Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hr. \_\_\_\_ Date \_\_\_\_\_\_\_\_

**Slideshow Notes**

To be completed during slideshow and used as a study guide.

The 7 Steps in Order

1)\_\_\_\_\_\_\_ the problem

2)Gather \_\_\_\_\_\_\_\_\_ on the problem

3)Form a \_\_\_\_\_\_\_\_\_\_\_\_

4)Design and perform the \_\_\_\_\_\_\_\_\_\_\_

5)Record and analyze the \_\_\_\_\_\_

6)Form a \_\_\_\_\_\_\_\_\_\_\_

7)Repeat, repeat, repeat

Scientific Method

● Be able to ***identify*** the following:

– ***Problem Statement***- a \_\_\_\_\_\_\_\_\_\_\_ you would like to solve (includes an independent and dependent variable)

– ***Hypothesis***- an “\_\_\_\_\_\_,\_\_\_\_\_\_” statement which tries to predict the results before the experiment is completed

– **Conclusion**- a statement which declares the \_\_\_\_\_\_\_\_\_\_ of your experiment

Problem Statements, Hypotheses & Conclusions

● Examples:

– ***Problem Statement***: Will a Bounty paper towel absorb more liquid than a Brawny paper towel?

– ***Hypothesis***: If we try to absorb liquids using Bounty and Brawny paper towels then, Bounty will absorb the most.

– ***Conclusion*** : The Bounty paper towel absorbed more liquid than the Brawny

paper towel.

Variables and Constants

● **Variables** are changes in an experiment

– **Independent**- The thing you \_\_\_\_\_\_\_\_\_\_\_\_\_.

– **Dependent**- The thing you \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

- **Constants** (sometimes called controls) are all the things that must remain the \_\_\_\_\_\_\_ in an experiment.

Variable and Titles on Graphs

● The **independent variable** should be on the \_\_\_\_\_\_\_\_\_\_\_\_ (ie. X-axis)

● The **dependent variable** should be on the \_\_\_\_\_\_\_\_\_\_\_\_\_ (ie. Y-axis)

– Don't forget to use the unit (ie. cm, kg, etc.)

● The title should be on the \_\_\_\_\_\_\_ and should be **independent variable vs. dependent** **variable.**

Numbering the Graph

● Always try to count by numbers which are easy to count by (examples: 1, 2, 5, 10, 20,25, 50, 100, etc.)

● When you find numbers which work for your set of data, carefully ***number the lines***.



Making the Bars

● Decide how wide your bars should be based on

– The graph paper you are given

– The number of bars you have to graph

● Make your bars the appropriate height

● Label each of your bars

Which Scope?

● A **\_\_\_\_\_\_\_\_\_\_\_\_\_** is used for looking at really small objects.

– A bee's leg

– A blood smear

– A piece of hair

● A **\_\_\_\_\_\_\_\_\_\_\_\_\_** is used for looking at objects which are far away.

– Planets

– Stars which are far away