**Station #2: Scientific Inquiry Practice**

**DIRECTIONS: ON YOUR OWN SHEET OF PAPER for each scenario below, identify the following:**

* **independent variable (IV) = the variable that is changed on purpose OR what “I” can control as the experimenter and change OR what causes the change in the experiment**
* **dependent variable (DV) = the variable that changes because of the IV OR what is being measured OR data/measurement/observations**
* **constants (C) (AT LEAST 2) = what stays the same on purpose in an experiment**
* **problem (written in the proper form) = the purpose of the experiment (specific, testable, in the form of a question)**
* **hypothesis (written in the proper form) = answers the problem question (If IV, then DV because)**
* **title (written in the proper form; CAPITALIZED) = The Effect of the IV on the DV**

**Scenarios:**

1. **Elizabeth tested how high 5 different brands of new tennis balls would bounce when dropped from a height of 2 meters. She dropped the balls so that they hit the same floor tile each time.**

**IV =**

**DV =**

**C = (at least 2)**

**Problem =**

**Hypothesis =**

**Title =**

1. **Maria wondered if different colors of plastic wrap affected the time for bread to mold. She wrapped a slice of bread in clear plastic wrap. Before wrapping the bread she placed 5 ml of water in the center of the bread. She repeated the process using red plastic wrap and blue plastic wrap. The bread came from the center of the same loaf. In each case, she used the same amount and same brand of plastic wrap. She wrapped each slice of bread in the same way.**

**IV =**

**DV =**

**C = (at least 2)**

**Problem =**

**Hypothesis =**

**Title =**

1. **Eric is a photographer and he noticed that every time he left his dark room that his pupils went from being very large to very small. He wondered if every time someone went from somewhere dark to somewhere light if the same thing happened to their pupils. He decided to test his theory.**

**IV =**

**DV =**

**C = (at least 2)**

**Problem =**

**Hypothesis =**

**Title =**

**Answers to Station #2: Scientific Inquiry Practice**

**DIRECTIONS: Make corrections to the ones that you have completed. Please make sure that you are asking questions if you do not understand why you got things wrong.**

1. **IV = tennis ball brands (brands of tennis balls)**

**DV = how high the ball bounced (height of bounce)**

**C = 2 meters (height dropped from), same floor tile; brand new tennis balls**

**Problem: Which brand of tennis balls bounces the highest?**

**Hypothesis: If Wilson tennis balls are used, then they will bounce the highest because … OR**

**If five tennis ball brands are dropped, then the Wilson will bounce the highest because …**

**Title: The Effect of the Tennis Ball Brand on the Bounce Height**

1. **IV = color of plastic wrap (clear, red, blue)**

**DV = time for bread to mold**

**C = wrapped in same way, same amount of plastic wrap, same brand of plastic wrap, bread from center of loaf, 5 mL of water, same kind of bread,**

**Problem: What plastic wrap color will work best at keep the bread from molding?**

**Hypothesis: If red plastic wrap is used, then it will take longer for the bread to mold because… OR**

 **If plastic wrap is used to cover the bread, then the red plastic wrap will work best to keep the bread from molding because…**

**Title: The Effect of the Plastic Wrap Color on the Time for Bread to Mold OR**

**The Effect of the Plastic Wrap Color on How Fast Bread Molds**

1. **IV = amount of light (dark or light)**

**DV = size of the pupil**

**C = amount of time in either dark or light, same person being tested, same light source, same dark room**

**Problem: Does the amount of light impact the size of the pupil?**

**Hypothesis: If a person goes from a small amount of light to a large amount of light, then their pupils will get smaller because not as much light needs to be let into their eyes to see.**

**Title: The Effect of Light on the Pupil Size**