

Words You Need to Know

In Science

Scientific Method – A system of problem solving using **Observation**, recording and evaluating **Data** from **Experiments**; formulating **Hypotheses** and **Theories** to explain observations; performing experiments to test hypotheses and theories for accuracy.¹

Observation – That which is seen, or heard or brought into awareness through the senses.

Data – Information that is gathered through observation.

Experiment – A set of actions that test an idea to determine whether it is true or false.

Problem – A situation or set of observations that lead a question or questions which need to be answered.

Hypothesis – A tentative explanation of certain facts to provide a basis for further experimentation.²

Theory – An explanation of the general principles of certain phenomena with considerable evidence to support it; a well established hypothesis.³

Law – A statement of the occurrence of natural phenomena that occur with unvarying uniformity under the same conditions.⁴

¹ Morris Hein, Susan Arena, Foundations of College Chemistry, John Wiley & Sons, Inc., 2007, 12th Edition, G-9

² Ibid G-5

³ Ibid G-10

⁴ Ibid G-5