



making physics matter

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CORNWALL PHYSICS EDUCATION PARTNERSHIP



<http://www.physicspartners.com/>

Free GCSE Practical Physics from *Physics Partners*

Physics remains a core component for the future success of our UK industries and our economic wellbeing. Cornwall has a growing technological industry that connects science and mathematics with the creative arts. Cornwall's future will increasingly depend on the skills of the creative physicist. Our success will be underpinned by inspirational and creative physics teachers nurturing the top physicists of the future.

Aided by a generous grant from The Ogden Trust, the *Physics Partners* charity achieves this aim by sending its team of expert trainers into schools to provide high quality physics support for science teachers and technicians. This not only gives confidence to the non-physics specialists and NQTs in our schools but also enhances the teaching of our more experienced physics teachers. All can benefit from this. In addition this physics training will provide flexibility in science staffing whilst maintaining a high quality teaching provision in physics.

The *Physics Partners* charity also provides support for individual schools outside this partnership. Further details are given overleaf. If interested in joining, please email naf@truroschool.com.

Nick Fisher
Deputy Headmaster Truro School
Cornwall Physics Education Partnership Coordinator

Free GCSE Practical Physics from *Physics Partners*

Aim:

- The aim of this project is to share best physics teaching practice and provide confidence in teaching the practical work required for the new AQA GCSE specification.

Free INSET workshops:

- A series of five workshops have been planned for 2016 -17, each covering a different practical theme from the new AQA GCSE specification.

Host schools leading the INSET:

- The following five schools will each host one teacher workshop:
Camborne Science & Technology College, Falmouth School, Richard Lander, Truro School, Wadebridge.

Preparation:

- Each INSET workshop session will be planned by the host school in a pre-training session on one afternoon a few weeks in advance. However, pre-training sessions may need to take place earlier during the school day to ensure the presence of the technician.
- We recognise that this will require expert guidance and support. One of our *Physics Partners* trainers will visit the host school to help develop and finalise the detailed plans and resources in a pre-training session before each workshop. *Physics Partners* would supply resources from their resource bank: practical worksheets, teacher and technicians notes, PowerPoints, video clips, etc.
- All INSET workshops will take place in the afternoon, from 3.00pm until 6.00pm, to help minimise the disruption of normal lessons.

Funding:

- *Physics Partners*, aided by *The Ogden Trust*, cover the costs and the expenses of our visiting teacher trainer. The host school's science department would also be provided with £120 from *Physics Partners* to pay for resources for the pre-training session and the INSET workshop; it is intended that this would help towards covering costs for photocopying, any necessary equipment or any necessary teacher cover.
- All schools teaching AQA GCSE Physics will be invited to each workshop. Transport to and from the host school will be paid at a rate of 45p per mile to each delegate, up to a maximum of 2 delegates from each school. Travel costs will be covered by *Physics Partners* and *The Ogden Trust*.

Workshop structure:

- The INSET workshop hosted at each school would include the following:
 - listed AQA practicals - to be set up by the science technician;
 - top tips and myths to avoid for the non-physicists and for the NQT physics teacher;
 - listed equations for that topic and teaching methods for the new mathematical requirements of AQA GCSE physics;
 - additional enrichment material – further demonstrations, digital resources, pupil activities, exemplar past paper questions;
 - an ideas sharing session where each attending delegate would share one idea or resource to help supplement the material provided by the host school and *Physics Partners*;
 - all new resources developed from each hosted workshop would be given to *Physics Partners* to supplement their bank of materials for future workshop training in the third year of this *Cornwall Physics Education Partnership* project.



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Outline Schedule

Dates be confirmed in early September

School	Topic	Pre-training afternoon: <i>Week beginning . . .</i> (time schedule to be confirmed)	INSET Training Workshop afternoon: 3pm – 6pm <i>Week beginning . . .</i>	Physics Teacher INSET Leader*
Truro	Waves light and optics: eg reflection, refraction	Mon 26 Sept	Mon 10 Oct	Adam Laity
Richard Lander	Dynamics: eg acceleration, work done by a spring, $F = ma$, momentum, density	Mon 21 Nov	Mon 5 Dec	Ben Lloyd-King
Falmouth	Electricity: eg I-V character, Voltmeters and ammeters,	Mon 16 Jan	Mon 30 Jan	Joe Robins
Camborne	Heat: eg SHC, infra-red emission and absorption, thermal insulation	Mon 6 March	Mon 20 Mar	George Reynoldson
Wadebridge	Electromagnetism: eg transformers, $F = BIL$, motors	Mon 26 June	Mon 10 July	Jayne Williams

* The INSET leader may delegate to other teachers in their department to help organise their hosted INSET; in addition *Physics Partners* provide expert guidance in the form of a visiting physics trainer