**Formal Laboratory Format**

**Title:**

* Reflect the factual content with less than ten words in a straightforward manner
* Use keywords researchers and search engines on the Internet will recognize

**Introduction:**

* Define the subject of the report: "What question will you explore?"
* Provide background information and relevant studies: "What knowledge already exists about this subject?"
* Outline scientific purpose(s) and/or objective(s): "What are the specific hypotheses and the experimental design for investigation?"

**Materials and methods:**

* Identify materials used, how were they used, and where and when was the work done (especially important in field studies). In paragraph form.
* Describe special pieces of equipment and the general theory of the analyses or assays used
* Provide enough detail for the reader to understand the experiment without overwhelming him/her. When procedures from a lab book or another report are followed exactly, simply cite the work and note that details can be found there.

**Results**

* Concentrate on general trends and differences and not on trivial details.
* Summarize the data from the experiments without discussing their implications
* Organize data into tables, figures, graphs, photographs, etc.
* Title all figures and tables; include a legend explaining symbols, abbreviations, or special methods
* Number figures and tables separately  
  and refer to them in the text by their number, i.e.
  1. Figure 1 shows that the activity or the activity decreases after five minutes (fig. 1)

**Discussion**

* Interpret the data; do not restate the results
* Relate results to existing theory and knowledge (actual results vs. expected results)
* Clearly indicate whether you accept or reject your hypothesis
* Explain the logic that allows you to accept or reject your original hypotheses
* Speculate as necessary but identify it as such
* Discuss possible sources of error (2 minimum)
* Include suggestions for improving your techniques or design, or clarify areas of doubt for further research

Lab Questions:

* Answer and Number all questions and label as such (pre-lab, lab, big Idea, etc.)