



The  
Thomas Hardye School

# Technician Conference 9th June

## at Thomas Hardye School, Dorchester



Time	Session				
09.00 – 09.30	<b>Registration</b> and refreshments				
09.30 – 09.40	<b>Welcome &amp; Introduction</b>				
09.40 – 10.30	<b>Keynote Talk</b> - Experienced Science Technicians representing the Science Council will talk about the value of professional registration and recognition of their skills. Jean Scrase, Gatsby Charitable Foundation - information on the new <i>Technicians Make it Happen</i> campaign				
10.30 – 11.30 (60 mins) workshop one choices	<b>Workshop 1a</b> Putting the WOW back in Science	<b>Workshop 1b</b> Introducing the BBC Micro:bit	<b>Workshop 1c</b> Science Council workshop on Professional Registration	<b>Workshop 1d</b> The Mystery of the Blood Stain	<b>Workshop 1e</b> Technicians Supporting GCSE Chemistry (New Specification)
11.30 – 11.55	Refreshment break and supplier exhibition browse				
12.00 – 13.00 (60 mins) workshop two choices	<b>Workshop 2a</b> Required practicals, A-Level, GCSE and data-logging	<b>Workshop 2b</b> Introducing the BBC Micro:bit	<b>Workshop 2c</b> Why Quality Matters, not all Glass is the same.	<b>Workshop 2d</b> Explaining Electricity	<b>Workshop 2e</b> Technicians Supporting GCSE Chemistry (New Specification)
13.00 – 13.45	Lunch and refreshment break and supplier exhibition browse				
13.50 – 14.50 (60 mins) workshop three choices	<b>Workshop 3a</b> Simple Physics Experiments using sensors	<b>Workshop 3b</b> Using the BBC Micro:bit in Science	<b>Workshop 3c</b> Lonza Electrophoresis	<b>Workshop 3d</b> Explaining Electricity	<b>Workshop 3e</b> Technicians – crucial members of the Science Department team
14.50 – 15.10	Plenary and feedback including refreshment break				

### WORKSHOP DESCRIPTIONS

## **SESSION ONE (10.30 – 11.30am):**

### **1a Putting the WOW back in Science** (20 max) - Selene Gilles, Breckland Scientific

Hands on fun experiments that are ideal for Science Week and Open Evenings. None of the experiments need any specific kit except a microscope, metre rules and Bunsen Burners, which all schools will have. The 'consumables' can be bought from anywhere. Suitable for KS3 and KS4.

### **1b Introducing the BBC Micro:bit** (15 max) – Simon Fitzjohn, MSLC and CAS SE

Basic introduction to find out about this tiny computer. Get it working, try some programs, begin to appreciate how it might be used in science and sense the fun kids (and others!) might have learning to write their own code. No previous knowledge expected. Suitable for KS3.

### **1c Science Council workshop on Professional Registration** (25 max)

This workshop follows on from the Science Council Keynote and will provide support and guidance for those interested in applying for professional registration. Examples of competence across a number of areas will be discussed and you will be helped to identify relevant examples from your own working life that can be used to support your application. Suitable for KS3 – KS5.

### **1d The Mystery of the Blood Stain** (20 max) – Paul Gray, Timstar.

Become a forensic scientist and solve a murder using a blood stain left at the scene of the crime! Identify if the stain is actual blood, then solve the crime by performing ABO and Rh typing of the stain as well as samples from the victim and several suspects. Suitable for KS3 and KS4.

### **1e Technicians Supporting GCSE Chemistry (New Specification)** (15 max) – Sue Cure, MSLC

This new hands-on session is designed to give science technicians increased familiarisation with apparatus typically used in school or college, and greater confidence in practical skills. The session will also explore strategies that technicians can use to support the new GCSE specification. Suitable for KS4.

## **SESSION TWO (12.00 – 1.00pm):**

### **2a Required practicals, A-Level, GCSE and data-logging** (15 max) – Iain Davison, Data Harvest.

This hands-on session uses data-logging to help meet the new requirements for both A-Level, and GCSE from Sept 2016. The workshop uses the “Vision” touch-screen fully-graphical data-logger for a number of experiments including light-gates and speed/acceleration; colorimeters and pH. Bring along a USB memory stick and you can take away a full set of teaching/learning resources meeting these requirements. If using an iPad, please download the “EasySense” App free from the App Store which can also be used to data-log. Please note that although this workshop uses Data Harvest products, you should be able to carry out the same or similar experiments with other branded Dataloggers. Suitable for KS3 – KS5.

### **2b Introducing the BBC Micro:bit** (15 max) – Simon Fitzjohn, MSLC and CAS SE

Basic introduction to find out about this tiny computer. Get it working, try some programs, begin to appreciate how it might be used in science and sense the fun kids (and others!) might have learning to write their own code. No previous knowledge expected. Suitable for KS3.

### **2c Why Quality Matters; not all Glass is the same** (20 max) – Michelle Powner, SciLabWare

SciLabWare manufactures Pyrex and Quickfit. Hear about the history of these brands and their origins up to the current day. Discover the benefits of quality glassware; not all glassware is the same and see examples of different types. Understand why glass breaks and the safety measures to put in place. How to maximise the lifespan, maintenance and cleaning. The physical properties and chemical resistance of plastics will also be looked at. Suitable for KS3 – KS5.

### **2d Explaining Electricity** (20 max) – Cerian Angharad, IOP

An opportunity to trial and make some basic kit that may help pupils in your school gain a clearer understanding of electricity, with some fun ideas that could also be used in a STEM Club. Suitable for KS3.

## **2e Technicians Supporting GCSE Chemistry (New Specification) (15 max) – Sue Cure, SLP**

This new hands-on session is designed to give science technicians increased familiarisation with apparatus typically used in school or college, and greater confidence in practical skills. The session will also explore strategies that technicians can use to support the new GCSE specification. Suitable for KS4.

## **SESSION THREE (1.50 – 2.50pm):**

### **3a Simple Physics Experiments using sensors (15 max) – Steve Emery, Instruments Direct - Suitable for KS3 – KS5.**

Try out simple experiments including 'Using sensors to measure gravity', 'Simple forces using a Force sensor', 'Measuring sound waves using a sound sensor'. Please note that although this workshop uses Vernier sensors, you should be able to carry out the same or similar experiments with other branded sensors.

### **3b Using the BBC Micro:bit in Science (15 max) – Simon Fitzjohn, CAS SE**

This hands-on workshop introduces the basics to getting the micro:bit working and looks at how the on-board sensors can be used in science teaching by making the micro:bit into a digital thermometer as an example. No previous knowledge of the micro:bit is needed, but this workshop would probably suit those who have some experience with simple electronics. Suitable for KS3.

### **3c Lonza Electrophoresis (10 max) – Lynn Thorne, Scientific Laboratory Supplies**

This workshop showcases the new Lonza 'Flash Gel' range for Electrophoresis that allows DNA separation to be carried out in 5 minutes with minimal setup time. No harmful stains, casting of gels or long separation times. This is very popular in university and research labs and is beginning to be used in some schools and colleges too. Use this workshop to find out more about this alternative method and try out the kit. Suitable for KS5.

### **3d Explaining Electricity (max 20) – Cerian Angharad, IOP**

An opportunity to trial and make some basic kit that may help pupils in your school gain a clearer understanding of electricity, with some fun ideas that could also be used in a STEM Club. Suitable for KS3.

### **3e Technicians – crucial members of the Science Department team (max 20) – Sue Cure, MSLC**

This session will focus on the importance of good teamwork within the Science Department and offer tips and strategies for getting the best from the technician team and other colleagues. This workshop is suitable for both technician team members and technicians who work alone. Discussion will be encouraged so that delegates can benefit from each other's experiences. Suitable for KS3 – KS5.

**Book at [www.stem.org.uk/cpd/44542/technician-conference](http://www.stem.org.uk/cpd/44542/technician-conference)**

We will then contact you separately asking you to choose a workshop for each session – please note there is a maximum capacity for each workshop, so do book promptly.



*This conference is organised in partnership with the Thomas Hardy School, Dorchester. The Science Learning Partnership for Dorset, South Wiltshire and Bournemouth & Poole is led by the Mathematics and Science Learning Centre, University of Southampton. STEM Learning operates the National STEM Learning Centre and Network, alongside other projects supporting STEM education [www.stem.org.uk](http://www.stem.org.uk)*

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