



Astronomy In The Classroom

For Teachers of KS4 and 5 Physics and GCSE Astronomy

Date: Wednesday 7th march 2012
Time: 9.30am – 3.30pm
Cost: £75 + VAT

Location: National Space Centre, Leicester
Lunch included

For more information, or to book a place on this CPD session, please contact Dr Sarah Hill, National Space Academy Project Manager: sarahh@spacecentre.co.uk

This full-day, intensive CPD session will introduce you to a range of hands-on teaching ideas, demonstrations and activities to allow you to bring the topic of Astronomy alive in your classroom. Whether you are teaching the space topic in GCSE science, the evolution of the Universe to your KS5 Physicists or teaching GCSE Astronomy, this course is packed full of ideas and resources to implement immediately in your classroom. And of course, from concepts of gravity to using multi-spectral analysis to find out more about our universe than we could ever have hoped to know, these approaches can enrich many topics of your general science teaching.

The day will be split into two sessions, with Lunch and a planetarium show included in the day.

Morning Session: The Universe in Your Classroom (Sophie Allan, National Space Academy)

Course Outline: This session will introduce you to a range of activities both hands-on and ICT based to enrich the teaching of Astronomy and Space Science based topics in the classroom. From analysing the latest SOHO data, to understanding gravity and parallax, the ideas and resources you gain from this session can be immediately implemented in your classroom. All participants will be provided with a set of digital resources to take away and use in their own teaching.

Course Tutor:

Sophie Allan is the National Space Academy Education Officer at the National Space Centre in Leicester. She studied Physics with Astrophysics at the University of Leicester, where she was also Vice President of LeSEDS (Leicester Students for the Exploration and Development of Space).

After graduating she stayed at Leicester to complete a PGCE in Physics and worked as a specialist Physics teacher in Leicester City Schools.

In 2010 she was asked to lecture at the European Space Camp in Norway and was invited back in 2011 to repeat these lectures and work as team-leader for the atmospheric physics group.

As well as teaching programmes for the Space Academy, she is also actively involved in the development of new curriculum focused STEM masterclasses and activities with a particular specialism in GCSE Astronomy and Applied Science.

Afternoon Session: Herschel Space Observatory – Understanding the Universe in a Different Light (Dr Chris North, Cardiff University)

Course outline: This course will introduce educational activities related to the Herschel Space Observatory. As an infrared space telescope, carrying the largest mirror ever launched into space, Herschel sees the Universe in a different light to the way we do with our eyes. The material covers the electromagnetic spectrum from the point of view of everyday life and from an astronomical viewpoint. The material is **designed for GCSE and A-level students**, and would also be suited to astronomy or science clubs.

As well as covering the electromagnetic spectrum, it introduces the Herschel mission.

Participants will be provided with:

- an understanding of how the full range of the electromagnetic spectrum is used to explore the Universe
- an understanding of some of the physics behind Herschel
- a resource pack with at least 3 hours' worth of teaching material and homework suggestions
- an introduction to "Chromoscope", a freely available online tool (www.chromoscope.net)

Course Tutor:

Chris North is currently the UK Herschel Outreach Officer, coordinating public and education activities associated with the Herschel Space Observatory. Based at Cardiff University's School of Physics and Astronomy, he also does research with Herschel. Herschel was launched in May 2009, along with the Planck satellite, by the European Space Agency, and both are working well.

Alongside this, Chris is the astronomy researcher and a co-presenter on The Sky at Night, the long-running BBC astronomy TV programme.