UAS Scheme

Physics Teaching in Schools Module

WEEKLY LOG SHEET 9

Student name: Josh Wainwright

Placement School: King Edward Five Ways School

Teacher contact name: Mr. D Cottle

Teacher contact Tel: 01214753535

Teacher contact e-mail: dcottle@kefw.org

Week from 4th March 2013 **to** 10th March 2013

What have you done?

- This week, I spent two hours with the same year 12 class. this allowed me to be a part of an experiment that the class was doing, from beginning to end, including some questions relating to the experiment and a discussion of its implications.
- The experiment was Young's Double Slit experiment. I gave a demonstration of this classic experiment with one of the school's lasers and discussed with the class as a whole the physics behind it. The students are not expected to have a very deep knowledge of the subject, but their enthusiasm meant that we could talk about it to an interesting level, so that they got a feel for the underlying theory.
- After demonstrating the experiment, the opportunity was take to practice experimental skills such as using vernier callipers and calculating errors as they measured the fringe spacing. For this session, I gave a short talk on using the callipers, as a refresher for those who needed it, and then helped with the queries that the students had from the practice and relating to the task, that of using the relation between fringe spacing and slit width.
- I also held the next after school university physics session. There were several more students this time. We discussed the questions and went through a particularly mathematical question from the previous sheet that had caused problems. Because of the nature of the questions that were being asked, the topic that stood out as causing some problems was friction. To help, I gave a few demonstrations and was able to get the students involved in some short experiments involving friction to encourage them to think around the problem and use the physics they already know.

What have you learnt?

- I gave a number of demonstrations to a classful of students and so was aware of the need to be aware of the surroundings, and of each student individually. The experiments were performed with the class around the lab desk so that everyone could see, and I was making sure that everyone was involved with the discussion at all times.

- I was also aware of the pressure that this situation presents. Since the students are learning a topic for the first time, they are likely to hold information that is taught to them. I felt that I coped a lot better this week, compared to last week, where I became flustered and so missed some important information and got a few key facts wrong. The value of experience was highlighted here.

Outline any problems encountered:

- There were very few problems this week.
- I felt that the demonstrations went well. I think that it might have been useful to explain some things, like using the vernier callipers, to the class as a whole rather than repeating the explanation a number of times to different groups.
- I also realised that I had made one of the questions on the problem sheet impossibly difficult by assuming knowledge of information not yet available at sixth form.

How did you meet last week's objectives?

- I led the after school session. I felt that it went very smoothly and the students were keen and enthusiastic to get involved and think about the problems set, especially the the hands on experiments that did not act as they might have expected.

What are your objectives for the coming week?

- I have offered/been asked to help out with the marking process of a class test for one of the classes. I hope to be able to help with the load of marking and to get some small experience of the work carried out outside of the lesson.
- The after school sessions are due to continue, I shall aim to give a theme to the problem sheet, as happened inadvertently this week, as this kept the interest one a single topic which, I think, was helpful for the understanding of the students.