



How do I prepare my lab report?

Mr. M. Gonzalez

Do Now (5 min.)



- ◆ Answer the following questions in your research note book regarding the Scientific Method Stick exercise:
 - Was your final hypothesis supported by your initial observations?
 - What events helped you to change your hypothesis?
 - If there was anything you could do different throughout this project, what would it be?



Objectives

- ◆ I can properly format a lab report.
- ◆ I can list the chapters of a lab report.
- ◆ I can describe the contents of each chapter of a lab report.



Lab Reports

- ◆ Lab reports must be typed.
- ◆ Must use 12pt sized font
- ◆ Font: Times New Roman
- ◆ The only exception will be the title (you may use a different size and font)
- ◆ Margins:
 - Bottom and Top 1''
 - Right and Left 1.25''



Keep in mind...

- ◆ Use **Roman Numerals** for each topic
- ◆ Must include complete heading
- ◆ Heading includes:

Your Name

Mr. M. Gonzalez

Class: Marine Biology

Date: _____

- ◆ Consecutive pages must include last name and page number in the top right corner
- ◆ This can be done as a header



Keep in mind...

- ◆ Don't use "I," "you," or "we."
- ◆ Write from an objective point of view.
 - Example – The chemical changed colors.
 - Not – I saw the chemical change colors.
- ◆ Do not mention how much you enjoyed the lab or how much you learned.
- ◆ Write it so that a 10 year old can read it –
**REMEMBER KISS – KEEP IT SIMPLE
STU.....**



Keep in mind...

◆ Chapters:

- I. Problem
- II. Background information
- III. Hypothesis
- IV. Safety
- V. Materials
- VI. Procedures (define variables)
- VII. Results (tables + graphs)
- VIII. Analysis
- IX. Conclusion
- X. Bibliography

Problem & Related Research

Roman Numerals

I. Problem:

- The object of study.
- Question form.

II. Background information:

- Any theory needed to support your work should be included in this chapter. Any new vocabulary words should be defined. You should also include equations you used.



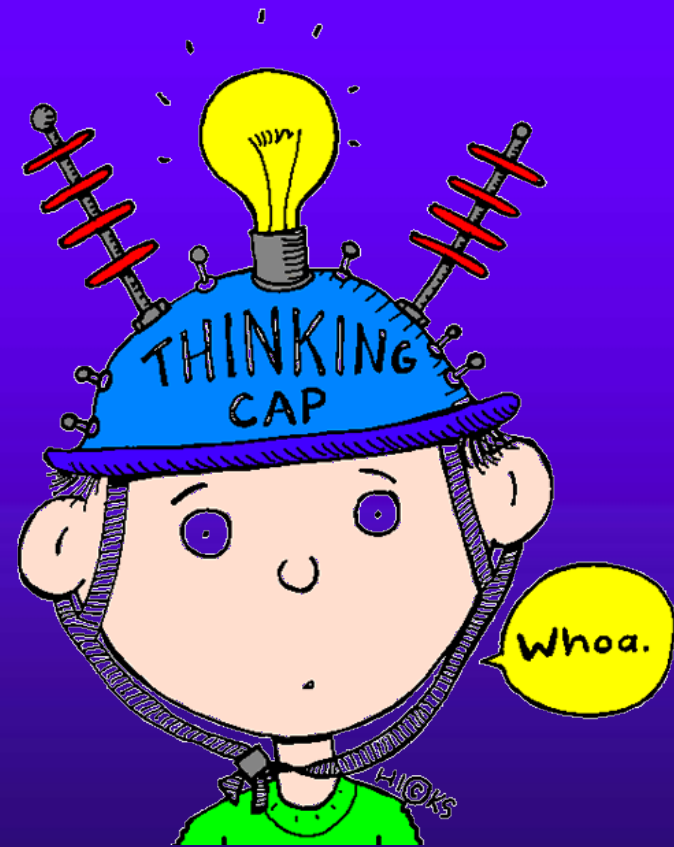
Hypothesis & Materials

◆ III. Hypothesis:

- What you think the answer to your question will be.
Example: If temperature is increased then the plant will grow faster because

◆ IV. Safety:

- Include lab safety symbols that may pertain to the work.
- http://chemistry.about.com/od/healthsafety/ig/Laboratory-Safety-Signs/index_t.htm





◆ V. Materials

- What did you use?
- Should be a table with 3 columns for item, quantity, and use.

Item	Qty.	Use
1" PVC pipe	5	Cover wires
Copper wire	2 feet	Connect motors
Caps 1"	2	Cover pipe

Procedure/Variables

◆ VI. Procedure/Variables:

- What exactly will you do that helps you determine whether your hypothesis is supported or not?
- Can be bulleted.
- Variables:
 - Independent Variable – A variable is something that differs in the experiment. A good experiment should be set up to have ONE independent variable. This is the variable that the researcher decides to test. This is the “if” you can manipulate which cause an effect.
 - Dependent Variable – The dependent variable **DEPENDS** on the independent variable. It is what you expect to measure for your data. It is the “then” or the effect that’s happening.





Data & Analysis

◆ VII. Results

- All data collected from your project. Usually written in a table format. Charts, tables, graphs, or sketches can go here
- After each chart/table or graph a caption must be written to briefly describe patterns in the data.



Termite Survivorship

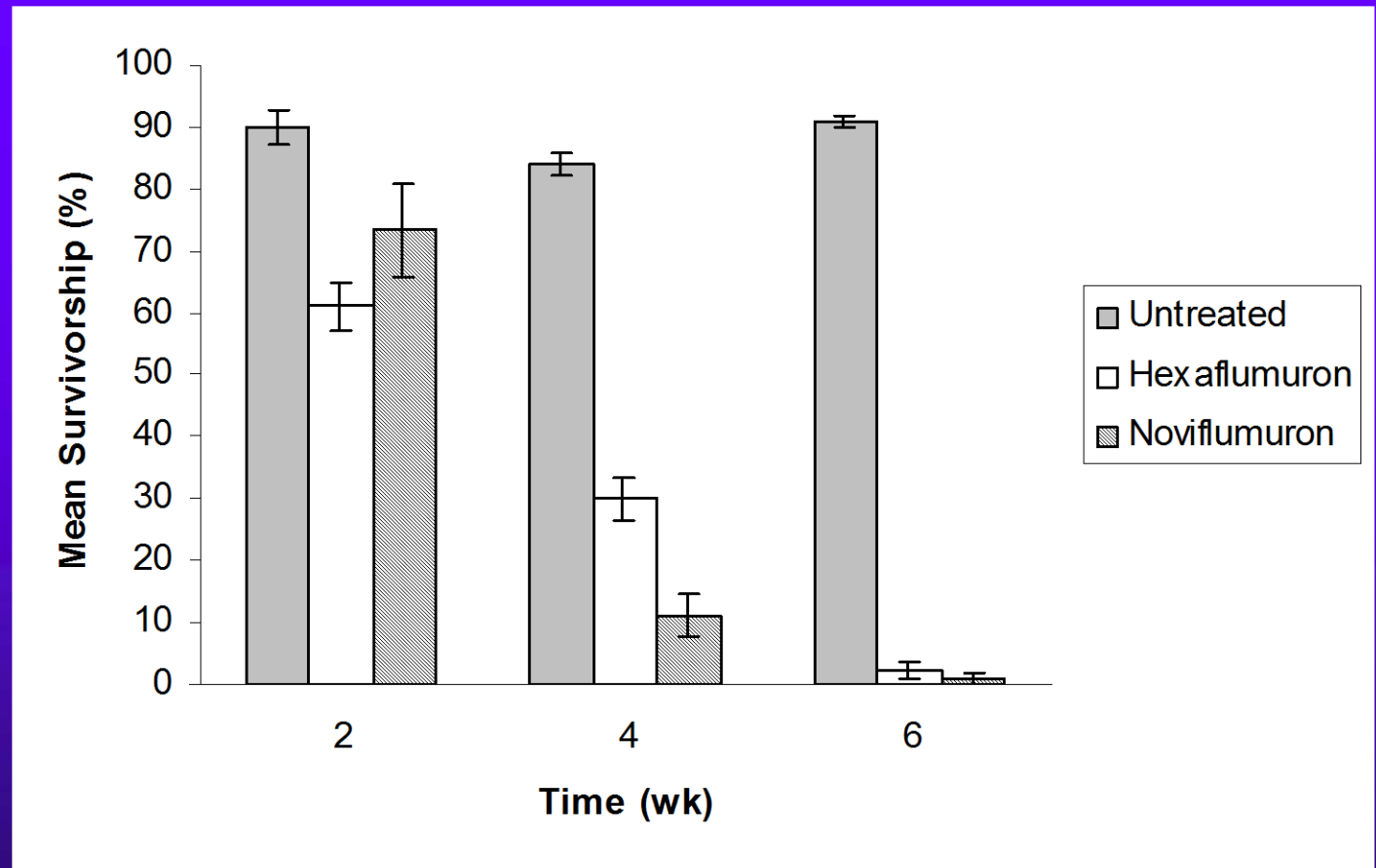


Figure 1. Mean percent survivorship of *R. flavipes* (Kollar) when fed hexaflumuron, Noviflumuron, or untreated cellulose matrix for 2, 4, or 6 wk.

Data Analysis

◆ VIII. Analysis

- Using the data in your charts/tables or graphs you must *interpret* any patterns found in data.
- You must use the information in your background chapter to help explain *why* the patterns exist.
- You must also explain if your hypothesis was supported or not and why.
- Include in-text citations when using background information otherwise you will run the danger of plagiarising.



Conclusion

◆ IX. Conclusion:

- Paragraph that restates problem and hypothesis if required.
- Restates if hypothesis was supported or unsupported
- Gives brief examples from data to support reasoning.



Conclusion Continued



- How might this project fit in the big picture - affect society?
- Suggestions for improvement.
- Suggestions for future research.



Bibliography

◆ X. Bibliography:

- Cite your bibliographic references using APA format.
- <http://owl.english.purdue.edu/owl/resource/560/01/>



H.W.

- ◆ Write a lab report on the Scientific Method Stick.