

# Classroomphysics

The newsletter for affiliated schools

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## Practical work

# Using log books to support new A-levels

In schools and colleges where laboratory log books are not already in use, September is the ideal time to introduce them to A-level students. Log books are an essential part of practical science and engineering. For students to be competent in their use before they enter industry or undergraduate labs is a great advantage both to the student and the institution.

The new A-level regulations requiring students to complete at least 12 practical activities *do not* require that the students employ a log book, and in a way this is good. Should the awarding organisations have decided to use log books as an assessment tool then it could have led to artificially pristine entries with students 'working in rough' and 'copying up' later that would defeat the objective of the log book being a live document.

The discipline required to keep an up-to-date record of the practical activity without resorting to drafting, using correction fluid or ripping pages out of the book can be instilled in students during their A-level course. Similarly, encouraging students to plot their graphs as they go through the practical encourages them to identify early on when something starts to go wrong.

The log book "should contain sufficient information to allow a third party, together with the script, to understand what you did on the day" (Lancaster University Lab Manual 2012, Dr R P Haley).

The script might be included in a lab manual that contains the theory and experimental procedure so that students need not write up lengthy methods (though doing so for an independent enquiry-based project would be essential). Of course,



Student log book with alternating graph and lined pages.

students will need instruction and they will need to practise working with a log book. It is through making mistakes and learning from them that students will become proficient in recording practical work.

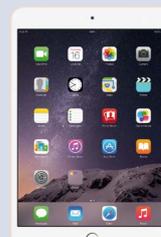
Guidance on using log books can be easily found by searching for university lab guides online, but provided the log book contains titles, dates, diagrams, neat data tables, graphs, some consideration of uncertainties and a conclusion then they will not go far wrong.

The nature of the book itself is not of key importance though it should not be loosely bound. It should be relatively hardy to resist wear and tear and alternating graph/lined pages are an advantage.

There may well be some degree of grumbling at first but you will be thanked for your perseverance later on.

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