

Pass it on

The mutual benefits of collaborative INSET

Universities/schools/organisations involved

The Lancaster University partnership with Queen Elizabeth Teaching School is proving to be an effective means of bringing teachers and researchers together for professional development that benefits all concerned. The 2nd annual Science INSET day gave 40 science teachers an opportunity to visit Lancaster University and meet academics from the Faculty of Science and Technology and participate in hands on scientific sessions, learn about current research techniques and consider how they link into the school curriculum.



Summary of activity

Feedback from the 1st Science INSET day (October 2013) suggested the format and programme of activities that was jointly developed was an effective model for enabling teachers to appreciate the benefits of working with researchers at the university. We used this experience and further requests for broadening the day to develop an extended programme of activities. Teachers attending in 2013 had clearly passed on the benefits as numbers of teachers participating this year increased. The day included tours of Lancaster's Biology, Chemistry, Physics and Engineering departments, followed by hands-on activities from each of these subjects. These proved popular and relevant as teachers said: *'Hands on session was very useful, I would be very keen to bring a group of the students or request a session in school'* and another *'really useful to see and do some interesting science, this should happen again if possible. It is really valuable for teachers to see up to date research and practice'*.

Aims

The overall aim of Lancaster's SUPI is to inspire the next generation of researchers. The aim of the INSET days is to provide teachers from different schools in the QES Teaching school, with hands on experience of Science investigations and ideas for use back in school. Engaging teachers and supporting them to inspire the next generation from an early age is something both university and school believe is important. As one teacher reported: *'I liked the way the session was relevant to [pupils in] Key Stages 3 and 4 as well as A-level'*. The intention for the INSET day is that it will, introduce teachers to the campus and facilities, raise their awareness about university research, give them and university staff the chance to discuss research, and future learning opportunities for students and teachers.

Target audience

Teachers and University Staff interested in working in partnership

What did you do? What did your activity involve?

The INSET day was delivered at the university campus providing teachers with the chance to have a tour of campus and to participate in one of five practical sessions. This was to provide targeted examples of the three science subjects and Engineering which are all taught in the schools. The activities included:

- **Biology** - DNA Polymerase Chain Reactions and use of molecular techniques to look at DNA
- **Chemistry** – Some of the science behind CSI ... a closer look at fingerprinting
- **Physics** – Electrons, charge and Planck's Constant
- **Engineering** – Fuel cells and hydrogen – Engineering future energy devices

The afternoon programme was shaped by the school and provided time for teachers from different schools to talk with researchers about teaching the curriculum.

All aspects of the day focused on colleagues passing on information and insights to one another. The day served also an effective opportunity for informal peer professional development and networking opportunity. University staff learned more about the school curriculum, which their own 1st year undergraduate students have experienced, which may support university curriculum development to ease transition. Teachers found out more about degree programmes and career pathways as well as having the chance to discuss ways in which Early Career Researchers may be able to support them in teaching and learning in school. For example, the Researcher in Residence pilot outlined in another case study was one such outcome from the day and another school has requested ECR mentor support for bright 14-15 year old pupils about to embark on their Silver CREST Award.

Evaluation and Lessons learnt

The days have been evaluated with end of session feedback forms that have been supplemented with teacher interviews and feedback demonstrating evidence of impact that has been collected throughout the year. Reasons for the success of this activity include:

- Collaborative planning between the school and the university to ensure content is relevant
- Building the event into the school calendar for INSET to ensure teachers are free to attend, further collaboration between the schools in the teaching partnership means that teachers from a number of schools can attend the same day
- Involving teachers from more than one school to facilitate networking between schools as well as with the university which brings economy of scale and makes best use of time, as one teacher said: *'really useful to make links for the future and explore possibilities for mutual co-operation'*
- Starting small (year 1 pilot) and then using enthusiastic teachers to 'pass on' the message about the benefits
- Providing teachers with hands on experience of equipment they may not have access to in schools, to enable their use of some of this equipment we are exploring use of 'resource boxes' which contain relevant equipment for use in schools.
- Pitching the activities at the right level and for application back in school, several teachers spoke about this when commenting on the session, one valued that university staff had *'not made assumptions about level of [our] knowledge'*, and another appreciated the *'good hands-on application that can be replicated in the classroom at all Key Stages'*



Future Plans

Following the success and practical lessons learnt from these two INSET days we plan to offer INSET to teachers in other subjects and work with academics in the Faculty of Arts and Humanities.