


# CLEAPSS BULLETIN

## Remembering Val Chapman

We were extremely sad to hear of the untimely death, in May, of Val Chapman. Val created the technicians' organisation Scitech and ran it, with Peter Robinson, from 1999 until only a few months before her death. Val had been suffering from cancer for several years but resolutely continued with her

'day job', while running Scitech in her spare time. She retired from both only when it was obvious she could no longer continue.

Val took no personal recompense for her work on Scitech and she was one of those rare individuals who worked for the benefit of others. She will be sadly missed but her legacy will continue.

## Welcome

At the start of the new school year CLEAPSS welcomes a new biology adviser, Mary Philpott. Mary joined us in June and has settled in well, already making some valuable contributions to our work. Look out for her as the tutor on forthcoming microbiology courses.

## Chemical hazard information



Although you will not see much obvious change for the next 15 months, legislation is changing behind the scenes. The **Chemical Hazard Information and Packing Regulations (CHIP4)** came into force in April 2009. This legislation places Safety Data Sheets under the European REACH Regulations. It also paves the way for the UK to adopt the European **Chemical Labelling and Packing Regulations (CLP)**. These in turn pave the way for the EU to adopt the **Global Harmonised System** of chemical labelling, beginning in December 2010. This means changes to hazard labels, including: squares become diamond; orange becomes white; black border becomes red; the face on the 'toxic' skull will develop a strange grin; a new 'exploding chest' will highlight health hazards such as carcinogens and an exclamation mark for harmful and irritant. Along with the Scottish Schools Equipment Research Centre (SSERC), we identified that dichromates and cobalt chloride have been flagged up as possible causes for concern under the REACH Regulations. However, a recent REACH report confirms that these chemicals will not, at the moment, be subject to restriction. REACH will be under severe pressure for some time because around 65,000 companies had pre-registered 2.7 million chemicals by the December 2008 deadline. This is around 15 times more than originally estimated.

## Hazardous Waste Regulations

The *Hazardous Waste Regulations 2005* have been slightly amended in England – but not in Wales. Under the original regulations, waste producers must notify the Environment Agency in advance. However, schools are exempt provided that the school as a whole (not just the science department) produces less than a specified amount of waste per year. The effect of the amendment – which came into force on 6 April 2009 – is to raise the limit to 500 kg per year in England, while keeping it at 200 kg per year in Wales. As 200 kg of hazardous waste might equate to 10 small TV sets, five small refrigerators or 500 fluorescent tubes it is likely that some secondary schools in Wales could exceed the limit. This is now much less likely in English schools.

## FREE

to all member  
secondary schools  
& other members.

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# Getting Practical

## (Improving Practical Work in Science Programme)

**As we reported in *Bulletin 135*, *Getting Practical* is a professional development programme for teachers and technicians who want to strengthen the quality of practical science teaching. The programme focuses on improving the clarity of the purpose for doing practical work.**

Although many teachers agree that practical work is an excellent way of improving young people's perceptions of science, many lack confidence in practical science.

*Getting Practical* will support teachers in developing confidence and will offer advice on how and where to find easy-to-use and helpful experiments and activities.

Through the national network of Science Learning Centres, training will be provided for those wanting to become programme trainers. During the 2009/10 academic year around 100

*Getting Practical* programme trainers will be recruited at both primary and secondary levels across England. These trainers will then pass on the programme's professional development to others in their local area. One advantage of this is that the trainers will be able to tailor their work to match local issues.

The professional development package is being written by a team of consultants comprising representatives from the Science Learning Centres and the Centre for Science Education at Sheffield Hallam University. Incorporated into the package is research done by the Centre for Science Education and their teacher reference groups.

The programme is supported by a website

[www.gettingpractical.org.uk](http://www.gettingpractical.org.uk) where teachers can view and download resources produced for the professional development package. The website will also help teachers find good quality practical science activities available from the *Getting Practical* consortium partners along with useful practical science news, government reports and updates on current research in the field. The website will go live in the Autumn Term 2009.

To find out more and register your interest in local professional development events contact Kirstie Hampson; Email: [kirstiehampson@ase.org.uk](mailto:kirstiehampson@ase.org.uk); Tel: 01707 283000. Further information can be found in the

*Getting Practical* leaflet (pictured), which can be obtained from CLEAPSS or from Georgina Westbrook at the ASE; Email: [georginawestbrook@ase.org.uk](mailto:georginawestbrook@ase.org.uk)



### Latex allergy – members' responses

Many thanks for the responses we received. Here's a brief summary. Latex allergy seems to be more widespread and more widely recognised than in the past. The range of original sensitisers seems extensive, affecting both staff and students.

Latex allergy is often linked with other allergies – *eg* various foods. The severity of the allergy depends very much on the individual. In responding, schools need to take advice from individuals, from parents and from the medical practitioner treating these individuals. This is a whole-school problem, and it is possible to create a latex-free school. Problems in science include latex gloves, rubber bungs, pipette teats and rubber tubing, all of which can be substituted with non-allergenic items, or dealt with by simple changes in practice. Balloons are a particular problem but no suitable substitutes have been suggested. Several students are currently coping well in school with their allergy, although, in one school, a severely allergic A-level student gave up science in part because of the allergy.

### Silicon(IV) chloride (silicon tetrachloride)

In *Bulletin 133* we reported that there have been mishaps when opening silicon(IV) chloride bottles from storage. We suggested it is better to prepare the liquid when needed rather than store it. Guidance leaflet *PS84* (available on our website) provides instructions for making small amounts of the liquid and how the method can also be used to prepare disulfur dichloride and aluminium trichloride.

# Assistance dogs in school science

**Until recently only adults were issued with assistance dogs but some charities are trying to train well-chosen teenagers to use such dogs, including in school. Schools may now receive more requests to accommodate pupils' assistance dogs.**

There are different types of assistance dogs: guide dogs for blind people; hearing dogs for deaf people; and various types of assistance dogs for people with physical disabilities. For example, a dog may pick up dropped items or alert someone to an imminent epileptic fit. (Pupils may also have other aids – *eg* white canes and/or able-bodied helpers)

Although these dogs are trained to behave quietly and respond promptly when needed, these sources of help may be more appropriate during certain science and D&T activities.

A risk assessment on all the activities the child will take part in needs to be done before the dog arrives, considering the needs of the child, the dog and others. Support workers, the organisation providing the dog and other appropriate organisations may

be able to visit the school and/or provide more detailed advice. A trial period can be agreed to ensure arrangements are working.

The risk assessment depends on the dog's duties, the pupil's activities and the rooms where they take place. Some, but not necessarily all, school laboratories and workshops may pose greater hazards than normal because of chemicals and sources of heat.

There are some important questions to ask.

- How does the child's disability affect the likelihood of harm and the risk assessment?
- How does the presence of a dog increase the likelihood of harm to the pupil or others from any given hazard?
- What is the likely risk to the dog from hazards that are otherwise controlled for pupils?

For example, if there is a risk that chemicals may spill on a dog or on the floor it is better to find an alternative place for the dog during those lessons.

CLEAPSS is interested to hear about any relevant school experiences.

## Gas Safe Register

The Health and Safety Executive has awarded a 10 year contract to Capita Group Plc to run a new registration scheme for gas

engineers. Anyone working with piped natural gas or liquefied petroleum gas is within the scope of *Gas Safety (Installation and Use) Regulations 1998* and must be on the new *Gas Safe Register*. This replaces the long-standing CORGI registration scheme. Registered gas engineers should also

carry identity cards. There is more information and details of registered businesses and engineers at [www.gassaferegister.co.uk](http://www.gassaferegister.co.uk)



## Bull's eyes for dissection

In a recent note (15 May 2009), the Department for Environment, Food and Rural Affairs (DEFRA) has slightly relaxed the rules on the availability of bull's eyes for use in schools. Under the European Regulation [(EC) No 1774/2002] and the UK regulations 25 & 26 of the *Animal By-Products Regulations 2005*, bull's eyes may be removed from the carcasses of animals killed before they are 12 months old, **provided those eyes are to be used for diagnostic, educational or research purposes**. Previously eyes could only be extracted from animals killed under the age of six months. This change may have limited impact in the short term but it represents the first relaxation in the availability of bull's eyes for several years. We hope that further relaxation will follow, as the threat of BSE *etc* recedes.

## Full steam ahead

Model steam engines have been used in schools for many years to demonstrate a complete energy conversion system and to provide a historic perspective on science and technology.

They provide an exciting spectacle, which students usually respond to with interest and enthusiasm. CLEAPSS publishes a guidance leaflet (*PS80*) with detailed colour photographs explaining the important safety checks and procedures required to operate model steam engines.



## A collection of **CLEAPSS** courses for technicians (and/or teachers)

**In response to a request from an overseas member, CLEAPSS is offering four one-day courses over four days in January 2010. The courses are mainly for technicians (some are also useful for teachers) and will be held at CLEAPSS in Uxbridge (near Heathrow Airport, London). Other members may also be interested in some or all of these courses.**

**Health & Safety for Technicians**  
Tuesday 19 Jan 2010

**Practical Skills & Techniques in Chemistry**  
Wednesday 20 Jan 2010

**Running a Prep Room**  
Thursday 21 Jan 2010

**Microbiology**  
Friday 22 Jan 2010

For more details visit the CLEAPSS website at [www.cleapss.org.uk](http://www.cleapss.org.uk). Click on 'secondary' then 'courses'. To book a place or request more information please e-mail [courses@cleapss.org.uk](mailto:courses@cleapss.org.uk).

Individuals can enrol on a single course, multiple courses or all four courses. Courses cost £80 for one; £150 for two; £220 for three; and £290 for all four courses. We can also provide information about high quality, relatively inexpensive accommodation on the Brunel University campus only a short walk from our premises.

### Identifying CLEAPSS Guides

CLEAPSS *Guides* have always had *R* or *L* prefixes and a number, as well as a title. *R* is short for *Retail* to denote that the guide contains retail information about suppliers, catalogue codes and prices. Suppliers frequently change their product lines, catalogue codes and prices so *R* guides have been discontinued. *L* is short for *Laboratory*. Why? Because they were kept in filing cabinets in the lab! In future, guides will simply be *G* (for *Guide*) with the appropriate guide number.

### Publications for sale

Please call us on 01895 251496 or e-mail [science@cleapss.org.uk](mailto:science@cleapss.org.uk) for the latest prices of paper copies of any of our publications.

## CLEAPSS courses

Course	September 2009	October 2009	November 2009	December 2009	January/February 2010
Basic Chemical & General Skills	London (SLC)		Oxfordshire (SLC)		London (SLC); Southampton (SLC)
Basic Physics Skills			Gloucestershire; London (SLC)	Harrow	Oxfordshire (SLC); Southampton (SLC)
Making Simple Science Equipment			Cornwall		Southampton (SLC)
Microscope Maintenance		Oxfordshire (SLC); Southampton (SLC)			Chester; Salford
Running a Prep Room		Flintshire; Southampton (SLC)	Kent (SLC); London (SLC)	East Midlands (SLC)	Surrey; Uxbridge (CLEAPSS)
Working with Glass	Cornwall		Malvern; Southampton (SLC)	Kent (SLC); Surrey	
Chemical Safety for Technicians		London (SLC)	Devon; Oxfordshire (SLC); Surrey	Bristol (SLC); East Midlands (SLC); Southampton (SLC)	Keele (SLC); London (SLC)
Practical Skills & Techniques in Chemistry	Northern Ireland	Northern Ireland	Devon; Dartford		Uxbridge (CLEAPSS)
Fume Cupboard Monitoring		Northampton		Uxbridge (CLEAPSS)	Uxbridge (CLEAPSS)
Biology Safety			London (SLC)		
Microbiology	Blackpool; London (SLC)	Brentford; Essex	Southampton (SLC)	Salford	London (SLC); Uxbridge (CLEAPSS)
Physics Training for Technicians	London (SLC)				South West (SLC)
Electrical Inspection & Testing	Durham (SLC); Hertfordshire; London		Eastbourne	Hertfordshire	Cambridge; Salford; Yorkshire & the Humber (SLC)
*Radiation Protection Supervisors	Isle of Man; Kirklees; Stockport	Durham (SLC); Rotherham	Bolton; Enfield	Hackney	Keele (SLC); Kent; Nottingham (SLC); South West (SLC)
Technicians' Health and Safety		Dartford; Ebbw Vale; Kent; London (SLC); Norfolk; Salford	East Midlands (SLC)	Barnet; Cumbria; Southampton (SLC)	London (SLC); Southampton (SLC); Uxbridge (CLEAPSS)
*The Management of Health and Safety for Heads of Science		Keele (SLC); Norfolk	Essex; Luton; Southampton (SLC)		
*H & S in Practical Science for New Teachers		Barking & Dagenham; Barnet	Salford		
*Surely it's banned / Microscale Chemistry					Southampton (SLC)

\* Denotes courses primarily for teachers.

CLEAPSS also runs courses for teachers and technicians in Design and Technology (*The D&T Technician*, *D&T Workshop Maintenance* and *H & S Management in D&T*) but we are only able to provide them if suitable venues can be found. If you are interested in hosting a D&T or Science course in your area please call us on 01895 251496 or e-mail [science@cleapss.org.uk](mailto:science@cleapss.org.uk)