

## LAB WRITE-UP FORMAT

Conducting an experiment is a process with many steps. Some are done to prepare for the experiment; some are done after conducting the experiment.

### **LAB PREPARATION**

The following steps should be completed in your lab notebook before you do the lab. It must be hand-written and will be checked before you are able to begin experimenting. This is the rough draft of your lab write-up.

**1) Title:** Describes the lab content concisely, adequately and appropriately.

**2) Problem:** May be a statement or a question. What question or problem are you trying to answer?

**3) Hypothesis:**

- **If, Then:** Must be an "if, then" statement
- **Reason:** Include a rationale (or reason) for your prediction.

**4) Materials:** List format - quantities should be listed and all measurements must be in metric.

**5) Procedure:** Step by step format (what, where, when and how much!). Describes the procedure used to gather data. It gives enough detail to allow for replication. It does not use personal pronouns. It includes pictures/diagrams whenever necessary to clarify the experimental set-up.

**6) Data:** Come up with an organizational chart to keep a record of your discoveries. You will not fill in the chart until the experiment is conducted.

### **WHILE CONDUCTING THE LAB**

During class while you are conducting the experiment record you data in your lab notebook after your pre-lab information.

**6) Data:** Data must be arranged in charts, tables, etc.

### **AFTER THE EXPERIMENT**

**7) Analysis (graph):** A graph or graphic organizer that makes clearer meaning from the data. You should choose an appropriate graph that best represents the data. Choose from a bar graph, line graph, circle graph, stem and leaf plot or histogram. For more information see the Skills Handbook in the back of your text book.

All Graphs should include:

1. Title
2. Labels
3. Key
4. Regular Intervals

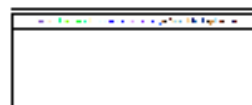
**8) DSET (Developing a Scientific Explanation Tool):**

This is a graphic organizer to help formulate the scientific claims in your conclusion section.



**Sample DSET →**

**(Larger version on next page)**



**9) Conclusion:** It is at least 1 paragraph (5-7 sentences)

Parts of a good scientific conclusion

- 1) Recap problem and procedure
- 2) Scientific claims based on data and research
- 3) Reflection (possible human error, future improvements, future experiments)
- 4) Concluding statement

## Developing a Scientific Explanation Tool (DSET)

What question are you answering with this experiment?

<u>Claim</u> based on the evidence (What is the answer to the question based on the evidence?)	<u>Evidence</u> (observations/data that answers the question)	<u>Scientific Reasoning</u> (Why did this happen based on background research)

Claim+ Evidence+ Scientific Reasoning= Scientific Explanation