

\*\*\*NO PERSONAL PRONOUNS (WE, I, YOU)\*\*\*

## **Creative Name of Lab**

**Title (dependent variable vs. independent variable)**

(Your Name)

Lab Partners

(Name)

(Name)

(Name)

Date Data Taken

Teacher

( ) block / period

Date

## **Creative Title**

# **Introduction**

### **Rationale:**

Overall reason you are doing the lab. What skills or knowledge is being introduced or reinforced.

Usually your teacher will give you this or you will find it in the lab handout.

(Ex. measuring, displaying heat transfer, or quantifying the change in motion)

### **Purpose:**

Specifically what are you trying to find out in this lab.

(Ex. To discover the relationship between mass and heat)

### **Hypothesis:**

What do you think will happen and what evidence or research have you done that justifies your statement? The justification is just as important as your educated guess. Don't forget to cite the information you used from other sources.

# **Experimental Design**

### **Equipment:**

List of Equipment (be specific include brands or number of drops used)

### **Apparatus:**

Picture of experiment working

Be sure to label each item in the picture

### **Procedure:**

List of directions to complete lab written in numbered steps. Each direction should start with an action verb.

## Data

Qualitative:

Insert your observations here. Any descriptions/observations that may impact the data outcome.

Quantitative: (Units are included in the column heading-not in every box)

### Example: Data Table: Car & Ramp

[illegible]

# Analysis

Calculations used to analyze data. (finding averages, density, velocity, acceleration, % change)

Example

Name of Calculation	Equation/Formula	Substitution/Work	Final Answer (with Unit)
Velocity at B	$\frac{d}{t_b}$	$\frac{.0500}{.1234}$	

## Graph

If you have a graph, it goes here. (Delete this when you print it out!)

Discussion of graph trend. What does the graph tell the reader? What is the big picture?

Your comments about what the graph means should be written on the graph.

## Questions:

Answers to any questions the lab may ask.

## Error Analysis

Personal errors: Personal errors: Personal errors are due to the experimenter following a faulty procedure or making an error reading an instrument.

Systematic errors: Systematic errors in experimental observations usually come from the measuring instruments. They may occur because there is something wrong with the instrument or its data handling system, or because the instrument is wrongly used by the experimenter.

Random errors: Random errors in experimental measurements are caused by unknown and unpredictable changes in the experiment. These changes may occur in the measuring instruments or in the environmental conditions. (unforeseen variables)

# Conclusion

**Purpose:**

Cut and paste from page 2

**Hypothesis Supported:**

Was the hypothesis supported, not supported or inconclusive?

**Major Findings:**

What did you find out? Use your data and statistics to defend the above comment about your hypothesis.

**Compare:**

Compare the hypothesis to outside research and classmates. Does it agree? How so?

**Suggestions for further study:**

What changes could be made to the experiment to test something new? What limitations were encountered that could be changed the next time?