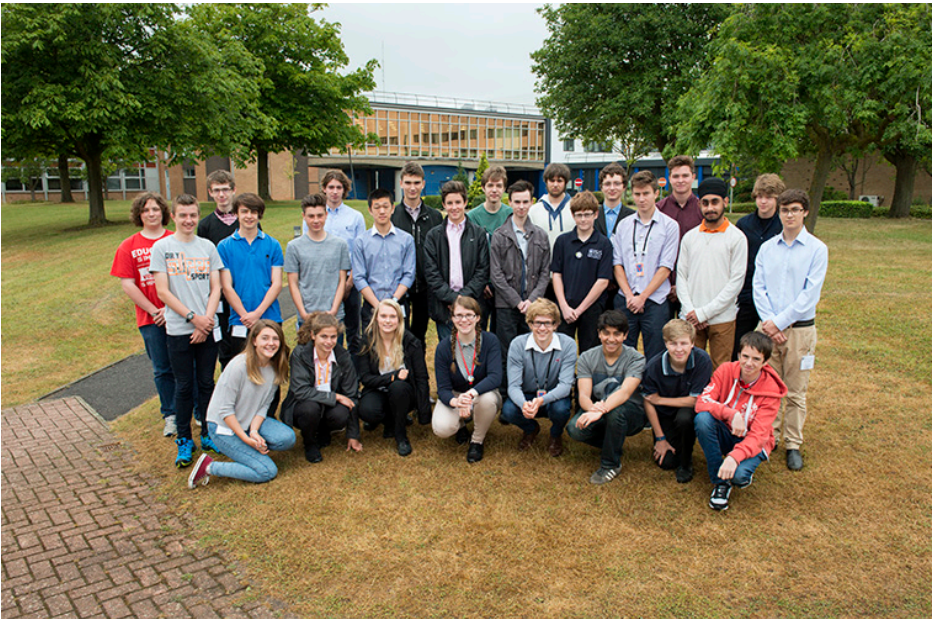


## Work Experience at Rutherford Appleton Laboratory



## A Guide for Supervisors

# **Work Experience at Rutherford Appleton Laboratory**

**Rutherford Appleton Laboratory is an excellent environment for young people to learn about science and its applications, and to see scientists and engineers at work.**

RAL has been offering work experience placements for 14-18 year olds (Year 10 – 13) in full time education for more than a decade. We offer placements in the main science areas: RAL Space, Lasers, Scientific Computing, ISIS, Technology and Particle Physics as well as organising placements in Logistics, Catering, HR, Media Services and Communications. Hopefully, the experience will excite students and encourage them to follow a career in science, technology, engineering, maths and computing and also give a wider understanding of the workplace.

## **What is work experience?**

Secondary schools offer young people aged between 14 and 18 a period of work experience, giving them a chance to spend time within a workplace environment during their final two years of compulsory schooling. This period can be for a week or a fortnight or it could be for a few days. Work experience has proven to be a great success over many years and thousands of young people have benefited from it by using it to help inform decisions about their first career steps – according to a 2015 survey by Oxfordshire County Council, work experience is rated as the most useful part of careers education for over 50% of students. The Education Act 1996, as amended by the School Standards and Framework Act 1998, governs work experience. Work experience at RAL is very popular, with four times more applicants than we can place, and we also accept A-Level students.

# Why do we take students?

As part of our Public Engagement (PE) strategy, work experience is one of many ways that we aim to:

- Promote the knowledge and understanding of STEM (Science, Technology, Engineering, Maths and Computing) subjects.
- Influence career choices by giving a better understanding of what is possible in science and raise the profile of career opportunities within scientific research.
- Influence the quality of future employees as employers can help improve the skills and preparedness of young people coming onto the labour market.
- Promote vocational qualifications – some students are now studying towards vocational qualifications such as the engineering diploma. There is clear evidence that well-organised work experience placements enrich students' general education and help to improve the standard of their vocational work.
- Raise the profile of the Laboratory within both the local and wider community as well as building links with schools, students, parents, and teachers.
- Increase employee development – employees can gain experience in a supervisory role and use the opportunity to pass on knowledge and skills.
- Share knowledge and invest in the future of the local and wider community.

## What do students gain?

It is easy to forget how different going to work is compared to going to school. The work experience placement helps students to think about life outside of the classroom and what their future may look like. Students start to adjust to the demands of working 9am – 5pm and learn how to fit other commitments in around work. This experience can be exciting, tiring and daunting for them.

It is recognised that the development of certain skills are essential in preparing young people for their first job. These key skills are:

- Communication
- Application of numbers and numeracy
- Information and communications technology
- Working with others
- Improving own learning and performance
- Problem solving

Students can develop these skills in the classroom but the school environment cannot replicate all the demands of a workplace. The best place to encourage work skills development has to be in a real place of work, experiencing the realities of working life in an adult world.

Students gain an appreciation of the self-motivation and responsibility involved in having a job and they begin to learn how to organise and prioritise work. Students gain an overview of the work that is done at RAL; and experience working at the cutting edge of science in a renowned scientific establishment. By offering work experience placements we are giving someone the opportunity to begin to understand the demands of the working world.

# What sort of things do students do on work experience?

There is a wide range of activities and work that students could be doing while on work experience at RAL. This includes but is not limited to:

- Low key experiments
- Computer programming/modelling, CAD
- Data input for electronic circuit fabrication
- Designing forms, posters, displays, helping to prepare PowerPoint presentations
- Software and web page evaluation and development
- Publishing data and searching for specific data on the web
- Taking photographs
- Data cataloguing, processing and retrieval
- General experience running ISIS ion source
- Measuring optics
- Helping with events and visits
- Researching other areas of science, including attending talks or tours on site
- Attending meetings
- Writing an article for in-house magazine
- Answering the phone, sending emails, writing letters, taking minutes, ordering goods and services

## **Feedback from previous students in 2014/15**

Students gave their placement an average rating of 4.30/5 for enjoyment value and 4.62/5 for educational value.

'Being able to look around the facilities, use the equipment and work on a project individually'

'I enjoyed being involved in a project using real data'

'Being able to get a realistic insight into what happens in the science industry'

'3D printing and receiving helpful advice from several members of staff'

'That people communicate with each other & are committed to what they do'

'Teamwork is vital'

'That enjoying your work is key to being a success in that field'

## **Has your work experience influenced your subject and career choices for the future?**

65% of students said that their placement had influenced their subject and career choices – and this number was significantly higher for female students.

'I now have a much greater understanding of what happens in a work environment and what careers are available'

'It made me more likely to carry on physics to university'

'I now know I would like a job involving science'

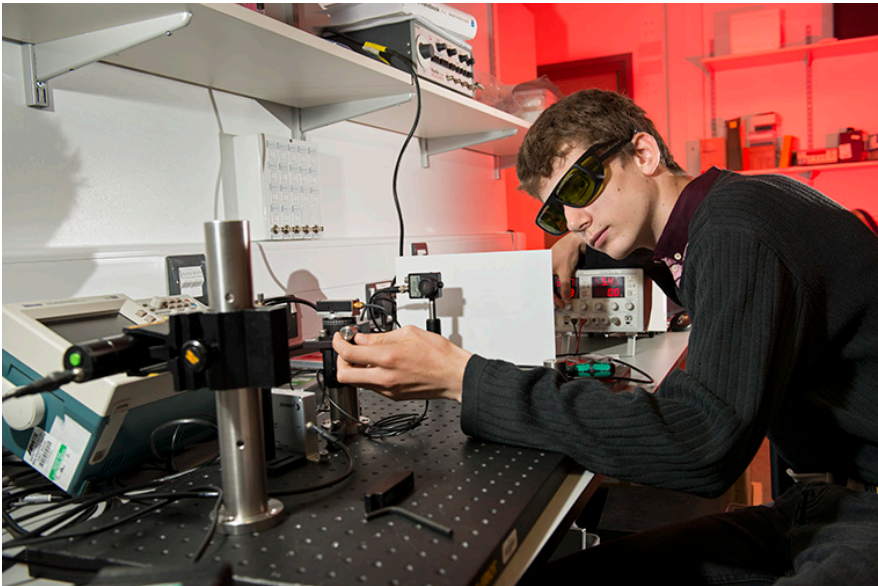
'I now see the importance of computer science in physics so I will likely take a course on this at university'

## Before the placement

The PE Team liaise with the student and school to complete the legal and necessary paperwork – without this, placements cannot take place. Students receive information about how to get to RAL, dress code, lunch arrangements, site hours and where to report on their first day.

From supervisors, we require a risk assessment for the placement (we will provide template forms). The Public Engagement team can obtain federal IDs for the student but must be informed at least two weeks in advance.

In the May half term, we run a Python workshop to give students an introduction to computer programming; supervisors can request that their student be invited to attend this course.



# The first day

Students are asked to arrive at reception for 9:00am. They will be met by the PE team and given their site passes for the week. They will also receive contact details, a map and details of site procedures. They will then be taken to the Visitor Centre for a Health and Safety briefing, which will include details on the fire, klaxon and emergency procedures as well as the procedure for first aid. Students will be advised of any hazardous areas around the site and the importance of warning hazard signs. Students are also advised that if they are sick and unable to come to work, that they must inform their supervisor or the PE team, as well as their school. On their first day, students are encouraged to have lunch together, meeting at 12:00pm by the atom tree next to R22, but this is not compulsory.

Supervisors will be asked to collect their student from the Visitor Centre at 9.30am so they can begin their placement – supervisors will be sent a calendar appointment for this.

Supervisors should go over the risk assessment with the student, advising of any specific hazards in their workspace.

To help students settle in, supervisors should advise where the nearest bathroom is, the emergency exits for the area that they are working in and the fire assembly point. Advise what the arrangements are for lunch; where students eat and buy food, where the fridge is, and some places to spend their lunch or break so they are not in the office all the time. Supervisors should also make clear their expectations for the start and end times of the working day.





# Making the most of the placement

Supervisors should:

- Make their expectations clear to the student from the start with regards to behaviour (including use of mobile phones), attitude and timekeeping.
- Take time to answer any questions and explain procedures thoroughly.
- Help students get to know their way around site by giving them a tour of the facilities and the opportunity to visit other areas – the PE team can help with this.

Someone from the school may want to come out and talk to the student during the placement. Schools have the Public Engagement Team as the first point of contact, who will liaise with the supervisor and school to make a mutually convenient appointment.

Many students are given a work experience diary by their schools to fill in during placement. This may sometimes include fact-finding tasks as well. Please give the student time to complete this, and they may need you to sign it too.

Students are asked to complete an evaluation form online at the end of their placement. On completion of their survey, students are asked to visit the PE Team offices, between 12:00 and 15:00 on Friday to receive their work experience certificates.

## Good practice for working with young people

In order to protect young people and staff from false allegations we advise supervisors demonstrate exemplary behaviour and encourage a positive culture and climate in the workplace. Please see the STFC Safeguarding Policy: <http://staff.stfc.ac.uk/people/hr/Documents/SafeguardingPolicy.pdf>

Be a good role model in all working practices remembering to put safety first.



Be aware of behaviour and conversations with others at all times.

Be friendly but avoid engaging in practical jokes or horseplay and avoid sexual joking/comments/questions.

Give plenty of positive feedback as well as constructive criticism. Try not to dwell on the negative; encourage students to achieve high standards and set realistic goals.

Try not to overestimate an individual's confidence; new places and people can be very intimidating.

# Child Protection

This is a very sensitive area. Placement providers should do all they can to ensure that the relationship with young people on work experience is appropriate. Supervisors need to be aware of potentially risky situations and take active steps to protect both the young person and themselves.

**Supervisors must inform their employer if they are disqualified from working with children under the Criminal Justice and Court Services Act.**

Special care must be taken where:

- The young person is working alone with one employee for substantial periods.
- The young person is of the opposite sex to employees all of one gender.
- The workplace is in an isolated environment.
- The young person has to travel in a vehicle with an employee.
- The placement involves some work during unsocial hours.
- The young person involved has any special needs.

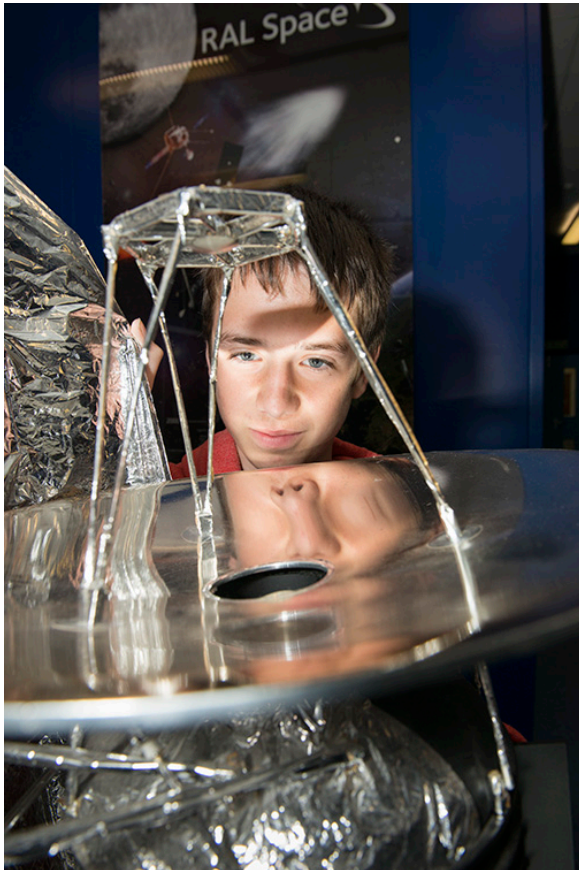
**For the young person's protection and supervisors' safety:**

Avoid being completely alone in an isolated setting with a young person – prop the door open/call someone/take someone else with you. Alternatively make sure someone else knows where you both are and when you will be back.

Do not be in a car with a young person on your own. If it is unavoidable then a parental consent form for off-site working is available from the Public Engagement team. In an emergency situation, ask them to ride in the back and let someone else know where you are going and when you will be back.

Keep physical contact with the young person to a minimum.

Avoid secrets. If there are concerns for the student's welfare, in the first instance speak to the Public Engagement Team.



Confidentiality should NEVER be promised if the young person's wellbeing is at risk.

If there are concerns that a young person may be suffering physical, sexual or emotional abuse or is being neglected, pass this information on to the PE Team or the named person in the school. Silence is not an option.

## Health and Safety

The PE Team will liaise with supervisors regarding a workplace risk assessment. All work experience students are given a short Health and Safety briefing with information of fire procedures. Care is also taken to explain any site hazards and explain the importance of warning hazard signs. Students are advised about display screen equipment and the importance of sitting comfortably and taking regular breaks.

Young people will be facing unfamiliar risks from the job they will be doing and from their surroundings and are therefore likely to need more supervision than adults. Good supervision will help to get a clear idea of their progress in the job and to monitor the effectiveness of their training.

When completing the risk assessment, it is advisable for supervisors to look around the department and ask themselves the following questions:

- Is the lab/office safe and tidy? Young people coming into a new environment will not be aware of that trailing electric cable you've all been meaning to do something about! Check everything.
- What equipment will the young person be allowed to use and is any personal protective equipment required to carry out the task safely?
- What hazards are there in the work space? Use the checklist to help identify them before the student arrives.

Many areas on our site are designated radiation areas and STFC has a strict policy for access to radiation and/or contamination controlled or supervised areas for persons under the age of 18, including access for visits. Appendix 12 of STFC SHE code 29 [STFC policy for access to radiation areas](#) clearly states the policy. If, as part of the placement, access is required, the placement risk

assessment must clearly state why and the risk assessment must be agreed with the RPA beforehand. All work experience students must be supervised at all times when in a controlled or supervised area. If the work of your department requires the use of sealed radioactive sources, please check with your RPS as to whether special procedures apply when work experience students are in your area.

## The Health and Safety checklist

The checklist below has been adapted from the Royal Society for the Prevention of Accidents (ROSPA) sponsored website:

[www.youngworker.co.uk](http://www.youngworker.co.uk).

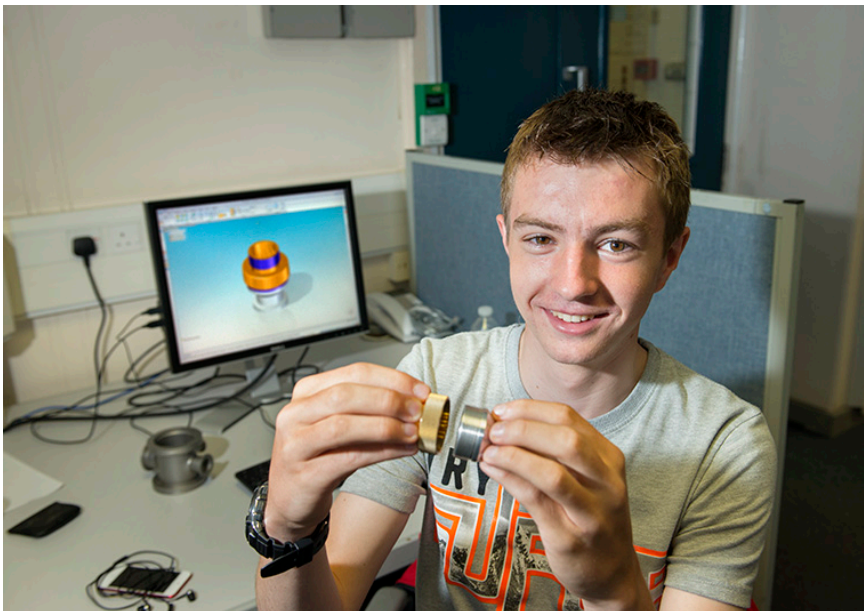
These questions are designed to assist Work Experience Supervisors in identifying the actions that should be taken when a young person begins work experience:

1. Where students are on a work experience placement, has effective liaison been established with the placement organisers, including arrangements for regular monitoring and reporting of accidents/incidents/ill health?
2. Have suitable and sufficient risk assessments been carried out for your lab/office taking account of a student's lack of awareness and experience?
3. Have any additional control measures required for young people been clearly identified?

The following guidance form HSE can be used to help identify the additional control measures:

[www.hse.gov.uk/youngpeople/workexperience/placeprovide](http://www.hse.gov.uk/youngpeople/workexperience/placeprovide)

4. Have risk assessments taken account of any special health and safety needs, which young workers may have as a result, for example, of any physical and learning difficulties, or health issues such as allergies, asthma and respiratory problems, heart disease, diabetes, colour blindness or use of prescription medicines?
5. Have work activities, which young people should be prohibited from undertaking, been clearly identified?
6. Have necessary steps been taken to isolate or make safe dangerous tools, plant, equipment or substances?
7. Have any necessary arrangements for personal safety and freedom from sexual harassment and bullying been considered?
8. Have work tasks for young people been properly defined and explained? Do young people understand what is required of them in order to protect their own health and safety, and that of others?



## **Advice for engineering placements**

The Health and Safety Executive has advised that certain activities in engineering should be regarded as too dangerous for young people of compulsory school age to undertake, and has drawn up a short list of activities which are prohibited to young people on Work Experience in their final two years at school. This list includes:

- Carrying out any processes which involve the use of hot metals, power driven capstans or milling machines.
- Driving or operating power driven haulage winches, cranes, fork lift trucks, locomotives or any other mechanically propelled vehicle in an engineering environment.
- Cleaning or maintaining any of the machines listed above.
- Working with any materials, solvents or solutions that are hazardous to health.

In addition, no young person should be expected to lift, move or carry a load so heavy as to be likely to cause injury to him or herself.



## At the end of the placement

Ask students to fill in the post work experience questionnaire form online and collect their certificate from the Public Engagement Team. Site passes should be returned to reception.

Supervisors should thank the student for their hard work and let the PE Team know how the placement went from their perspective so the experience can be fully evaluated.

Thank you for taking a student - if you have any questions about the placement or working with young people, please contact the Public Engagement Team.

