Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period \_\_\_\_ Number\_\_\_

**Unit 1-Intro to Science & Scientific Method**

**Review Sheet**

**Section 1 Notes**

1. What is the scientific method?

**the ways in which scientists answer questions and solve problems**

1. What are the steps of the scientific method?
2. **State the PROBLEM in the form of a question**
3. **Research**
4. **Form a Hypothesis**
5. **Experiment/Test hypothesis**
6. **Observations, record data, analyze**
7. **Draw a conclusion**
8. **Ask another question**
9. What is data?

**A record of the progress of your experiment**

1. What is a theory?

**Is an explanation of observations tested many times and is supported with data**

**Section 2 Notes**

1. How many variables should you have in a controlled experiment?

**1**

1. What 3 things should a good experiment include?
2. **Same Size of all groups being test**
3. **Large sample size**
4. **Repeating the experiment**
5. Give an example of an observation.

**Ex. The grass is wet**

1. Give an example of an inference.

**Ex. The grass is wet because it must have rained**

**Directions: Answer the questions below on this sheet of paper**.

1. Mr. Smith’s thinks that a special juice will increase the productivity of his workers. He creates two groups of 50 workers each and assigns each group the same task (in this case, they’re supposed to staple a set of paper). Group A is given the special juice to drink while they work. Group B is not given the special juice. After an hour, Mr. Smith’s counts how many stacks of papers each group has made. Group A made 1,587 stacks, Group B made 2,113 stacks.

Identify the problem? (What question is Mr. Smith trying to answer?) **Will the special juice make my workers more productive?**

Write a hypothesis for this experiment. (Use “If…, then…, because…”)

**IF I give the special juice to my workers THEN they will be more productive BECAUSE the juice gives them energy.**

What is the control group? **Group B**

Identify 2 control factors (constants).

1. **Same number of workers**
2. **Same task**
3. **Same amount of time to complete the task**

What is the experimental group? **Group A**

What is the variable of this experiment? **Special juice**\_