

Free Teacher CPD Workshop:

Voyage through the Universe

Explore Free Online Resources to help you use Real Astronomical Data in the Classroom

Monday 14th December 2015 - 9:30-4:00pm

The Sloan Digital Sky Survey (SDSS) is the **world's largest astronomical survey**. It has taken images of more than 30% of the night sky, and mapped the locations of millions of galaxies and stars. All this data is made **freely available online**.

Join us on the campus of the University of Portsmouth for a hands on workshop exploring voyages.sdss.org, a new **free educator focused resource** designed to enable the use of this online data from the Sloan Digital Sky Surveys (SDSS) in support of the teaching of **topics in maths, physics and computer science**.

The Institute of Cosmology and Gravitation at the University of Portsmouth has been part of the SDSS collaboration since 2008, and it forms part of our research in extragalactic astronomy and cosmology, which led to us being rated in the **Top 10 departments for physics research output** in the UK in 2014.

This is a **unique opportunity for UK teachers** to learn how to access these resources. Ten schools will also be able to take back with them their own piece of astronomical history - an actual piece of equipment used by SDSS to map a patch of the night sky. **The Smithsonian Museum in Washington DC, and the London Science Museum are among the locations which display these objects - and your school can join them.**

Participants will spend the day with ICG scientists working with SDSS data, and will also have the opportunity to contribute their own experiences using data in the classroom into new, guided journeys through Voyages for specific educational levels.

Chrome books will be available for use for those not able to bring their own laptops.

This workshop is provided free of charge (with a limited budget available to support travel/expenses/teacher cover cost) thanks to funding from the South East Physics Network (www.sepnet.ac.uk) and the Sloan Digital Sky Survey (www.sdss.org) and the Southern Universities Network (www.sunoutreach.org) part of the National Network for Collaborative Outreach.

To book a place please click the link to the [ONLINE BOOKING FORM](#)

For more information please contact Education Liaison at the University of Portsmouth on 023 9284 6214 or email elot@port.ac.uk

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Adopt a Patch of SDSS Sky

In order to map the distances to galaxies and stars in the Universe, the SDSS telescope in New Mexico makes use of “plug plates”. These large aluminum circles are drilled with holes which correspond to celestial objects and which hold the optical fibres to collect light from each one. They are custom made for a small patch of the night sky, and once the observations are complete they are no longer needed.



The SDSS recently decided to start handing these objects out (free of charge) to schools, accompanied by a poster of the patch of sky they correspond to, and resources for the exploration of the science and technology behind modern astronomical surveys. We have ten such plates to hand out - the first ten ever distributed to schools in the UK, and your school could be among the first to get your hands on one, and adopt your own patch of SDSS sky.

Because these are such rare and special objects, we want to make sure the plates go where they will be used best. In order to be considered as a school who gets one of our first 10 plates, could you please **let us know how you will plan to use the plate in your school, and what it will mean to your students to have access to this piece of astronomical history.**

Bring this along with you to the workshop, or submit it in advance. Please use no more than a single page of A4.

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9:30 am	Registration and Tech Check	Room: Dennis Sciama 2.14
10:00 am	Welcome	Dr. Karen Masters
10:05 am	The Sloan Digital Sky Surveys Mapping the Universe	Prof. Bob Nichol
10.30am	COFFEE BREAK	
11:00 am	Example Preflight Activity (e.g. for a single class period)	
11:30 am	Example Launch Activity (e.g. for a week of classes)	
12.00pm	Example Expedition Activity (e.g. for an extended project, or afterschool club)	
12:30 pm	LUNCH	
1:30 pm	SDSS Plates and Spectroscopy	Dr. Karen Masters
2:00 pm	Group A - Explore your SDSS plate	Dr. Karen Masters
2:00 pm	Group B - Example offline activity	Dr. Jen Gupta
3.00 pm	Short SDSS Science Talks	SDSS Scientists at Portsmouth
3:30 pm	Wrap Up and Questions	
4.00pm	FINISH	