

## **Lab Activity**

Experimental reports tend to have the same general structure, regardless of the level of work being done. A typical high school lab write-up should not be terribly different in structure from that of a Nobel Prize winner who submits an article about his or her research to a professional journal. The content will be obviously different, but the structure is not.

**Assignment:** Write up your lab report using the structure shown below. Be detailed, but keep language brief and to-the-point when doing technical writing. There is as little ‘fluff’ as possible.

Typical structure for lab reports:

### **Abstract**

Briefly describe your project, including main conclusions. *Keep it brief* here - you don't need to explain how you will do it, only what you want to investigate. When you search for papers and articles with *Google Scholar*, for example, more often than not the article abstract is provided so the reader can quickly determine if the article is what they want.

### **Introduction or Purpose**

Explanation of what you plan to do and why you are conducting this experiment. What do you want to learn from your experiment?

### **Hypothesis**

Describe your hypothesis. What is it you predict your data will show?

### **Experiment**

#### **Materials and Resources**

What do you need to complete your experiment?

#### **Method or Procedure**

Describe how you will conduct your experiment. A good rule of thumb is to write these detailed enough so that a complete stranger will be able to reproduce your test just as you do.

You may wish to take photos or draw diagrams to better illustrate your methods.

Some prefer writing as steps:

**Step 1:**

**Step 2:**

**Step 3:**

**Etc.**

Others prefer to write up Methods and Procedures in more of an essay/paragraph style.

## Data or Experiment Results

Include all of your data you collected during your experiment. Put it into tables (include units) when appropriate. For example, perhaps one measured velocity as a function of distance:

	<u>Velocity (m/s)</u>	<u>Distance (m)</u>
Trial 1		
Trial 2		
Trial 3		

## Discussion or Analysis

Analyze your data, and include relevant graphs and charts. Do the data make sense? Do your methods make sense now that you have data, or do results seem questionable? Did you discover a better solution once you started?

## Conclusion(s)

Summary of your results and findings based on data and observation.

## Acknowledgements

This is especially important for professionals, who list funding agencies and individuals who made significant contributions to the project. This is often *not* included in high school class reports.

## References

Use accepted formats for listing references. A good resource with examples is:

[http://www.sciencebuddies.org/science-fair-projects/project\\_apa\\_format\\_examples.shtml?gclid=CIXlyr32ipwCFRHxDAodxFXqYA](http://www.sciencebuddies.org/science-fair-projects/project_apa_format_examples.shtml?gclid=CIXlyr32ipwCFRHxDAodxFXqYA)

or

<http://www.calstatela.edu/library/bi/rsalina/asa.styleguide.html>