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STFC Public Engagement

Dr Elizabeth Cunningham

Particle and Nuclear Physics Outreach Officer

Elizabeth.Cunningham@stfc.ac.uk

Dr Sophy Palmer

Public Engagement Manager

Sophy.Palmer@stfc.ac.uk

Outline

- STFC Public Engagement Strategy
- Funding
- Subject-specific projects
- Direct engagement at the National Laboratories
- Summary

Public Engagement Team

Inspire and Involve!

- Stimulating and responding to public interest in research and its outcomes
- Linking STFC science and technology with young people
- Capacity building:
  - Support for researchers
  - Embedding PE in funded research
- Engaging publics with the STFC National Laboratories

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Audiences

Equality and Diversity in Engagement

- Engagement in science and technology should be open to all!
- Target under-represented audiences:
  - Girls and young women in engineering and physics
  - Groups in areas geographically from STEM activity
  - Schools underperforming in STEM

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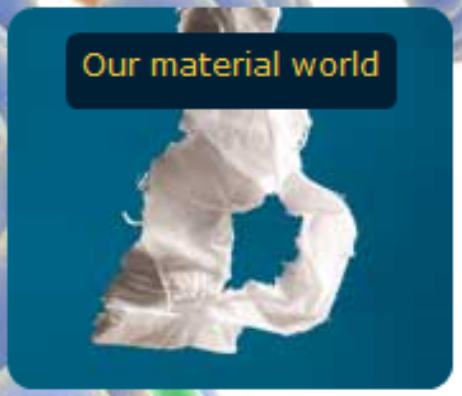
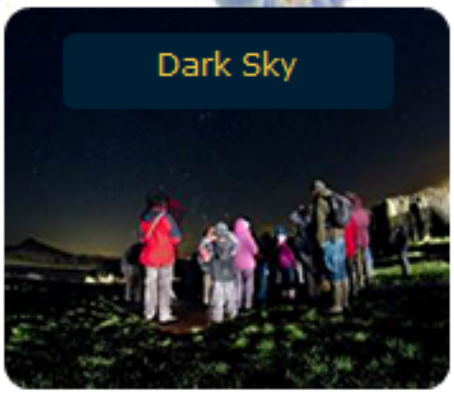
Engagement Themes

Inside the atom
using the biggest experiments in the world to understand the smallest building blocks of the Universe





Public Engagement with Science and Technology

Strategic Plan 2013 - 2016

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Funding

- STFC, Small Awards. Funds for small, local or 'pilot' projects promoting STFC science and technology.
- STFC, Large Awards. Funds for projects which are expected to have a significant regional or national impact.
- STFC/IoP/IET Schools Grant Scheme. Funds to enrich the teaching and learning of physics, astronomy and engineering.

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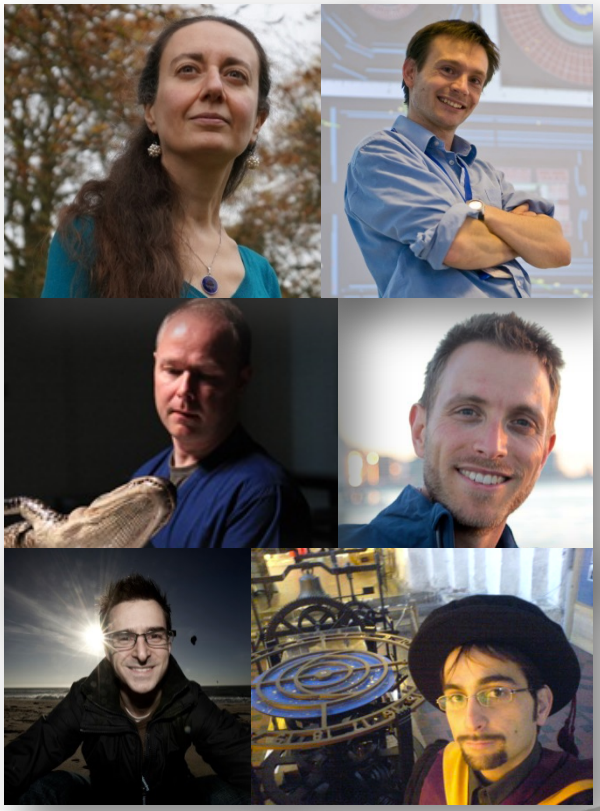
Fellowships

- Aimed at those with significant research experience who have demonstrated a track record in outreach/communications work



- The Fellowships purchase a proportion of a researcher's time to enable them to concentrate more on public engagement activities which will have a significant national or regional impact

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Fellowships

Dr Cristina Lazzeroni, University of Birmingham

- Create interactions between University researchers, school communities and the broader public, to give as large an audience as possible the chance to be involved with hands-on particle-physics activities.

Prof Alan Barr, University of Oxford

- Citizen Science for the Large Hadron Collider: analyse the data from the ATLAS experiment, to identify features which may be indicative of particles or processes not yet known to science.

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Training Support

- Bursaries for Royal Society media and communications workshops
- Support for British Science Association media fellowships
- Royal Society Summer Exhibition Grants

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RS Summer Exhibition

- For the past two years STFC have supported exhibitions on the Higgs Boson presented by ~20 UK particle physics groups.

- In 2014 STFC also supported the ‘X-appeal’ exhibit which explains how Diamond is used to study dinosaurs.

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Travelling Exhibitions

- LHC on tour
  - life size replica of the LHC
- Exhibited at venues from to Big Bang Fair
- Staffed by STFC and the UK particle physics community

- Travelled more that 4,244 miles, wowing 600,000 people

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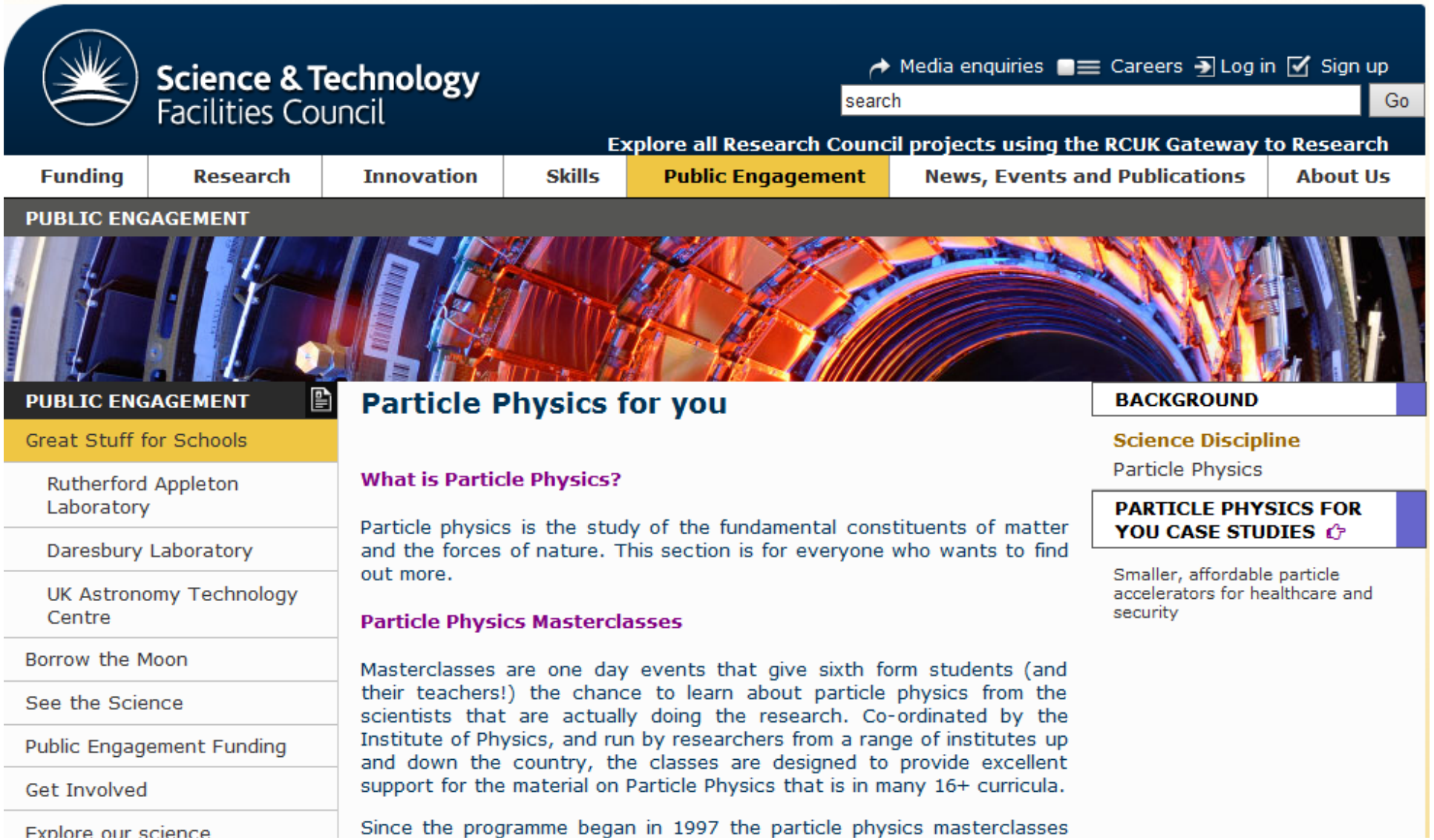
Free Resources

Website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Great Stuff for Schools
Rutherford Appleton Laboratory
Daresbury Laboratory
UK Astronomy Technology Centre
Borrow the Moon
See the Science
Public Engagement Funding
Get Involved
Explore our science
Particle Physics for you
What is Particle Physics?
Particle physics is the study of the fundamental constituents of matter and the forces of nature. This section is for everyone who wants to find out more.
Particle Physics Masterclasses
Masterclasses are one day events that give sixth form students (and their teachers!) the chance to learn about particle physics from the scientists that are actually doing the research. Co-ordinated by the Institute of Physics, and run by researchers from a range of institutes up and down the country, the classes are designed to provide excellent support for the material on Particle Physics that is in many 16+ curricula.
Since the programme began in 1997 the particle physics masterclasses
BACKGROUND
Science Discipline
Particle Physics
PARTICLE PHYSICS FOR YOU CASE STUDIES
Smaller, affordable particle accelerators for healthcare and security

Borrow the Moon!

If you can't go to the Moon…

- For one week, schools, museums and clubs can borrow samples of Moon rock brought back to Earth by the Apollo astronauts and meteorite samples (one of which is a piece of Mars).

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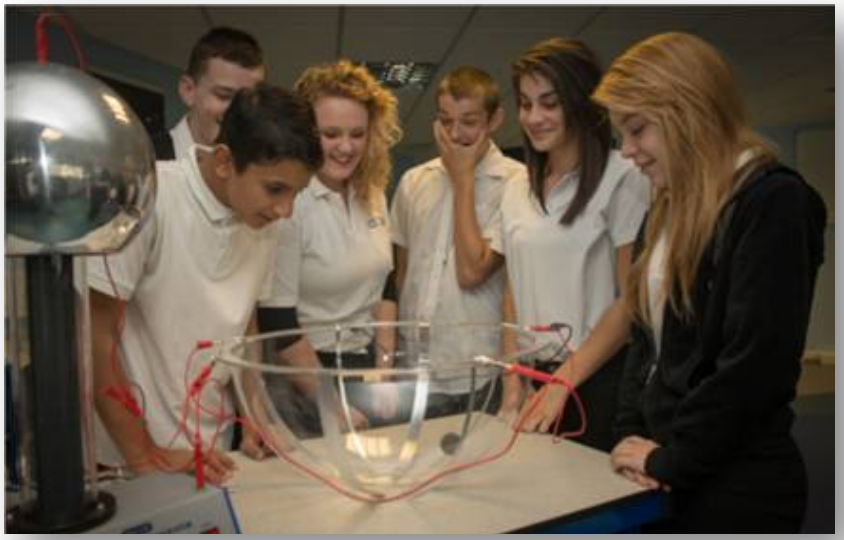
Explore Your Universe!

Atoms to Astrophysics



- Partnership with the Association for Science & Discovery Centres
- 10 Centres equipped to deliver inspiring activities based on STFC stories and technologies
- Now expanding to 10 more centres through phase 2
- Engaged with 156,880 children and adults over two years

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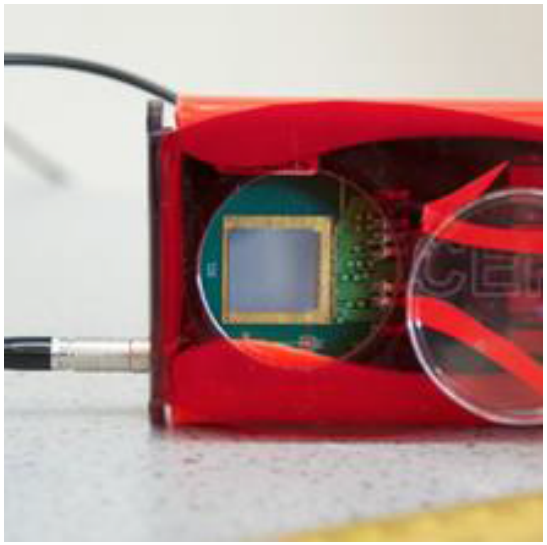
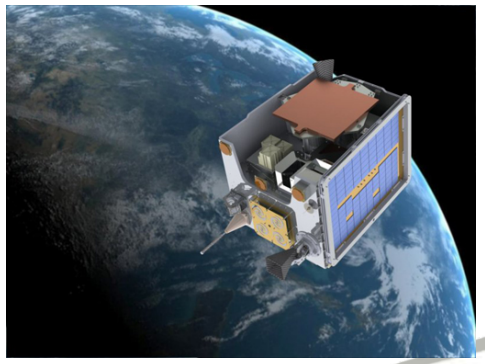
CERN@school

Bringing CERN into the classroom

- Uses pixel detector chips from the Medipix Collaboration at CERN
- Engage students and teachers with real research equipment and data
- To develop research based learning as part of students' experience of physics





http://cernatschool.web.cern.ch

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Masterclasses

Hands on Particle Physics

- One day events for GCSE and A Level students held at 20 sites across the UK
- 12 Universities and Labs also participate in international masterclasses
- This year 100 students attended ‘remote’ masterclasses held at sites away from PP groups

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National Laboratories

Direct Engagement - Science & Technology

- Three main sites:
  - Rutherford Appleton Laboratory
  - Daresbury Laboratory
  - UK Astronomy Technology Centre
- AIMS:
  - Use our unique facilities and enthusiastic STEM Ambassadors to engage young people and the public
  - Provide an inspiring context for teachers of STEM subjects

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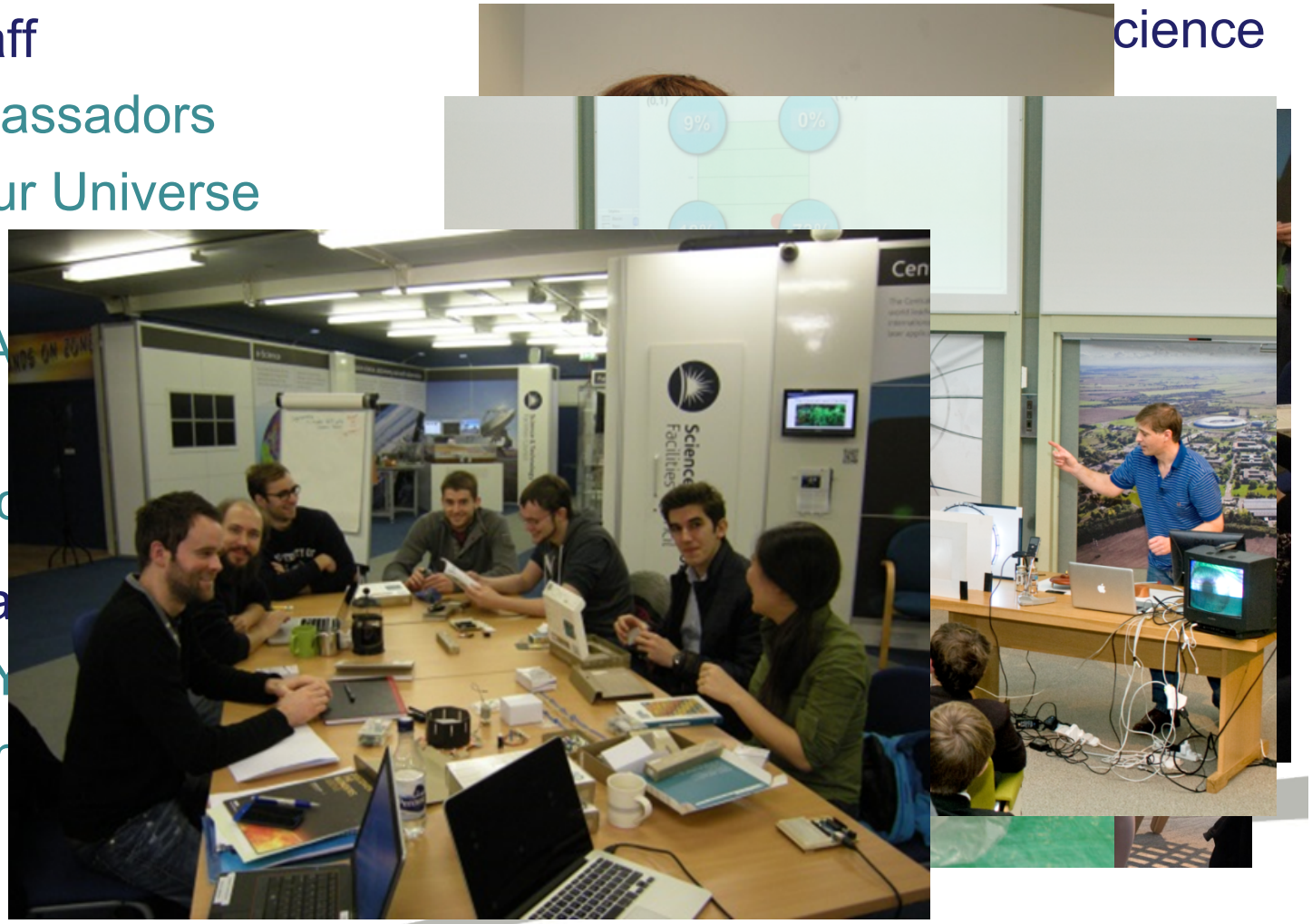
National Laboratories: Activities

- Training for staff
  - STEM Ambassadors
  - Explore Your Universe
- School visits
  - Education A
  - Starlab and
  - Ada Lovelac
- Careers days a
  - Science in Y
  - School ever



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Masterclasses

- RAL and Daresbury both run Particle Physics Masterclasses
  - Rutherford Appleton Laboratory: 720 places over four days
  - Daresbury Laboratory: 360 places over three days

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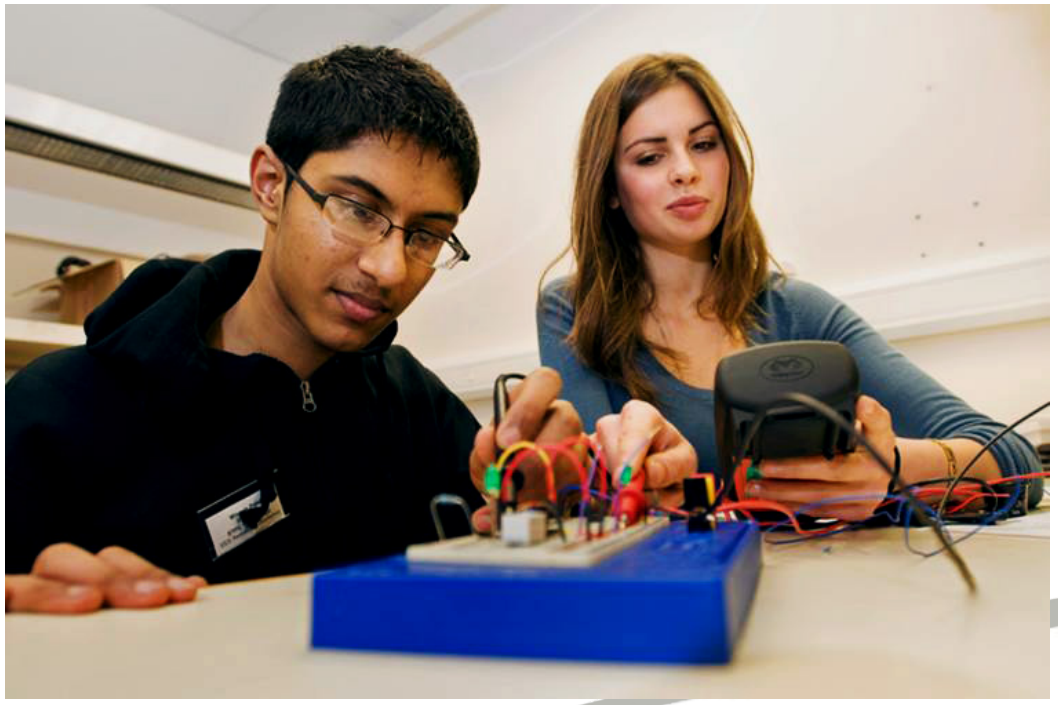
Work experience

- All three sites run work experience programmes
  - Rutherford Appleton Laboratory: 110 placements in 2013-4
  - Daresbury Laboratory: 42 placements in 2013-4
  - UK ATC: 20 placements in 2013-4



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Working with teachers

- Leading the development of a national programme of training workshops for teachers
  - Using National Labs and our themes as an exciting context for teaching

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Impact

STFC Public Engagement Programme

- Estimated participants engaged per year:
  - 18,000 teachers
  - 91,000 primary students
  - 243,000 secondary students
  - 1,100,000 general public
- Grants and Fellowships:
  - 32 awarded to the value of £626,000

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Inspire and Involve

- Public Engagement is a key part of STFC's strategy
- The Large Hadron Collider and the discovery of the Higgs have captured the public and young people's imagination
- We have an opportunity to encourage the pursuit of STEM subjects

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