Investigation Write-ups

Writing up experiments is an important skill and is also essential preparation for your coursework. You should divide your report into sections, exactly what goes where is not important as long as the report reads well. The following suggested layout includes the kinds of questions you should consider when writing your report.

Experimental aims and method

- What is the underlying physics behind your experiment?
- What are the key variables you are measuring and which are you keeping constant?
- Are there any risks associated with your experiment and if so then what steps have you taken to mitigate them?
- What techniques have you used to reduce uncertainty and the chance of error?
- How did you decide on the range of data you collected and the number of repeats?

Results

- Do your tables show your results clearly and to appropriate precision?
- Is it clear what your graph is aiming to test or demonstrate?
- Is your graph correctly arranged to have a straight best fit line?
- Is the uncertainty on your graph communicated clearly?
- Does the best fit line give a relevant quantity? Is the value of that quantity clear?

Analysis and conclusion

- Does your data allow you to propose or confirm the relationship between your variables?
- Are you able to measure any constants off your graph? If so, have you cross-checked your results with those available elsewhere?
- Have you allowed for random uncertainty and systematic errors in your analysis? What effect do these have on your conclusions?
- What were the limitations of your procedure? Could these be overcome in future?