A Focus on Physics

Our students are commencing the first external exam series for 3 years and understandably they (and we) will be apprehensive – that's normal. We will always wonder could we have done more, prepared them better but don't forget – it's their exams 😊 It is 10 years since my eldest took his first GCSEs and for me, believing that he had done his best as a student and I had done my best to support him as a parent was liberating.

With the coming of the exams, hopefully there will also be more opportunity for planning and professional development; and with this in mind, I just want to re-iterate STEM Learning and the SLP's Physics offer.

As part of our enhanced Physics offer, the Ogden Trust will be delivering the SKPT (Subject Knowledge for Physics Training) CPD. This is designed for those teaching physics out of specialism (though it could also be useful for Early Career Teachers too). The first session looks at Forces and provides 20 hours of learning over 8 weeks starting in June. It comprises a mix of face-to-face sessions (in a range of locations), online tutorials and independent study. More information and details on how to sign up is here.

If you are interested in bespoke physics CPD, then our local SPN (Stimulating Physics Network) coach has some availability. Taking advantage of this would enable your department to have up to 6 funded sessions, focused on an aspect of Physics to be agreed between you, plus access to SLP-delivered Physics CPD. If you are interested in this, please email slp@eatonbank.org and we will put you in touch with our SPN Coach, Ant.

We are also offering the following A-level Physics CPD:

- Teaching A-level Physics for the first time – Subject Knowledge 29 June £60

  Join Physics expert Phil Jones as he discusses common misconceptions and how best to approach teaching A-level topics.
- Teaching A-level Physics for the first time – Practical Skills 13 July £90, The Whitby High School

  A chance to get hands on with Physics expert Phil Jones and discover how to develop your students' practical skills.

Our technician conference will have some Physics specific workshop sessions:

- Technician Conference 19 July £90, Stoke-on-Trent 6th Form College **TRP £50** (reducing the cost to £40)

STEM Learning is offering a Phototonics Explorer Workshop on either 12 or 14 July 1-4pm which includes a free photonics explorer kit. Details below:
Learn about Photonics! the science and technology of light – essential to our daily lives. Photonics underpins the internet, smart phones, laptops, medical diagnostic and treatment technologies, manufacturing, and lighting – and more.

This free workshop will use the Photonics Explorer kit – each teacher/school that attends will be sent a free kit worth £150 (limited to one kit per school).
By the end of the workshop teachers will:

- Know more about the science and technology of Photonics and how it is important to our daily lives
- Be able to use the Photonics Explorer kit to teach relevant topics in the National Curriculum to their students to different Year Groups at different Key Stages.
- Know more about the research in Photonics

The Photonics Explorer Kit:
Each kit contains a classroom set of the following components suitable for up to 30 students working in small groups of 2 to 3: Eye-safe Lasers; coloured LEDs; polarisers (7x5 cm); optical fibre and slits for optical diffraction experiments. The kit contains 8 educational modules provided on a data stick with Notes for Teachers, and Fact Sheets and Worksheets for students – all of which can be edited/adapted.

Some modules also feature videos to support the suggested lessons plans. (For more about the kits please go to the site: http://www.b-photonics.eu/en/photonics-explorer).

The modules are designed to teach:

- Properties of light and its use in telecommunications
- Colour: perception, additive and subtractive colour mixing
- Lenses and telescopes
- Eye and vision

- Diffraction and Interference
- Polarisation
- A scientist's job.
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For an initial expression of interest please contact: Dr Pearl John, Public Engagement Leader, Physics and Astronomy, University of Southampton: pj@soton.ac.uk

These workshops are funded by the EPSRC Future Photonics Manufacturing Hub at the University of Southampton and the University of Sheffield.

Finally – I have collated a few examples of useful physics-related resources (with thanks to the authors for sharing them on twitter)

Audio equation tests for GCSE physics

A video for tackling 6-mark ques (with examples for GCSE & A-level)

There are some great KS3 resources in this Resource a day Collection

If you are planning transition day activities, then this Philip Harris blogpost has some ideas.

Access to flash files relevant to physics with a flash player as well via this link

As always – please do get in touch if you have any specific questions or requests, meanwhile, we hope to see you again soon at one of our CPD sessions.