

How to Survive.....

Lab reports and science papers

Lab reports typically follow the same layout and structure as papers found in scientific journals. This means that students are being asked to:

- Develop familiarity with scientific language and procedures
- Become used to the style of writing used in journals
- Use an established form of scientific thinking and experimentation

Writing should be clear, logical and 'scientific' – (remember, however, that someone has to read this).

But what goes in each section?

Introduction

Familiarises the reader with the topic and the experiment. You need to include some background to tie in the broader context but the main thing to include is the **aim** or **hypothesis** of the experiment (ie what you were trying to DO). Don't leave the reader wondering why you bothered – justify why this is worth looking at.

EA 3.2

Methods

This is probably one of the easier sections to write – but it can be easy to get confused (and confuse your reader). A good way to think of it is that you are trying to write a **clear set of instructions** in case someone else wants to do exactly the same experiment as you (a bit like a recipe). 'Methods' sections are typically written in the **past tense**. It is also important that you don't make any assumptions – include important detail even if it seems obvious to you.

Style Guide

It is also important to get the **formatting** right. Check your unit outline (or "instructions to authors" for a journal) to find out what types of headings, font, spacing and layout are expected as these things will vary depending on your subject and/or the journal you are writing for.

One thing to remember is that **table captions** go ABOVE the table and **figure captions** go BELOW the figure

Results

This section is exactly what it says it is. You need to present the results you found (not what 'should' have happened) in a logical order. This doesn't mean you have to include everything - filling pages with every raw result you can think of doesn't show that you can identify important findings. Tables and figures are very helpful in displaying information but they should be readable on their own, so make sure they have enough labels etc.

Discussion

Because the results section contains only **FACTS**, the discussion section is where you give your results **meaning**. This is where you draw out trends from your experiment and link what you found to comparable research in the **literature**. Don't leave your reader to do all the work - it is your job to **highlight** important findings and to explain what your experiment has shown.

Conclusion

You might not always need a separate conclusion but you will need to finish off your report by considering where your aims were met and/or your hypotheses were proved. It is basically where you answer the question "**So what?**". You might also be asked to acknowledge any **problems** you faced and provide suggestions for **future research**.

Intro WHY you did this test	Methods HOW you did the experiment	Results What the experiment SHOWS	Discussion What the results MEAN	Conclusion Were your AIMS met?
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Other useful resources:

BOOK - Fry (2000) Improve your writing (LL&RS Resource Area Section EA100)

BOOK - Lindsay (1995) A Guide to Scientific Writing (LL&RS Resource Area Section EA100)

BOOK - Van Emden & Easteal (1987) Report Writing (LL&RS Resource Area Section EA100)

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