Guidelines for Writing a Lab Report

1. **Title** - Make it short and descriptive.

2. **Purpose** - Describe your reason for conducting the experiment. What are you trying to learn or discover?

3. **Hypothesis** - Briefly, make an educated guess about the outcome for the experiment. Kids often treat the hypothesis as a yes no statement. A good hypothesis briefly gives detail about why that outcome is expected. Do this BEFORE conducting the experiment.

4. **Materials** - Make a list of the items used for the experiment.

5. **Procedure** - Make a list of the steps performed when conducting the experiment.

6. **Results and Observations** (depending on whether the lab has calculations) - The results section will have the findings. The results section will include:

- Observations
- Data tables, graphs, and charts
- Notes and drawings
- Photos: Taking photos with a cell phone is a great way to document observations.
- Calculations belong here.

Example: Let's say you performed a study looking at the distribution of bird species in your area. You saw 10 birds total. 3 of the birds were blue jays. The raw numbers go in this section. In the calculations section you calculate the percentage of blue jays 3/10 x 100 = 30%.

7. **Conclusion**

- **Summarize what you learned in paragraph form.**
- **Include the numerical results from the Results section.**

Example: 30% of the birds in the study area are blue jays.

In science write-ups, it is usually best to leave the numbers as numbers not written up as words. The numbers are important and should "pop" out at you.

- **State whether you accepted or rejected your hypothesis.**
- **A critical analysis of the weaknesses of the experiment should be in the lab report.**

Example: The bird study has a big weakness. 10 birds is a very small sample size from which to make significant conclusions about a population distribution. This weakness should be addressed. It is okay to discuss your thoughts about this. Perhaps the small sample size is not a weakness. Maybe other bird species are shyer than blue jays, or maybe it is the dead of winter in a very cold location and you were lucky to see even ten birds.

If you are having trouble getting started with the written part of your experiment, read over the write-up for the experiment. You can use what the author of the lab instructions has written **as a starting point**. Do not copy language directly from the author. That is plagiarism.

Hypothesis:
Materials
Procedure
Observations:
Diagrams and Pictures: see attached lab sheets
Results and Calculations:
Conclusions: