

# **“I Hate Lip Gloss”**

Submission for the Year in Industry Mentor’s prize

by

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**Placement at the L’Oreal Young Scientist  
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## 1. Introduction

I started my Year in Industry placement at the age of 17, one year after moving to London to live. The L’Oreal Young Scientist Centre (YSC), located in the basement of the Royal



Institution of Great Britain (Ri), is right next to the original laboratory of Michael Faraday, one of the most influential scientists in history. Launched in October 2009, the YSC enables young people aged 7 to 18 to experience hands on science activities, aiming to inspire young minds and to encourage them to approach science in a critical and open-minded way. It runs laboratory based workshops, family fun days, participates in science fairs, is an integral part of the outreach programme of the Ri and a well

respected part of the science communication landscape.

After a selective interview I became the YSC’s third Year in Industry (YINI) student, working with a small team of three – David (Dave) Porter, my supervisor and the YSC Director; Dr. Liz Coates, the YSC technical coordinator; and subsequently her maternity cover Dr Sean Thurston. Here, I describe my work and other placement related activities, giving examples of my personal achievements and reflections throughout, setting it all in the context of learning to navigate London and competing internationally in sailing.

## 2. Key placement related activities

### 2.1 Laboratory technician

The main reason the YSC recruited a YINI student was to support the practical side of the workshops. I soon found out lab technicians had a lot on their hands; at school all this was done for us. I was responsible for setting up working stations, maintaining the laboratory and its equipment in a clean and functional state, and checking and ordering

stock materials and equipment. Initially, it was challenging to keep track of the extensive inventory and learn how to handle the machines (including the autoclave, gel electrophoresis tanks and power packs, PCR machines...) and biological materials (enzymes, ladders, chelex beads...) Liz taught me how to make up the stocks for the biochemistry workshops: TAE buffer, Chelex bead solution, practice gel loading dye...etc.



I enjoyed managing and organizing the lab; I felt it was my own little world and only I knew the ins and outs of it. I developed inventory systems, a new way of ordering the shelves and

became adept at negotiating with suppliers. I even started getting quite protective of all the equipment!

## 2.2 Workshop facilitator

The workshops comprised formal lectures (kept to a minimum), open discussions in the classroom, and practical work. At the beginning I would observe David and Liz during the workshops and would take mental notes on the way they'd open up a discussion and cover the theory. It was rarely a lecture type talk (as we so often had at school!) but more of a conversation with the students. What I liked most about their approach was their willingness to engage with the students and discuss the workshop; the students would feel at ease after the first few minutes and weren't afraid to question certain aspects of the workshop. I try to teach in a similar open-minded way. As my



confidence grew I eventually progressed to teaching whole workshops on my own, on occasion to young people that were older than me. I discovered that teaching was more complex than I had previously thought.

I would prepare bullet points of the topics I wanted to cover but soon learned to open workshops by asking a few questions and getting the discussion going. I'd try and assess their level and interest and decide how detailed the theory behind the practical needed to be explained. I also found that I had to pace myself: with up to 30 pairs of eyes staring at me, I had to judge what speed to speak at, when I was not being clear and detailed with my explanations. Being 'on the other side' of the whole teaching process made me appreciate how difficult it can be to convey information to a group of students who all have their own way of learning and absorbing new information. I learnt lots of tricks not only to keep attention in a large group (especially with the 7 to 10 year olds!) but to encourage understanding and creativity in students thoughts.

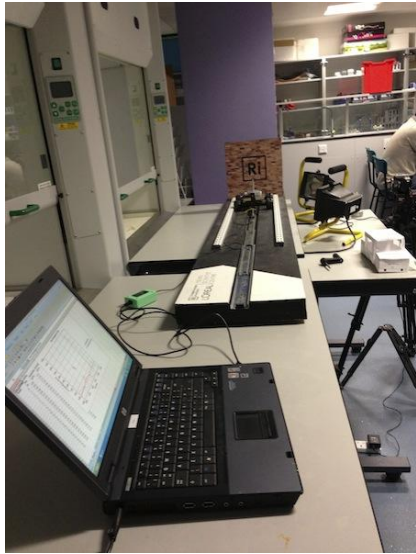


The students came from a wide range of educational backgrounds (state, private and home schooling), giving me an insight into the effects of this variety, particularly on their confidence. It was always fun most with enthusiastic and curious students.

## 2.3 Administration

Every job has to have some boring parts - at least that's what my parents told me when I complained, but I hope I'll prove them wrong some day! Administration was the most tedious part of my placement although I did acquire many new useful skills.





The first administration part I was assigned was to collect all of the evaluation forms and enter them manually on the computer. It meant I got to read each and every student evaluation form and reflect on the feedback they gave. This was really useful as it meant the YSC could constantly improve their work and tailor it to what the students wanted out of the session. As manually entering and analyzing the answers into an excel spreadsheet took too long I designed a [Survey Monkey](#) online survey which partly automated the process. Although still a fairly long process it has speeded up data entry and made analysis of the feedback easier.

When taking bookings for workshops, I soon learnt to always be polite, clear, accurate and make sure I provided the information requested. I enjoyed interacting with people and learned how to write clear, informative and well-written e-mails, a skill I have since used extensively used for my university applications. The administration side of the job, although tedious at times, taught me how to organize a businesses time schedule, coordinate with colleagues and keep organized records of orders. I believe everyone should really go through this at some point.

#### **2.4 Science communication: a world of seminars, conferences and networking**

As a team, we spent considerable time at seminars and conferences, where I would interact with interesting people from the world of science. We are currently getting ready to go to the Cheltenham science festival and the 'British Interactive Group' annual conference. One of the most appealing aspects of science communication is that you are constantly being challenged about your work; someone else out there will always claim to have a better technique of approaching the public. I learned to defend my ideas, or if you found the arguments of others to be convincing, alter my own approach. Networking was probably the most useful skill that I acquired this year.

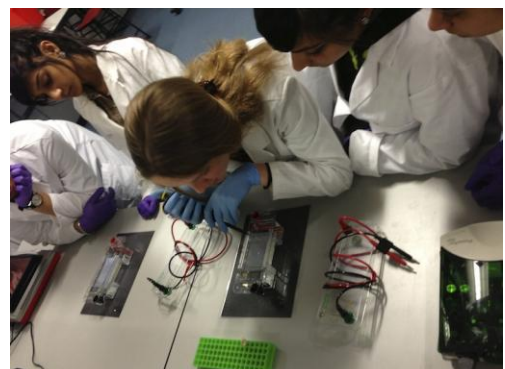
### **3. The working environment**

#### **3.1 Interaction with my colleagues: working in a team**

I was extremely fortunate to be working at the Ri. Not only was I working in a building where some of the most important scientific breakthroughs of our time had been made, the people I had worked with were extremely easy to get along with and, most importantly, loved their job. The Ri staff were organized into bigger sections of the organization. The 'Young Scientist Centre' was part of the 'Ri Young People Programme'. Apart from the YSC, we had the 'Maths team', the 'public programme team' and the 'School and Christmas lecture team' in our office. Each section had its own personality, but all were dedicated to their work and felt they were making a difference to the world of science communication. Our office never lacked enthusiasm or curiosity. There was also solidarity in the face of adversity as the Ri was faced with public interest due to a serious financial shortfall.

#### **3.2 Responsibilities and expectations**

The biggest challenge I faced was the high level of responsibility. In school it was up to me whether to concentrate in class or not and if I didn't study enough, if I underperformed, the only consequence was a bad mark. At work, you're being paid to perform and deliver, people expect things to be done and there are consequences for others if they were



not. For example, I couldn't lose concentration in the middle of a workshop, I had to perform 100% of the time or children would get a poor experience. I also had to constantly be aware that what I did affected the YSC's (and the Ri's) image. So whenever I was asked to coordinate with l'Oreal or our other sponsors I had to adopt a very professional attitude. This was a great maturing influence on me.

### 3.3 Social aspects

Science communicators are extremely social creatures. Apart from communicating the science they love to the public and defending their way of relating to the public, they love spending time with each other. The working environment was relaxed and there were few times in the office when everyone would be deadly serious. Before coming to the Ri, I had a preconceived notion that you didn't socialize with your work colleagues and that you only came to do your job. It isn't like that. Everyone at work knew each other well and we organized team lunches and generally had a lot of fun at work. After evening Ri lectures, science days or working late to meet deadlines there were always regular visits to the pub, where the mood was not so different to that in the office.

## 4. Learning from difficult situations

There were challenging situations – at times I felt out of my depth, with responsibilities that I



could barely handle and I came close to giving up. I will give two examples. During the hectic Christmas lecture period at the Ri, the YSC organized an educational visit for a group of Kazhakh children. My supervisor David and I spent the entire week with a full on day and evening programme of workshops and visits. The 14-hour days, language barrier and general unhelpfulness of their teachers accumulated until I was pretty relieved to see

them off at the hotel on the last day. However, their taxis to the airport went missing and on my own I had to organize new transportation, which then also went to the wrong address. On the brink of tears, I pulled off a third set of taxis that finally got it right. I went back home and slept the whole day. I am now more confident to sort out a logistics crisis on my own.

Probably the four most stressful days of my life were spent at the YSC stall at the UK Engineering and Young Scientists [Big Bang Fair](#) in London's Excel Centre. Imagine spending 8 hours a day making lip balm after lip balm with an endless line of enthusiastic children, around 2000 in all, and trying to keep up with their enthusiasm. I told Dave mid-morning on day four that if I had to make another lip balm, I was going to lose it (they really get to you after a certain point). He told me go home for a few hours, then come back and finish off the work. I learned the importance of taking breaks, knowing



your limits and teamwork. I still get goose bumps whenever we make lip balms in our Cosmetic Chemistry workshop.

## 5. Conclusions



I am often asked why I chose YINI rather than a “Gap Yeah” enjoying my freedom and travelling to exotic places. On reflection, this year has given me another kind of freedom, one that I will rejoice in during my university years and for much longer than that. I have had the opportunity to work in one of the most stimulating intellectual environments in the world and this has helped me mature as a laboratory assistant, and educator and, most importantly, as a person. Juggling commuting, college applications, training for and competing in the world and european championships in sailing and full time work brought me close to giving up on several occasions. I am glad now that I didn't as these experiences have toughened me up. I now realize that even in an interesting and rewarding job, there are some parts you will not want to do and you know what? You just have to do them and get on with it.

I feel I definitely have a head start over other young people my age. I have refined my vision of a career in environmental engineering; the technological innovations we have and will continue to make will not have the desired effect if they are not properly and understandably communicated to the public. Science communication will have an increasingly important role to play in the future. Otherwise, how will we convince the public to change its behavior – that has been embedded in our culture for centuries – in order to ensure a stable climate for future generations?





## Annex 1      Acknowledgements



This year would not have been this successful had it not been for my supervisor David Porter. He made sure I experienced all the different aspects of science communication (I really don't know what else he could have showed me) and made efforts to let me experience research work in laboratories as well; I spent a few days in the David Faraday Research laboratories shadowing PhD students as he knew that was what I was planning to end up doing. In addition, he was extremely understandable and flexible when it came to my sailing training commitments. He has offered me ongoing work in the YSC in between my university semesters. I cannot thank him enough for all he has done for me. I would also like to thank the Ri staff for being such a welcoming and interesting bunch of people; they have definitely helped me shape my view of the working world.

The Year in Industry team have been supportive and helpful throughout. My YINI mentor, Peter Akehurst,

was always available to talk to if needed and the structure of the year was well thought-through and planned. Thank you for creating this programme.