Comparative Testing Project

**The Assignment:** Each student will investigate a scientific question using the Scientific Method as we have learned it in class.

 **Your finished reports MUST include all of the following:**

1. A cover sheet with the same format as the sample pictured below:
2. Title H ) Dependent Variable
3. Purpose (Scientific Question) I ) Controlled Variables
4. Information Gathered J ) Procedure ( step by step, and in detail )
5. Hypothesis K ) Data (include tables/graphs )
6. Materials L ) Conclusion
7. Independent Variable M) A photo of you doing the experiment

(Your Title)



 (a graphic in the middle)

By:

(Your Name)

Mrs. Salter’s Science Class

(Your Student #)

**The Proposal:**

Each student must submit a proposal that has **been approved by the teacher and a parent/guardian.** This must be completed before you start working on the project.

The project **must be a comparative test** where numerical data is collected.

You will need to **provide all of your own materials** and any specialized equipment. If this is a problem talk to Mrs. Slater, she may be able to loan you materials.

**Where You Can Do the Experiments:**

* You may choose to work on the experiment at home, as well as at school.
* You will be provided 2 days of lab time in class to gather information, conduct experiments, gather data, or work on the write up. If you are working on the experiment at home, you must still use the 2 days of class time to work on part of the process.
* **Due Date:** You will then have approximately 3 weeks to turn in your finished reports. Late reports will be graded down 10% per day**. Due Date is** **Wednesday, October 23!**

**Scoring:**

 Each report will be scored as follows: Cover Sheet with Title 3 pts

Purpose 2 pts

Information Gathered 5 pts

Hypothesis 2 pts

Materials 2 pts

Independent Variable 2 pts

Dependent Variable 2 pts

Controlled Variables 4 pts

Procedure 4 pts

Data 4 pts

Conclusion 6 pts

Photo of you 4 pts

Neatness 2 pts

Presentation 8 pts

**Grand Total:** **50 pts**

**Working Together:**

Students may work alone, or with one partner that is in the same class period as them. Each individual is responsible for designing, completing, and writing up the report. You may have friends or family members help you **only with** developing ideas, carrying out experiments, and collecting the data. You must do your own work on the report and designing the experiments. The grade given to the project will be recorded for each student.

**Helpful Checklist: Yes Date**

1) I have chosen a scientific question to answer by conducting experiments. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

2) I have written up a rough draft of the first 11 parts of the experiment,

 (Sections A - K) following the proper format, before doing the experiment. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

3) I have gathered all of the materials necessary to conduct my experiments. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

4) I have collected all of my data, and I am ready to complete my final draft. \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

**Comparative Testing Project Proposal**

1) I would like to do my project on the following question:

2) I will need to do research about this topic before forming a hypothesis:

 **The things I will look up are**:

 1)

 2)

 3)

 4)

 **I will ask this person** for information (an expert on the topic):

3) The materials I will need are:

4) Here is how I plan to get the measurements I will use as data when I run

 my experiments:

5) I plan to do my experiment at (circle one): **home school**

6) I will be working (circle one): **alone with:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

### Parent Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Project Research**

**Question #1**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I found information at…

I learned that…

**Question #2**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I found information at…

I learned that…

**Question #3**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I found information at…

I learned that…

**Question #4**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I found information at…

I learned that…

**My expert**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ helped with question(s) #\_\_\_\_\_\_\_\_\_

**Designing My Experiment**

My hypothesis is:

Independent Variable:

Dependent Variable:

List all of the things in your experiment you will need to keep controlled:

My **step by step** procedure:

1)

2)

3)

4)

(Use the back of this paper for additional space)