

Safety and Procedures, Scientific Method, Measurement and Variables, Lab Tools		
Key Word	Definition	Picture/Example
Hypothesis	A possible explanation for a set of observations or answer to a scientific question; must be testable.	If I raise the temperature of a cup of water, then the amount of sugar that can be dissolved in it will be increased.
Independent Variable	Independent (Manipulated) variable is the variable changed by the scientist; what the investigator is testing	A scientist studies the impact of a drug on cancer. The <u>independent variables</u> are the administration of the drug - the dosage and the timing. The <u>dependent variable</u> is the impact the drug has on cancer.
Dependent Variable	Dependent (Responding) variable is the response to the independent variable that can be observed (qualitative) and measured (quantitative).	
Constant	A variable that is not changed	
Control	A constant variable that is part of the experiment that is not being tested and is used for comparison.	Measure how much water flow increases when we open a faucet, water pressure is the <u>controlled</u> variable is held <u>constant</u> .
Predict	Statement about what might happen before it does.	Increasing the amount of sunlight affect the growth of a vegetable.
Conclusion	A summary of the results of the experiment and a statement of how the results relate to the hypothesis.	Reject or accept a hypothesis.
Infer	A logical conclusion reached on the basis of data, observations and reasoning.	If you hear your dog barking, you may infer that someone is at your front door.
Observation/Research	Anything noticed about the problem	Some tomatoes in the garden are larger than the rest of the tomatoes.
Classify	To arrange or organize into groups or types	Group organisms in kingdoms according to their shared characteristics.
Theory	A well-tested concept that explains a wide range of observations, an explanation supported by many tests and accepted by a general consensus of scientists.	Meteorite caused dinosaur extinction.
Law	A statement that describes what scientists expect to happen every time under a particular set of conditions,, a rule that describes a pattern in nature	Mendel's Law of independent assortment