Work Experience

Advantages

• Builds good links with schools and aid in recruitment to your university department.
• Opportunity to see the inside workings of a “real” physics department.
• Students have chance to develop team-working, communication and problem solving skills.

Disadvantages

• Lack of academic involvement: academic staff worried about level of knowledge and how to get students working on something meaningful in a short space of time.
• Paperwork required for a placement is increasing. E.g. for 1 work experience placement it can take ½ day’s work preparation.

Examples

Lab placements

• Students work with lab supervisor to go through first year experiments looking for errors/problems.
• Develop their own experiments (aimed at peers) alongside outreach team.

“Office-based”

• Develop posters/website content for outreach purposes.
• Act as demonstrator on outreach activities.

Physics Academy

• Students spend one week working on a project.
• Day 1: introduction to the topics (3 research themes led by academics).
• Day 2-4: carry out research. E.g. groups carried out some computer modelling of structures to study whether they expanded or contracted under changes in temperature.
• Day 5: preparation for/presentation of work to academics, teachers & family.
• 30 students reached.
• Close-working with academic staff.
• Opportunity for original research.
• Skills development: attend maths classes and presentation skills workshop as part of the week.
• Involvement of schools and families. E.g. family of one student with Aspergers never imagined he would be able to stand up in front of a group and talk. He did and carried out complicated calculations relating to special relativity and explained them well to the audience.

• Demand still outstrips supply (but by less).

• Time-consuming for outreach staff to brief and approve projects by academics (but academics now continue year-to-year).

• “I can’t wait to do this at uni now, it seems much less daunting.”

Lessons learned

– Lab/office-based activities good for Y10 age groups, but Y12 level may be looking for something more demanding, therefore Physics Academy-type activity may be more suited as support is given to academic staff.

– As a result of the Physics Academy we have found that academics have a better understanding of level of knowledge and capabilities of Y12 students.

– It was a positive experience for academic staff as they are working with bright, motivated students and this has made them eager to work with us on more projects and have expressed support for the same activity next year.