**Basic Science Terms** (Sunal & Sunal, 2003)

|  |  |  |
| --- | --- | --- |
| Term | Definition | Example |
| Concept | The set of characteristics common to any and all instances of a given type that distinguish all examples from non-examples | Trees, planets, flowers, rocks, minerals, freezing means to change from a solid to a liquid |
| Conclusion | The results of an experiment; stating whether a hypothesis is supported or not supported | The results supported the hypothesis that fertilizer increases the growth rate in pea plants. |
| Experiment | A test of a hypothesis. | What is the effect of fertilizer  |
| Fact | A statement of observations of objects or events | Salt is a white solid; sugar tastes sweet; today the sky is blue; the water feels cold |
| Generalization | A statement that relates concepts showing how two or more concepts are connected to each other. It is not formed from observation alone and attempts to explain an effect and predict a future occurrence.  | The sun rises in the east. Cooling causes liquids to become solids. All rocks are hard.  |
| Hypothesis | A statement that describes the relationship between two or more variables that is constructed so that it can be tested. An “educated guess.” | The colder the temperature, the smaller the volume in a balloon filled with air.  |
| Inference | A statement based on observation that extends beyond what has been observed that is not created to be tested. A “best guess.”  | Since the sky is gray it is likely to rain |
| Law | A science regularity (generalization) that applies to all members of a broad class of phenomena.  | Law of magnetism (like poles repel, unlike attract); motion (Newton’s laws); floatation (Archimedes’ Principle). |
| Observation | A statement of characteristics of objects or events observed through use of the senses | Salt is white, sugar testes sweet, the sky is blue today |
| Theory | An explanation of events based on laws or principles and known consequences of other phenomena | Kinetic theory- (particles are in constant motion); plate tectonics-(the continents are moving on plates); cell theory- (all living things are made of cells); evolution- (living species change over time) |