



## STEM Insight: Eleanor Smith

**Role:** GCSE level and A level biology and chemistry teacher

**School:** Lampton School

**Placement:** Babraham Institute, five days in October 2016

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**Host:** The Babraham Institute is a world-class research institution focusing on the molecular mechanisms that underlie normal cellular processes and functions, in particular the process of ageing. The Institute shares its campus with 60 small to medium-size companies which assist in knowledge exchange.

**Motivation:** I wanted to apply for a placement at the Babraham Institute to develop my understanding of STEM careers to share with students and colleagues, help me gain an understanding of current research and real life applications of various techniques, and to enhance my subject knowledge for parts of the A level specification.

**Experience:** I was introduced to different aspects of the Institute's research, giving me an insight into exciting research topics. Learning about the core facilities on the campus and understanding how these different techniques work was one of the key attractions to the placement as it is most directly relevant to my teaching. Getting hands-on in the labs was great and really brought things to life.

I also spent time learning about the scientific facilities that underpin the Institute's research, and the Institute's wider operations, such as public engagement and the funding and commercialisation of research findings into new products and services. All important in bringing science to life!

In addition, I visited two of the companies on campus, Kymab and AstraZeneca, to find out how research is undertaken in a commercial setting.



The visit to Astra Zeneca provided an opportunity to find out more about drug testing and development which was particularly helpful and relevant to my teaching.

The Institute hosted a teacher twilight session during my week with presentations about confocal microscopy and epigenetics pitched at a very helpful level. I will be able to share these with both students and colleagues in the future.

**Impact on me:** Whilst I was really stimulated by the topics that relate to my teaching, the surprise was the way in which my knowledge of what people do in both research and private sector companies really flourished during the week. I could never have anticipated the range of job roles that I encountered throughout my placement. This is really useful knowledge for motivating my students and has had an extremely positive impact on my day to day discussions with them about career choices.

I also saw what skills are needed to succeed in the sector, whether it be mathematics for finance and commercialisation activities, or good communication skills for staff in public engagement activities, to the key skills like team working and problem solving that everyone needs.

These are the skills that most students develop in the process of doing STEM subjects but need to be more aware of how relevant and important these skills are for their future careers.

I feel the programme has given me more confidence to engage with universities and industry and I will be using more examples from both in my teaching from now on.

**Impact on my school / students:** This placement was particularly valuable as students look to their teachers for advice about what comes next, something that most of us feel much less confident about than our subject area. Having met such a huge range of scientists and finding out about the different career paths and job opportunities within a research institute, including roles outside of the lab, I have gained a much better knowledge of STEM careers and the educational and vocational routes to them, whether it be through a degree or an apprenticeship programme.

I believe that I have greatly improved my ability to support students when choosing routes of study into industry or university. I have talked informally to students since I returned to school about what I found out about STEM careers so they are already benefitting from my placement



So far I've shared information with colleagues in school informally and the Institute have sent me some careers resources which I have shared with the sixth form team. I hope to run a careers session later in the year, something I wouldn't have felt confident to do before the STEM Insight placement.

I also feel that I can teach better due to increased subject knowledge and making this more relevant by linking it to current research. I've used my own experiences from the scheme over the last five weeks as teaching examples and I've already detected improvement in the motivation of some of my students, which is really exciting!

Ultimately, I aim to develop a CPD programme with help from researchers at the Institute to share learning more widely with other teachers, so that my knowledge from my placement and links with the Institute will impact on my colleagues too.

I know I will be able to draw on this experience for months to come and that, over time, the impact on my students and colleagues will increase.

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