



Testing
Tip 3:

Testing Against a Control Group



Set up two identical experiments. Label one as the 'control' experiment.

Change one variable in the second experiment. Compare the results to the control experiment.

Testing
Tip 4:

Collecting Survey Data

A survey can be used to gather data to test a scientific hypothesis.

Surveys should be distributed to a large group of people in order to get more reliable data. Surveys work best when they reflect a balanced cross section of society.

