

Reflective Diary Example – School of Chemistry Schools Project

NOTE: Reflective diaries are a part of the coursework element of the Schools Project. They are **NOT** expected to be word processed. The one below is an example.

TG Harrison (July 2008)

11th October

Today was the first session with Tim Harrison, sorting our CRB checks and learning a little more about the project.

The Criminal Records Bureau check has advanced from the police check, after incidences such as the Soham murders in 2002. Before this, a yellow form handed into the police station which they then approved.

Information about the Science and Engineering Ambassadors soon to be STEM scheme was given, this is the scheme used to complete our CRB checks. It is a programme in which teachers are supported by people with science, technology, engineering or maths skills, enhancing and enriching parts of the national curriculum.

Tim Harrison gave a presentation on his work for the outreach scheme; there were lots of points, ideas and experiments that could be used in this project. Tim Harrison is the Bristol ChemLaBs School Teacher fellow and Dudley Shallcross is the Outreach Director.

I was interested to learn that the level of difficulty of A Levels is not equivalent for example Chemistry, determined by the ALIS testing carried out by Durham University, is considered the hardest A level. I started to consider, statistically this is the case, but how is it explained when a person achieves an A in chemistry A level but a C in say physics?

The previous projects that were shown to us were quite dauntingly impressive and certainly encourage hard work.

I mentioned my previous work in a widening participation scheme at SCHOOL and also my Student Associate Scheme at SECOND School to Tim Harrison mentioning that if they struggled to find a placement for me, I do have previous links with both those schools.

I have begun thinking about the sort of project I would like to do and looking at the various exam boards, it has made me consider whether a project has previously been done on the advantages and disadvantages of the various exam boards for example in terms of practical work, statistical success, whether one exam board suits a particular type of learner specifically for Science and in particular Chemistry.

Maybe the special needs facilities in Science and the scope within the syllabus for them to have a practical experience of chemistry.

Also what about experiments designed for the gifted and talented?

Current scientific issues, how are these used in the classroom, would more use of them encourage students in science or are they just a distraction? How can these be made applicable to the various syllabuses?

12th October

Today was a training session for the schools project. It started with an introduction and question section, allowing people to voice their concerns. I asked the question what if it all goes wrong and expressed concern about our exact roles being obvious to our supervisors in schools.

A learning style questionnaire was conducted; according to my questionnaire I am a reflector which surprised me. The learning style of someone is probably their most effective teaching style; however this isn't how everyone learns and needs to be adapted for other learning styles. The resources provided by the exam board and the curriculum have limits.

Other things that I took on board during training, concentrate on the mindset, the need to be professional, ally to the teacher not the pupils. Don't be afraid to admit you don't know the answer to a pupils question, always be prepared with more information than relayed to a pupil. I was also made aware of the need to become aware of the priorities and perspectives of others.

Work out good means of communication between you and the school to inform them of when you will be in.

The second part started with a group activity of different scenarios, the main theme was to be prepared, ask for help when it is needed, find out who the child protection officer is, familiarise with the school policy before entering the school.

The final part involved looking at the national curriculum, different perspectives about education and observation.

The change in the key stage four curriculum really interested me because surely there is going to be a pitfall when not all students have the same knowledge and therefore this cannot be built on at post 16 level and university. How well do different exam boards fulfil this curriculum? Social dimensions now more important than content, will this work? Will this make children more interested in studying science? I would like to base some of my project looking at these issues.

Having spent sometime in training looking at different learning styles I took this further and did some of my own research looking at different learning styles and multiple intelligences. I looked at Mike Hughes' and Howard Gardner's research.

18th October

Need to carry out a risk assessment. Looked at various demonstrations today and learnt how to do some of them. The first was with **liquid nitrogen**, there are various things that are good for show. Rubber tubing was stuck in it and then bashed with a hammer; this could be accompanied with an explanation about elasticity. Flowers were placed in liquid nitrogen for a couple of minutes, this freezes the cytoplasm. A banana was also frozen in its skin and then smashed this could be coupled with an explanation about the freezing of biochemical matter. The petals become brittle and can be broken off. An egg was cracked into a frying pan, liquid nitrogen was poured on top and it looked as though the egg had cooked, in fact it had just frozen.

The **oxygen demonstration** consisted of a tall measuring cylinder placed in a washing up bowl on a bin liner, it can get messy! Add 250ml hydrogen peroxide to the measuring cylinder; add food colouring and a palmful of potassium iodide. The catalyst in the reaction is IO^- which is what iodine oxidises into in the reaction. When clearing up the equipment add paper towels.

Methanol burners were next. Add methanol to a dry plastic container, shake it and remove the excess, it is the vapour which is important. A lighted splint was held at the top and the reaction proceeded, water is produced. **Hydrogen and Helium balloon tests** came next, a stick with a lighted splint attached via a hairgrip or cellotape, was held up to each balloon in turn. Hydrogen lighted with a large flame and a pop.

Dry Ice was the last experiment carried out today, it was put in a latex glove and warmed using your hand, it sublimed and the glove expanded until eventually it pops. In the final demonstration universal indicator was added to a beaker of water, then sodium hydroxide before dry ice was added and according to films, proper chemistry occurred.

I have also looked at the Planet Science website which seems to have a lot of really good experiments that can be used in the classroom. For example testing cereal to see how much iron is in it, is something I did at school, which I remember being fun. Also 'magic milk bottles' sounds a tricky experiment to do but effective in demonstrating materials and physical processes. I was also interested in the 'whether the weather will..' experiment measuring the water level in a jug as ice melts because during a Student Associate Scheme I worked with a gifted and talented group who were doing a presentation on climate change and came up with this experiment themselves.

20th November

Today I went to SCHOOL, to meet up with SCIENCE TEACHER to chat about what I am going to be doing. It went very well and it was really good to be back. I am going to work mainly with the GCSE pupils, helping them with their coursework initially before I begin a more focused project. It seems to be a time of uncertainty due to the changes in the Syllabus'. I mentioned some of things done in the past, such as Science Clubs, websites etc and they seemed very enthusiastic. To begin with I will go every Monday and Tuesday from 11 onwards. Science club also happens on a Monday lunchtime which fits in quite nicely! They have a mixture of double and triple award science so it will be interesting to compare the differences. I don't have any immediate ideas for a project and those that I have previously thought of now don't seem so viable!

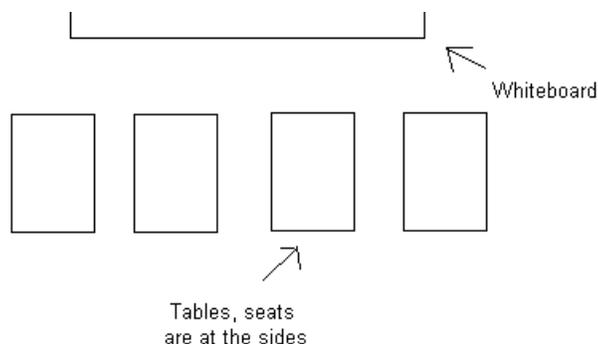
I look forward to next week when I start properly! I have found out that email is probably the best communication with SCIENCE TEACHER himself but if I need to contact the school I can phone them centrally.

I also had a look at the Ofsted report SCHOOL has a specialist science status and is a smaller than average secondary school. I would like to investigate more how this impacts on the school. It mentions how the curriculum provision in science caters for a wide range of ability. One negative was the lack of opportunity given to pupils to work independently and use their initiative. The GCSE science results were well above the national average. Able pupils have the facilities to take the separate sciences, core, additional and applied sciences are also offered.

26th November

It was my first proper day at SCHOOL, I observed three lessons. One Year 7 group, an average ability group.

Here is the seating plan for their classroom



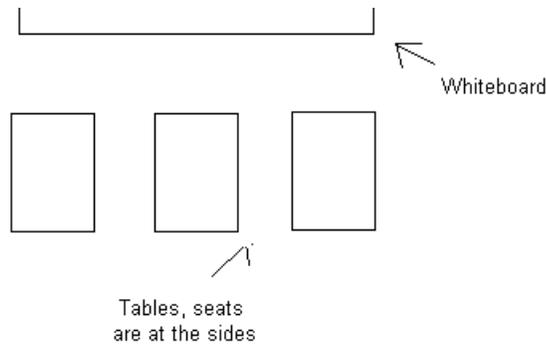
They were learning about energy, renewable and non renewable sources, and how energy is transferred. The use of a demonstration with real life examples, such as a torch, a Bunsen burner, a toy car really helped their understanding.

A torch, energy is transferred from chemical → electrical → heat.

It was a well controlled lesson with a lot of interaction.

The second lesson I observed was a Year 10 separate science group, a high achieving group. This lesson was about drug testing, the side effects and risks something that is new on the curriculum, I personally found it interesting, starting with a gruesome film clip which sparked interest. This was followed by a worksheet and a text book exercise where they perhaps lost interest.

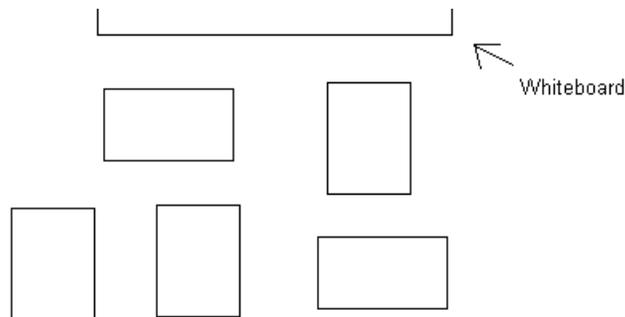
Here was their seating plan very similar to the Year 7.



I would have then been involved in Science Club, but the person running it was away so it was cancelled.

The final afternoon lesson was a cover lesson. It was a bottom set Year 10 group. None of them can understand why they are doing science and really struggle to see how it directly relates to them. Their ambitions have nothing to do with Science.

This was a biology lesson, talking about arteries and veins, just copying and labelling textbook diagrams. Their seating plan was very different; it was also a much smaller group because it was a bottom set.



Altogether it has been an interesting day seeing a lot of mixed abilities.

I had a thought that I may want to do an environment week, see Appendix A (spider diagram) though I don't think this will be feasible as they already have an eco club and are quite active in this area.

27th November

I saw a couple of different lessons today; the first was a Year 9 class. Looking at the reactivity of different metals, it included a practical burning magnesium ribbon, iron filings and copper in a flame. It was a little bit manic, and the pupils were quite hyperactive during the practical. It was handled well though.

I spent some time researching on what I would like to do the main proportion of my research project on doing a review of the new Key Stage 4 curriculum. This would be beneficial to the school and make a very interesting project. I started doing some research into the reasons behind the new curriculum and found on the QCA website three reasons as to the reform.

'1). Putting KS4 in the 14- 19 context. This is a result of the structural reforms being considered by the working group on 14-19 reform.

2) Schools would be reluctant to introduce a new curriculum which wasn't in line with future developments.

3) The new KS4 increases the flexibility for schools, enabling them to develop their curricula.

It is aimed to - challenge students

- Motivate and encourage achievement
- encourage institutions to work together '

I spent time in a separate science Year 10 class, who were doing chemistry coursework. There was such a variety in the independence and initiative various pupils took, some were unable to think of a title and others needed no help and worked completely independently. The coursework was about the Rate of Reaction of reacting marble chips with hydrochloric acid. This was in the computer room. Another opportunity to use some of the methods learnt in training, providing background information about the marble chips and hydrochloric acid to try and maintain enthusiasm for the piece of work. I also gave a lot of positive feedback to what I had read and gave hints as to the best way to proceed.

3rd December

I spent time in two lessons today, the first was the bottom set Year 7 group. This is an unusually big class for a bottom set with about 25 pupils. Behaviour of course was an issue but not as bigger problem as I had anticipated. They were learning about electric circuits.

The lesson panned out like this:

5 mins – worksheet to review their knowledge of circuits by colouring in the light bulbs which were lit up when various switches were closed.

5 mins – going through this with closed questioning

15 mins – Experiment – worksheet with different circuits that needed to be set up and the voltmeter read

5 mins – reviewing their knowledge, explaining the next experiment

20 mins – final experiment, using fruit and vegetables as a battery

Hand in homework and tidy up

2nd lesson was a big contrast, Year 10 top biology group; it was run by a PGCE student doing her formal assessment. Dissecting hearts was the main activity!

The lesson panned out like this:

3 mins – introductory worksheet labelling the heart

5 mins – open questioning reviewing the worksheet

20 mins – demonstration of dissection of pig's heart

20 mins – class practical dissection and analysis of hearts

2 mins – start diagrams of all different angles of the heart

Having taken on board the information given to us in the initial training, when asked questions such as what's this bit miss? (pointing to a section of the heart) I answered with a question getting them to identify the part next to it and working through a process of elimination to identify the bit they were looking at. I also attempted to refer back to when I did this at school and use personalised information, persuading two girls who were refusing to take part in the dissection at least stand and watch. I remembered that for me actually doing the dissection at school was the most effective way of learning about the heart.

4th December

The first lesson I observed today was a top set Year 8 group.

Again I took note of how the lesson proceeded. As the group has already finished the topic respiration two weeks before they are due to, this was an extra lesson on smoking and I thought it was really effective in bringing home all the issues associated with it and linked back well to the respiratory system they have been studying.

5 mins – introductory true or false worksheet

- 10 mins – presentation – copied key points into books, showing examples of tar etc, and open questioning
- 10 mins – group work, this was an activity where each group received three A3 pieces of paper with the titles, Benefits of not smoking, Short term effects, long term effects and some slips of paper with various things which then had to be placed in each category.
- 5 mins – went through this and wrote a few examples of each category down, explaining the next activity.
- 15 mins – Second group activity involved a cardboard sheet with an outline of a person on it, and the group had stickers with various ailments caused by smoking, the groups had to stick the stickers on where the ailments affected the body.
- 5 mins – scary facts and looking at the chemicals in cigarettes

The second lesson I observed was the same separate science Year 10 class but this time in Chemistry. This didn't involve practical work but an interactive game, designing an environmentally friendly t-shirt. This was followed by answering some textbook questions. This really illustrated that the new syllabus really is thought provoking and relates more to everyday life than previously, 90% of the pupils really engaged and benefited from this interactive activity.

I spoke with Mr Davies about the key stage four review and I know have enough information to start working on the pupil questionnaire which will be answered by a mixed range of ability Year 10 and 11 as well as Year 12 who took the old course, to evaluate whether the aims of the changes have really had an effect.

8th December

I looked in the best way of writing a questionnaire for pupils so I get the maximum information from the questions. I found an interesting website

http://www.cc.gatech.edu/classes/cs6751_97_winter/Topics/quest-design/ which seemed to have some really helpful information. A geography student also told me about a book by Oppenheim which looks at questionnaire design. So firstly I need to consider the aims of my questionnaire. My main aim is to find out whether the aims set by the government for introducing a new key stage 4 curriculum have really been achieved. So the questions I ask need to address, whether students are now more challenged and if they are more motivated and encouraged to achieve good grades. Also whether there are more outside influences. This is going to be very much a comparison between those who did the old curriculum and those currently doing the new one. It may be that the new curriculum definitely fills one aim but not another. This is very much going to be qualitative data, as it relies on the individual's honesty. I think it will include a mixture of open and closed questions. Closed questions

being those such as do you feel challenged by your science course, what is your predicted grade? Open questions being if you could change one thing about the science GCSE what would it be? The closed questions will be much easier to analyse than the open questions, but I think the open questions will really give more of an idea of whether the new course really is an improvement. I looked at another couple of books one by Arlene Fink and one by S Sudman on questionnaire design which were similar to the Oppenheim book mentioned earlier.

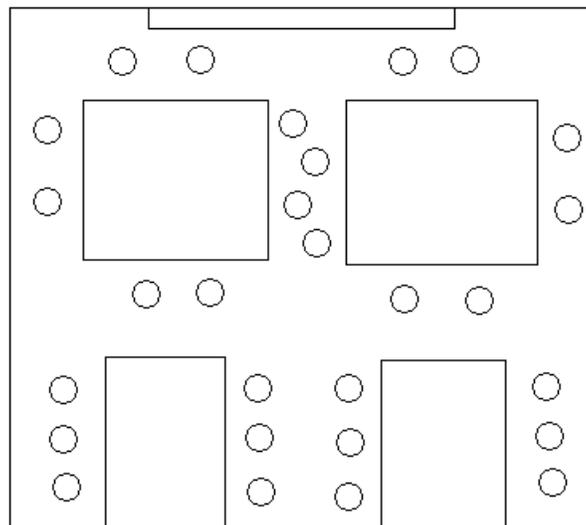
10th December

I took my questionnaire into school and SCIENCE TEACHER had a look at it and was on the whole very positive. I have decided to get all the Year 10s and 11s to fill it in plus a sample of Year 12, this is more difficult as SCHOOL only has up to Year 11. I observed three classes, the first a bottom Year 7 class working on posters about energy sources. It was interesting to see the various groups work together and how much prompting they needed. The level of creativity was really high!

The second lesson was the Year 10 separate science set, they did a mini test on healthy living all achieving A's and A*'s with only one getting a B. Although some found it hard to concentrate solely on their own work.

The third lesson was a Year 7 middle set, who were learning about electricity. This is the first time I have seen this teacher in this classroom which was an interesting shape. Due to it being so small and the class being so large, they are some who sit with their back to the whiteboard.

Plan of the classroom:



It was interesting to see under the objectives on the board, there were two levels depending on whether the pupils were working at a level 4 or level 6. I thought this was a good way of stretching the higher end of the class while still maintaining the standard level for the rest. By the end of the lesson they had gone way above what is required at Year 7. The justification for this is that when they do the topic in Year 9 and are introduced to the concept of current in series and parallel circuits they don't understand it, so introducing it now gives them a little bit of a head start!

11th December

Today has been a bit of a nightmare day! I spent an hour extra at home putting the final touches to my questionnaire. I arrived in school to have received an email from Tim Harrison giving some helpful pointers, I showed it to SCIENCE TEACHER and he disagreed with some of them. Particularly about the wording on the questions and the emphasis being placed on content as opposed to teaching, SCIENCE TEACHER and I decided that the emphasis on content would be better emphasised in the initial explanation of the questionnaire to the pupils. I sorted out the photocopying working out the classes I am going to target. Those that have science on a Monday and Tuesday are who I am going to target. I am going to target five Year 10 classes and eight Year 11 classes, a mixture of double and triple award science, with a range of abilities. I am going to photocopy 150 on blue paper for the Year 11's and 100 on yellow paper for the Year 10's. I also worked on the best way to introduce it. I am going to test it on one class first to see the results I get.

I also investigated into the school website, there have been attempts at a science website before but nobody was keen to keep it up, therefore it just fell apart. I'm not sure whether it would be of any use to make it and then to not to be used. I will think about it over the holidays because the teachers were very keen for this to happen, however the technician wasn't so confident.

17th December

I tested my questionnaires on one group and it worked really well giving interesting results and very mixed views. I decided that the emphasis on content as opposed to teaching would be better explained in the oral introduction than written into the questionnaire. This proved to be a good method and in the test group none of them referred to the teaching but solely the content. Therefore I tried it on a lot of groups very mixed ability, everything from bottom set to top set. Having looked into research methods I am worried my questionnaire will be difficult to statistically analyse.

The end of term is nearing so lessons are winding down. I did observe one Year 10 lesson, Double set 2, after doing the questionnaire they were learning about polymers and the effects of adding plasticizers and cross links. This was a learning task where the emphasis was very much on independent work. It was interesting to see that the girls were capable of working quietly and getting

on with the task but the boys started playing up almost immediately. I wonder if there is a link between boys kinaesthetic learning as opposed to goes who are more visual and aural learners. I think Lisette's study will be very interesting.

The second lesson by the same teacher was entirely different. This was a high achieving group of Year 11 triple science. They spent the majority of the lesson filling in my questionnaire and then writing their reports. Each pupil in their reports each term is able to write how they feel the term went and then in the teacher's report this is answered. There were mixed views as to how productive this is amongst the staff. After this the rest of the lesson was a cover lesson, just copying key terms from the glossary about the Universe. I don't think many of the class got much of this done or learnt much.

18th December

A few more classes completed my questionnaire but other than that classes were just watching films and relaxing as it is the end of term tomorrow.

14th January

It was good to be back in school. I spent the first lesson with 7J, the bottom Year 7 group who are learning about Variation. This is a key concept and after three lessons they were still struggling to grasp it. They completed a couple of worksheets which I helped some of them with. The second lesson I assisted in was with a new science teacher, teaching one of the Year 10 separate science groups. It was half way through the lesson that a pupil piped up that he was teaching the wrong topic. They were meant to be learning about evolution. It was a PowerPoint presentation and a bit of a discussion. This is the first time I have seen this new discussion facility of the curriculum in action and I thought it was good and thought provoking but at the same time not very well structured, the pupils by the end of the lesson had lost interest.

Science club was fun, looking at how glass can be used as a fibre optic if it is melted and bended and then a laser is shone through it. There is a science week planned in March and I have offered to organise some of the activities for that, which is another thing to work on, I have a couple of ideas with the clock experiment, a liquid nitrogen demonstration and some other egg races.

I spent sometime this afternoon reading through a document about the new curriculum and using it for ideas of my teacher's questionnaire as part of the review.

15th January

School was hectic as Year 9 had their mock SATs this morning, and Year 10's had a module GCSE exam this afternoon. I assisted in an 8J class (bottom set Year 8), doing an experiment on refraction,

using light boxes, slits and glass. Drawing the diagrams was probably one of the most difficult tasks but most seemed to get the concept that the light when it enters a different medium, bends.

Then the same Year 10 separate science class as yesterday but in chemistry. They were doing their chemistry case study on the use of plastic bags have on the environment. It was quite interesting and there were some thought provoking issues brought up. The difference between bio degradable and degradable is one that I certainly wasn't aware of.

This afternoon I was with a low Year 11 group, revising forces. Despite having an exam this month they seemed unconcerned about learning this information. The teacher made helpful summary sheets and equation triangles to put the information in the simplest form, for understanding and learning.

However many of them do not understand the difference between weight and mass. They did a worksheet and a group of boys filled out none of it. They blamed their lack of understanding on poor teaching, however from my perspective this wasn't the case but an unwillingness to learn.

Next week I am going to look at coursework and how to help students with it. This will give me a good opportunity to see how it has changed in the new curriculum.

21st January

I observed two lessons followed by going through some coursework. The first lesson was 7P a middle set Year 7 class. They were learning about parallel circuits, it was a practical lesson. The class is known to be a class which misbehaves; therefore they have been put on class report. Meaning if someone in their class talks or messes around their name gets written on the report, it is used to identify the groups within the class which are misbehaving and hindering everyone else's learning. The lesson began by testing previous knowledge, most of the questions were answered correctly and so the lesson moved on quickly. There was a demonstration of how to build a parallel circuit and then each table (groups of four) worked in a group to create that circuit and then they were asked to investigate three questions, what happens to the brightness of the bulbs in a parallel circuit if the number of bulbs is changed? Can the bulbs be turned on independently and what happens if the number of cells is decreased?

The first is an interesting question because in theory the brightness of the bulbs stays the same, however in practise due to the quality of the equipment if a bulb is added the brightness decreases. This is an important distinction and one which they seemed to understand.

Altogether it was a good lesson, I have seen the class before and because they were on report there was a lot less misbehaviour.

The second lesson was a separate science Year 10 class, which I see most regularly. They were still learning about evolution and Charles Darwin, there was no practical element to the lesson. Only one or two had done their homework. So the lesson didn't start on a good note. There was essentially a

mini lecture given about Charles Darwin before they answered questions from their textbook. In 20 minutes most had only done two questions, the teacher confused all the page numbers so in the first ten minutes no work was done while pupils tried to work out what they were meant to be doing. Science club was cancelled due to the teacher who runs it having too much administration work to do. So my ideas for science week will be looked at next week.

The third lesson I spent going through three pieces of coursework, reading the assessment guidelines and learning how they are marked and how the three pupils could improve what they have done. It was really interesting. Next Monday I am going to review this with SCIENCE TEACHER before working with people on a one to one basis to improve their coursework.

23rd January

I found an interesting book on Science Education Reform, which mainly focuses on America. It goes through the last century with the changes in educational reform and how these came about. I have started also looking at literature about the new curriculum.

25th January

Met with Tim Harrison to discuss how my project was going and the best way to proceed. He has given me a contact for a sixth form in similar style to SCHOOL which I can use for my pupil questionnaire to get a comparison with the pupils at St Bede's. I am also going to speak to Lisette asking about the questions she used to ask the staff, to make a comparison between a city and small town school. I will also look further into the mechanism of coursework, how it is worked out in terms of timing. Risk Assessment was the final thing that was mentioned, I need to find a way of leading at least part of a lesson or giving a demonstration and performing a risk assessment for each time this happens.

This was the email I sent to Madeleine Woolfenden

Dear Ms Woolfenden

I am a final Year undergraduate in Chemistry at Bristol University and doing a schools research project, under the supervision of Tim Harrison, who passed on your contact details and has been copied into this email.

I am mainly working with SCHOOL and am currently undertaking a review of the new key stage four curriculum. However as they only have up to GCSE it is difficult to make a comparison with the old

curriculum. I have got pupils to fill in a questionnaire about the new GCSE science and now I am looking to do the same with those now in Year 12 about their GCSE science.

I was wondering if it would be possible to come in to St Brendan's and ask pupils in Year 12 to fill out the questionnaire? It wouldn't take long and would be very valuable information for my research project.

Hope to hear from you soon.

Best Regards

Emma Feggetter

28th January

Today I met with SCIENCE TEACHER, to discuss how things are progressing in terms of my project. I informed him that I needed to take a more active part in a lesson whether this was giving a demonstration, introducing an experiment or running an experiment with the class. He said he would think about a way of incorporating this. I also told him how I would like to have an involvement in science week and my idea about running a competition for a website design. He also answered all those nagging questions I had about the school and the mechanism for coursework. I asked about how it is decided whether a pupil does additional, applied or separate science and who does foundation and higher tier work. This was asked in response to a pupil comment on the questionnaire I ran. The target grades are looked at and the pupils and parents wishes are taking into account. There are only 60 places for separate science so it is the top 60 in the Year group, pupils opt for applied science and then the teachers decide who is most suitable to do this.

Coursework is done to take into account for both work load in science and in other subjects, for the Core Science in Year 10 all of the Year do it at the same time, when it is to be done is written into the timetable of the weeks in which they do each module. The separate science classes are done so that the two classes do it at different times. Finally we went over a couple of pupil's coursework who I am going help improve. It was a good meeting and I feel more confident about the project as a whole.

I observed the same Year 10 separate science biology set on monday as always, it is good to have a rapport with them, I know all their names and they know who I am which makes a pleasant change sometimes. Again the lesson was very much in the same style as last week, very much a lecture style with a powerpoint presentation on mutations. Behaviour was a lot worse this lesson though and it took a whole lesson to get one concept about DNA learnt. This was followed by textbook questions which they were supposed to have already done for homework.

At lunchtime science club took place, this time using borax to make glass using tiny amounts of different oxides to form various colours. This was fun and all who attended seemed to enjoy themselves. Next week we are visiting the farm.

In the final lesson, I took a pupil doing additional science in Year 11 to the library to look at his data analysis coursework with him, this was about wind turbines and how the voltage changes with the number of blades. He seemed embarrassed to be singled out in this way, but it was effective and he managed to improve his analysis and write the whole of his evaluation which he had previously got zero for. The coursework in this new course was changed to be less jumping through hoops however it still seems to be this way. They are all given a crib sheet made by SCIENCE TEACHER with sentences which just need finishing on, there is also a crib sheet for the case study coursework (Appendix B). I found it hard at first, having not been present at the actual experiment to suggest ways he could improve his analysis as he seemed fairly uninterested, so I had to encourage him to tell me exactly what he did and why his results are as they are for example the first two results were anomalies because he used different equipment.

Altogether it has been a busy but good day.

29th January

The first lesson I observed today was a Year 7 revision lesson on energy sources and transfer and electricity. First the instructions were explained in the classroom, they had to go onto the GCSE bite size website, find the key stage three part and use it to revise. This involved either doing the multiple choice test first, then reading the revision notes and then doing the test until full marks were gained or read through the revision notes and then complete the online tests. If full marks were attained in both they were then allowed to play science games on the same website. Many of them just wanted to get full marks in the tests as quickly as possible so that they could spend the rest of the lesson playing games. As a consequence on the energy transfers part, which is the topic they did first they were just randomly clicking and using a process of elimination as opposed to working out the answers. The electricity part was fresher and most did this by working out the answer. There were a few problems with some of the computers, slowing some pupils work and leading to the consequence of doubling up. The second lesson was a bottom set Year 7 group, the same as yesterday. However today they had four people doing a live observation as part of an outstanding teacher programme. This meant that the learning aims were written up properly with the various levels, the tasks set for the lesson and key words. The lesson began with a question and answer session on recalling knowledge from the previous topic on variation; this led onto the current topic of how different classes reproduce. Mammals was the main focus, this was followed by a sorting exercise putting in order by age different pictures, starting with a sperm and an egg to an old couple. This was followed by group discussions

on how a sperm is introduced to an egg. Many of them were quite embarrassed and not very forthcoming in their group discussions. This is a key thing for independent learning, though I didn't think it was very effective on this topic and speaking to the teacher at the end of the lesson, she agreed with me. During this observation period the pupils who usually find it hard to concentrate and distract one another were quiet and very well behaved. The Observers left and the class continued with a powerpoint presentation naming and labelling the female and male sex organs. Quite a few people had a lot of questions and all seemed very interested in the topic! Although a little disgusted at times.

At lunch I asked questions about how often reports were written and other types of assessment. They have one report, one parents evening and a review, which is a short report, and their assessed levels are written down once a term.

After lunch, as yesterday I spent time helping two Year 11 pupils improve their coursework. This was applied science coursework, measuring the resting heart rates of both males and females with different body mass indexes. They were both working on their analysis and evaluation. They were good with some prompts on the actual experiment and how they could improve it but not so much on the scientific background and how this experiment relates to respiration. I struggled to help them with this both not having done the experiment or biology since GCSE.

3rd February

I had a substantial amount of email contact with Tim (Appendix C) I have been awarded a project grant from the School Trust Acts Settlement of £500, which I applied for in the summer. I asked Tim about a sensible way I could use this in my review of the new key stage four curriculum, mentioning the idea of running a direct comparison with a school in Europe. He knows someone in Paris and has contacted them about this possibility. I would translate my pupil questionnaire into French but use the same questionnaire to make a direct comparison.

4th February

Today was an inservice day at SCHOOLbut some Year 11 pupils came into school to do their coursework in the computer room. Two students were doing their science case study coursework which was about whether plastic bags should be banned. To complete the coursework they had to do an introductory paragraph about how plastic bags are made out of crude oil and about the properties about low density polyethene. The second paragraph was about the arguments for banning plastic bags for example, the litter problem, the affect on the environment and cost. This had to include an explanation of each reason as well as quotations or statistics from a variety of sources supporting the argument. A comment then had to be made about the reliability and whether the student agreed with

that opinion. The third paragraph was the same but the arguments against banning plastic bags. They then had to compare and contrast the arguments also looking at the alternatives to banning them, for example charging for them at the supermarket or introducing a law saying all plastic bags must be biodegradable and form a conclusion as to whether plastic bags should or shouldn't be banned. Finding relevant quotations in articles and comparing and contrasting the arguments were what they found hardest and they needed a substantial amount of help with this element of the coursework.

5th February

The first lesson I observed today was a good Year 7 class, they were doing the topic of Variation, specifically looking at fingerprints. A practical was completed, this involved each person using an ink pad and printing their fingerprint on the sheet (Appendix D) and identifying which type of fingerprint they had, whether it was a Whorl, Arch or Loop. The class as a whole seemed very interested in this topic, with a lot of questions being asked. The teacher also had some interesting stories to tell about how this technique is used in forensic science. The class data was then written up and the class was asked whether it was continuous or discontinuous data, reviewing previously learnt material. For homework they had to do a crime scene investigative sheet and also write up the data in what they thought was an appropriate table or graph.

The next lesson I worked with the same boy as last week on his applied coursework about BMI and resting heart rate. He seemed really keen to do well and this is a student who is usually fairly lazy. It was great to see such a change in his attitude.

At lunch I discussed my teacher interview questions about the key stage four review with SCIENCE TEACHER. He seemed happy with them so now I shall email them to Tim.

The last lesson was a bit of a disaster, I worked with six students doing their case study coursework, as two students were yesterday. With such a large group, they spent a lot of time talking and messing around rather than getting on with the work. It was also very disorganized, they weren't sent to the library with clear instructions so treated it as a free lesson. It was difficult to impress upon them the importance of the work and the two boys continuously distracted the four girls. I had no control over them as I can't enforce discipline all I can do is report back to the relevant teacher, which wasn't going to solve the problem at the time.

11th February

Today was a good day on the whole, the atmosphere in the science faculty when I arrived was very dull and gloomy. I came in, in a very good mood due to the weather being so good, they thanked me for being full of the joys of spring, and I'm not sure whether they were being sarcastic!

Anyway the first lesson I worked with a girl on her applied science coursework, she worked really well and understood the concepts behind it well. The coursework was on how heart rate changed with increasing BMI, I helped others with the same coursework last week. At the end of the session when she finished she thanked me for my help which was really nice to be appreciated.

The second lesson I observed was the Year 11 triple science I have observed before, it was on sampling. There was a bit of explanation as to what this was and how to recognize a *Bellis Perennis* (daisy) and also about the domain scale (Appendix E). Then we went out on the field with quadrants and measured random samples of the grass for daisies. The groups got distracted quite quickly though the practical element of it helped them understand how to use the domain scale.

Science club was cancelled due to the person who runs it being ill. After lunch I spent sometime helping a girl do her case study coursework, in one lesson she got the whole thing done in comparison to a tenth of it, when she had distractions in the library.

12th February

Today SCIENCE TEACHER was ill so instead of running my teacher's questionnaire by him and starting to get staff members to fill them out, I just observed two lessons. The first was with a middle set Year 7 class, looking at liquids, solids and gases, this is the first time I've seen chemistry in a Year 7 class. The class demonstration didn't work which was illustrating Brownian motion. Halfway through the class I was sent to photocopy some sheets about the menstrual cycle for the following lesson (Appendix F). Finally a practical experiment was conducted, this was simply using a bunsen burner to boil some water and measure at what temperature the water boiled. The emphasis was on independent learning, and no instructions were given apart from safety instructions. For example every time thermometers and bunsen burners are used, the teacher must inform the class not to put the thermometer in the bunsen flame as they thermometer may explode. This is due to an incident a couple of weeks ago where a Year 8 pupil did precisely this and it exploded.

During the practical it was interesting to see that many of the pupils thought that as soon as there were a few bubbles the water was boiling, having no real idea what water looks like when it boils, as usually when they have boiled water in the past it is in a kettle.

The second was with the bottom set Year 7 class going through the menstrual cycle. The teacher spent some time emphasizing the reasons as to why it is not just girls that need to learn this which was really positive to see and the boys did focus on what was being taught. Without this talk at the beginning I'm not sure they would have been so cooperative. An interactive powerpoint display was used to take them through the cycle and then this was followed by a cutting and sticking exercise. The plenary was a video of a girl talking about her experience.

18th February

This week is half term so there is no school, however I met with Linda. I had several things to ask her about pursuing my project in comparing a french school, firstly a bit about the French education system. It doesn't work quite like the english system, they have primary schools, secondary schools up to the age of 14 and high schools which are 15 – 18 Year olds. At the end of the secondary school they take the Brevet which is a system where you collect academic points throughout the Year and at the end of the Year everyone takes a final Year exam however you can collect enough points throughout the Year so that as long as you get more than 0 % in your exam, you pass the Year. Then in the first Year of high school everyone has to take all subjects and in the second and third Year you specialize in a particularly area for example business, science or literature. Within some of the courses you have to take science but in two you do not.

This was really interesting and in order to fit into my research I think I need to look at the last Year of secondary school and the first Year of high school. Linda said that this was possible and was going to confirm the links she had already made. We then discussed the best way to use my questionnaire, the majority of the pupil questions are relevant, and the only ones that were particularly unsuitable were about coursework as this is not the system in France. A lot less of the teacher questions were relevant for example all those about coursework and resources.

Dates were then discussed and Linda is going to find out when the school holiday dates are so that I can plan my time around them.

Finally logistics were talked of, I asked her if there was a youth hostel in the near vicinity of the schools I could stay in but she said there wasn't. She has offered me to stay at her house, which is extremely kind and I am very worried about interrupting her family life but she was very keen for this to happen. I told her about my grant and indicated I would like to give her contribution for all the help she is giving me, however she waved this and wasn't very keen on it.

HALF TERM WEEK

As this week is half term and I am unable to go into school, I started thinking about the best way to do my presentation and how to write up my project. I looked at a couple of peoples projects from last Year and it was a valuable insight into the variety of schools people are placed in. James Greenwood last Year went to Badminton School and in his reflective diary he talks of planning the next topic for a Year group given the choice of three. This is very different to SCHOOL where the equipment limitation means that at the beginning of the Year it is set out which classes do certain topics in certain weeks of the Year. For example not all Year 7 students study the same topic at the same time. It was very useful to look through previous Years projects and I feel a little more relaxed knowing how I am meant to write up my project.

29th February

I went into school today to see SCIENCE TEACHER to plan the best way to spend the rest of my time in school, but unfortunately he was ill.

3rd March

The first class I assisted in today was the bottom set Year 7 class, they were just starting a new topic acids and alkalis. Firstly the existing knowledge of the students was tested, with a question session about acids. There were some very interesting misunderstandings which were brought to light. The existing knowledge on examples of acids was good but knowledge on the characteristics was very poor. After the initial introduction the rest of the lesson concentrated on the safety aspects of handling acids. The procedure for carrying, using and storing acids was explained. The pupils were warned that if they did not listen to these instructions and rules they would not be able to work with acids and alkalis in this topic. Therefore the concentration level was higher than usual. They were given a set of rules,

Rule 1: Always stand up when using acids and alkalis

Rule 2: Always wear safety spectacles

Rule 3: Put the lid back on the bottle when you are not using it or passing it someone else

Rule 4: When pouring acid into a test tube put in a test tube rack do not hold it

Following this the pupils practiced accurately pouring acid into a test tube and then finally measuring out a certain volume of acid using a measuring cylinder and placing it in the test tube. At the end of the lesson when clearing up I came across one boy who was pouring acid back into the bottle from his test tube when he was instructed to pour it down the sink, he was sat down and didn't have his safety specs on and then he left the top off the bottle of acid. Clearly nothing he had been taught in the lesson about how to use acids safely had been taken in. Therefore in the plenary he was put on the spot and tested about his knowledge.

The second lesson was a Year 10 separate science biology lesson where they were in a computer room working on their case study coursework, should the smoking ban be maintained? Many of them weren't doing this but rather playing on Photoshop creating tags. I told them that if they didn't do their coursework now they would have to waste their own free time at home doing it and they said they would rather do their coursework at home because they didn't have Photoshop at home to play on. They were all very boisterous at the start of the lesson and this continued for most of it.

At lunch I discussed science week with SCIENCE TEACHER and SCIENCE TEACHER 2, hopefully next tuesday I will do a demonstration with liquid nitrogen and then there will be two egg races on monday and thursday. I looked through the schedule from last Year (Appendix G). It seemed a lot

more organized and despite saying I wanted a significant part in it the organization just hasn't been there to be able to do this!

In the final lesson I helped a Year 11 pupil with his case study chemistry coursework on whether plastic bags should be banned. He was quite resistant to get on with his work and needed a lot of encouragement. As a consequence we only got through the science behind it rather than getting this and the arguments for and against done as I have with other pupils. However his background science was very detailed and he seems to have a good understanding.

After school I discussed with SCIENCE TEACHER how I could play a more active role in lessons. We decided as both the Year 7 classes I have previously worked with are now studying chemistry topics these would be a good start. Therefore with the bottom set Year 7 I am going to do a pH scale game to check their knowledge on the topic. With the middle set Year 7, I am going to do a demonstration asking them to identify which is the solvent, solute, solution, gas, liquid, solid by holding up cards showing the various particles on them. Finally I arranged to do some work with the Year 10 separate science group I have worked with a lot though what exactly is still to be confirmed. I feel more positive now that I am going to have an active part in some lessons at least.

4th March

The first lesson I assisted in was a middle set Year 7, this just involved going through there february exam, which tested all their knowledge from the first half of the Year on energy and electricity, the environment, cells, reproduction and variation. The class attained a range of results everything from a 3a to a 6a, the highest level able to be attained. Most achieved four or fives. I asked the teacher how this compared to her bottom set group she said that they mainly achieved threes and fours so slightly lower than this group, one girl in the bottom set got an N. Finally they had to write their comment for there report, this had four areas:

1. They had to comment on the topics they had liked and disliked
2. The learning methods they preferred eg dvds, class quizzes, posters, practicals
3. What they thought of their behaviour and how hard they worked in class
4. Target for the rest of the Year

Most wrote a sensible comment that reflected their performance in class.

	Corrosive Attacks and destroys living tissues, such as skin and eyes.		Irritant Not corrosive but will make the skin red or blister.
	Toxic Can cause death, e.g. if swallowed, breathed in or absorbed by skin.		Harmful Similar to toxic substances but not as dangerous.
	Highly Flammable Catches fire easily		Oxidising Provides oxygen to make other substances burn more fiercely.

The second lesson was the bottom set Year 7 group and following yesterdays lesson they were introduced to hazard symbols by means of a powerpoint presentation. This was followed by

a cutting and sticking exercise of the hazard symbols illustrated here (except oxidizing which is too advanced for Year 7). After the instructions had been given three separate individuals asked what they were meant to be doing a clear indication that they had not been listening. In fact throughout the lesson the class was quite boisterous. Throughout the introductory presentation two boys were playing a game by flicking a ball of paper between them and two girls were whispering behind their hands, both were warned several times to stop. Next lesson Mrs Garrett is going to change the seating plan and separate the two girls.

The plenary was a quick quiz again with the interactive powerpoint presentation.

In the final lesson I worked with a girl on her case study coursework again the case study on whether plastic bags should be banned. There were no computers free and she seemed relieved that she could write it by hand. However she didn't have a chance to get any quotes or statistics to support her for and against arguments as we only had textbooks for information. In comparison to the boy yesterday she worked hard and achieved twice as much. It did seem something that she was genuinely interested in.

After school SCIENCE TEACHER and I had a quick chat about science week and it all seems planned to go ahead. I think this would be the most interesting thing to do my presentation on.

6th March

I popped into school today to sort out the risk assessment with Andy (Appendix H)

10th March

Today I spent the first lesson with the middle Year 7 group that I am going to do the plenary or introduction to a lesson with next week. They were doing a practical dissolving sugar in some water at various temperatures. Thus investigating how temperature affects the amount of substance that can be dissolved. This took the majority of the lesson, twice I had to go and get things from the technician so spent a lot of the lesson dashing around. The plenary was an explanation of particles and solute, solution and solvent. The group worked well apart from a couple of individuals who had to be warned about their behavior. After the lesson I had a discussion with the teacher about the best way to prepare my resource for next week's lesson. I am going to prepare four cards for each pupil, with particle diagrams on them, one for each solid, liquid, gases and solution. Then as I do a demonstration they hold up cards depending on the substance I am talking about is a solid, liquid, gas or solution. I spent the rest of the lesson preparing the resource as well as setting up for the first of the lunchtime egg race.

This lunchtime it was building and burning bridges. There were eight teams of four people approximately. Each was given a few sheets of paper, a metre of cello tape, a metre of string and six

straws. The bridge had to hold 100g and the winning team was the bridge that survived the longest. The record time was 6 minutes and 24 seconds. It was a great success. (Appendix I)

The last lesson I went over the risk assessment with Andy and looked at CLEAPPS section 11 and the exact plan with the liquid nitrogen. Finally I carried on preparing my resource. I also had a meeting with another teacher and briefly talked about how I would be able to have an active involvement in her Year 10 triple chemistry lesson. I am going to do an explanation of how surface area affects the rate of reaction with three types of iron.

11th March

Today I did a demonstration at school with liquid nitrogen and dry ice. It went really well and formed part of science week. It was part of a talk on Making Ice Cream run by Andy. I firstly did an experiment adding dry ice to water, sodium hydroxide and indicator. There were a lot of wow's from the pupils and wanted to touch the carbon dioxide coming off. I then gave out some rubber gloves filled with dry ice. Then came the liquid nitrogen, I think I did this in slightly the wrong order. Logically I should have done the eggs in the frying pan first, then done all the other bits so that you could see what happened to the eggs at the end when they had heated up again. I made it interactive getting the pupils to firstly guess the gas coming off the dry ice experiment and then getting them to guess the boiling point of liquid nitrogen. The only thing that didn't quite work was the banana which I didn't leave in the liquid nitrogen for quite long enough. I did this again more successfully at the end. Having dipped the flowers in liquid nitrogen I let them stamp on the rubber gloves and crumbled the flowers.

We then used it to make ice cream, which was actually quite edible. Everyone tried some and the pupils were each given a cone with some bought vanilla ice cream.

The last lesson of the day, I finished preparing my resource for my lesson next week. I also discussed exactly what I am going to do in the Year 10 separate science lesson next week.

17th March

Today was presentation day, I thought it went okay, some of the questions I got asked were quite tough. Afterwards I went to school and helped out in a Year 7 lesson, which was separating sand and salt from water using filtration and evaporation. Finally I checked that everything was okay for the two lessons I am going to teach tomorrow.

18th March

Today was quite a tough day at school. I did demonstrations and actively took over the lesson in two lessons. The first was a middle set Year 11 where I did the starter activity. I made some laminated cards with the diagrams of particles on them one of a liquid, gas, solid and solution and then asked the

class questions and they had to hold up the right card in response to my questions as I did a demonstration of putting a solid in a liquid and making a solution. The classes knowledge was generally very good even with the scientific words which had just been introduced to them such as solute and solvent. The rest of the lesson was spent doing the same lesson as yesterday but with a different class and teacher. This time however they were given very few instructions, they were just told that from this mixture they needed to work out and perform a method that separated the sand and the salt. This was an experiment which is performed at key stage two. The plenary however introduced new terms not mentioned in key stage 2 for example insoluble and soluble.

The second lesson I did a demonstration with a triple set Year 10 chemistry lesson. They were being introduced to the collision theory and how surface area affects the rate of reaction. So I had three different types of iron, an iron nail, iron wool and iron filings. I initially asked them several questions about the difference between them. It took a little while before the right answer was given and it became a bit of a shout out, I didn't want to discipline them because they weren't actually my class, so Mrs Ford stepped in and did this. In hindsight however I think I should have been firm with them from the beginning. I then asked which they thought would react faster, the majority said the iron wool so I showed them by doing a demonstration with the Bunsen burner that it was actually the iron filings because they had the largest surface area if you took the same amount of each substance. I then tried to ask them probing questions as to why this was, but this was difficult and they didn't really understand so Mrs Ford stepped in and gave a thorough explanation. The rest of the lesson was just a theory lesson and behaviour was the worst that I have seen from this group! I am slightly worried that this was my fault by upsetting the balance by having an active input in the lesson.

It was my last day at SCHOOL so quite sad, they gave me a card and a bottle of wine and I gave them a box of chocolates to say thank you.

25th March

I spent a week in France observing two French schools. The first of the schools was a collège, Collège Auguste – Delaune, which was in the suburb of Bobigny just outside Paris. It has 600 pupils with classes of 22 though sometimes pupils are taught in half classes. Collèges have Year groups from sixieme to troisieme, in England this would be Year 7 – 10. At age 15 pupils finish this school and either finish school forever or continue to a lycée.

The second school I observed was a lycée, Lycée Louise Michel. Most pupils who go to Collège Auguste - Delaune go onto this lycée.

I went with a Year 8 group to Le Cite de Science which is a massive science museum in Paris. The class was doing a project where they visit the Cite de Science several times throughout the Year each

time visiting two different areas at a time. This is a scheme for several schools around Paris where one class of each school visit the Cite de Science and then at the end of the Year the classes from different schools meet at the Cite de Science for a conference.

This time we visited the Geolab and the Planetarium. The Geolab involved an initial presentation about dinosaurs, this was followed by the class being divided into groups and each group did a different activity. Then the plenary was the lady from the Cite De Science building up a picture of a habitat. Though this was very beneficial for the pupils and certainly an experience they wouldn't have been able to get in the classroom. I thought that the pupils would have been able to learn more had they had the opportunity to do more than one activity in the room.

The Planetarium was an amazing way to learn about the solar system, with a recreation of everything from the galaxy to planets to various star constellations. All the pupils seemed to thoroughly enjoy this. This was a class that was supposed to be quite noisy and have behavioural problems. However they were well behaved throughout the day. This group is not allowed to do practical work in school as they have too many behavioural problems.

When the class returned to school immediately they had to sit down in their classroom and answer some questions about their experience. This was all very strict.

I found the classrooms very bare with none of the pupils work on the walls.

26th March

I went to the Lycée which was a very different experience. My first impression was that I was walking into a prison, we were quickly ushered into school before they closed the gate. School started at 8am. I observed a lesson which was with a deuxieme Year, this is the bottom Year of the Lycée before pupils specialize. This was supposed to be a practical lesson however it wasn't very practical. The pupils started off with physics (physics and chemistry are taught together in France). They had to plot their data from a previous experiment on a computer program. This was followed by two physics worksheets on gravity. Finally they moved onto chemistry and did a worksheet on moles. Pretty much the whole lesson was done aurally, with the pupils just filling in worksheets. There were no audio visual resources used during the whole of the two hour lesson. This was a high ability class of pupils interested in science, so slightly unusual. They filled in my questionnaire and gave it back to me later in the week.

The second lesson at the Lycée I observed was a normal deuxieme Year class of mixed ability. This was a two hour lesson where pupils were just doing question and answers. At the beginning of the lesson the pupils went through their homework. One pupil wrote on the board what they had written for their homework and then the teacher corrected what they had done. This was followed by just more questions and answers. The class had a very relaxed atmosphere. The lesson went from physics to

chemistry without a break. One set of questions were about gravity, mass and weight and the next set of questions were about diluting concentrations. This was referring to an experiment they had done the previous week. I helped members of the class with both of these sets of questions however I found it much easier to help with the chemistry questions than the physics questions. During the mid way break I had a lot of positive interaction with the pupils and they were all very willing to fill in my questionnaire. There was no school on Wednesday afternoons.

27th March

I spent the day at the college. I observed a range of lessons maths, biology, physics and chemistry. The first was a 6^{eme} half group maths lesson about geometry. There were about 12 students. The teacher had a set square and compass which were made to be used on the blackboard. This accurately demonstrated what the pupils had to do. The other half of this class was doing science. They are taught in half groups when something practical like geometry needs to be taught. The lesson started by going through the homework, this was followed by copying from the blackboard some rules for quadrangles. This was followed by another set of exercises.

The second lesson I observed was another maths lesson with the same teacher. This was the same class I went to the Cite De Science with. They were quite rowdy, though on talking to the teacher they were better behaved than some lessons. The lesson was conducted in the same fashion as the previous class. One boy was sent to the principles office for bad behaviour. This was quite a serious punishment without any real warning. It is not something that would immediately happen at St Bede's. The third lesson I observed was a half group 6^{eme} Year biology lesson, this was combined with watching another 5^{eme} biology lesson. The 6^{eme} lesson was very similar to a lesson I observed at SCHOOLabout variation. The pupils were given different creatures and had to put them into groups. They then had to explain how they were categorized. The 5^{eme} lesson was looking at fish gills under a microscope. This involved drawing diagrams and filling in a worksheet. A projector and computer images were used to aid learning.

The last lesson of the morning that I observed was another maths class doing the same work as the second lesson I saw, however this group was a lot more rowdy and got a lot less of the work done in the time. Another teacher also interrupted half way through the lesson to give the class their english homework, this caused a lot of disturbance. Pupils generally seem to have longer days and a lot more homework than in England.

The final lesson I saw was a 4^{eme} class doing Physique Chemie (a mixture of chemistry and physics) They were doing electricity, in the previous lesson that had conducted an experiment measuring current in a circuit in both parallel and series. This was just a follow up theory lesson about what they had found. This was a large class of about 25-30 pupils. Much of the lesson involved copying from the

board, but a demonstration using a visualiser was also used, this is not a facility that SCHOOL had access to and doing a demonstration caused a lot less disruption because of this facility. At SCHOOL all the pupils have to get up and move to the front so that they can see the demonstration. Two pupils didn't write anything down for the first half of the lesson and it was a long time before the teacher did anything about this.

28th March

This morning I collected all my questionnaires and saw two English lessons. The first was with a 5^{eme} group. The teacher asked me to stand at the front and tell them about myself. Then the pupils could ask me questions. This lasted about five minutes. The lesson continued looking at various weather conditions and English speaking countries. Pupils had to construct sentences using the different types of weather and country names. A game was then played where a pupil chose a country and a weather conditions and all the other pupils had to construct sentences and guess what weather and country the pupil had. This was followed by writing down the sentences in their exercise books.

The second English lesson I observed was a 3^{eme} lesson, the top Year group in the school. This was with a different teacher who was much more relaxed. Again I spent some time standing up at the front of the class while the pupils asked me questions. They were really intrigued and as their English was much better than the previous group this went on for longer. I helped them construct the question they wanted to ask and then would answer it for them followed by asking them the same question back or slightly modified if it wasn't appropriate. The rest of the lesson was a listening exercise. They then went through it on the board.

This was a really good experience as some of the pupils had never previously met an English person before.

In the afternoon I went back to the Lycée. This was to observe a practical lesson with the same half group I saw at the beginning of the week. I found the practical very difficult to understand as it is not one I have previously seen. I think it was measuring resistance change as the temperature of water is increased. I did manage to help some of them.

I thoroughly enjoyed my experience in France and have definitely learnt things that I can use doing Teach First next Year. It has been a very interesting comparison.