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TECHLINK

a newsletter for science technicians

No: 64 May 2007

From the ASE Conference in January

This annual science conference from the Association for Science Education is probably one of the best opportunities for technicians and teachers. All of the major suppliers are there and many smaller ones. A variety of lectures and workshops run all day with a range of leisure activities mixed in to provide some light relief. The venue is always a large University and often at either Birmingham or Reading. Next year is Liverpool and it is always early in January. If you can make it I can guarantee you will enjoy it and find it very useful. Below are a few bits of information I picked up from this years conference that I think you might find useful.

Very good space and galaxy video. Needs Flash. Words by Eric Idle. One swear word so choose your audience carefully!
http://dingo.care-mail.com/cards/flash/5409/galaxy.swf

BP Educational Service – some free resources and some you have to pay for but worth a look solar kits, fossil kits, rock kits, oil products kits. Giant periodic table wall chart and student versions. Energy and Climate Change posters.
http://www.bp.com/genericsection.do?categoryId=1030&contentId=7004432

Take control of the world's largest robotic telescope. I have suggested a site for this type of thing before, but this one is the Faulkes Telescope. Access is simple using a specially designed website. www.faulkes-telescope.com

The ultimate energy experience. The EON Energy Experience is an engaging FREE education resource that helps teach 5-16 year olds about energy. An interactive website with supporting classroom packs to help understand the different sources of energy and their merits and what their choices will mean locally, nationally and globally. http://www.eon-uk.com/energyexperience/

For the Chemists! Full instructions for chemistry experiments FREE on the Nuffield/RSC website. Current age range 14-16, future age range 11-19. This site is very useful, giving detailed instructions with diagrams and full safety advice for most of the popular chemistry experiments.
http://www.practicalchemistry.org/

Use the RAF to bring physics into real life. Posters and an interactive CDROM on subjects such as sound, motion and pressure. The science of parachutes, aircraft loading and airfield operations are mission-based and interactive. These resources are FREE. Email raf@edcoms.co.uk giving your name and school contact details.

Look at www.surrey.ac.uk/sbms for the University of Surrey's School of Biomedical and Molecular Sciences site. From the home page find schools and resources. On these pages you will find information for downloads of science based images for PC backgrounds and animations, and useful links and resources to help teachers and students and show you what else is out there in the world of Biomedical and Molecular Sciences. The table at the ASE was full of goodies and they were only to happy to give away multiple copies and help schools. I walked off with a batch of A4 glossy periodic tables and other useful bits and pieces!

A computer game for bored students? NanoQuest features Orla and Jack who have been reduced to nanosize by an evil scientist. They have to complete various challenges to return to human size. Hopefully students will learn about nanotechnology on the way? www.nanoquest.ie

BRAINIAC Warning

Be aware that some of the experiments on Brainiac are not all they seem. This is 'television' and sometimes the science is faked for visual effect. A teacher in Wales tried copying a nitrogen triiodide experiment and had a slight accident. The school received some unwelcome publicity. I do not think any one was harmed so the comment below from a fellow technician made me smile!

'They obviously didn't do the experiment Caerphilly enough!!'

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New Fire Safety Regulations

Fire safety regulations have changed and now schools should have a list of all flammable, extremely and highly flammable, oxidising and explosive substances on site. Hopefully, most of you have up to date chemical stock lists, which would comply, but only if the hazards are indicated. The CLEAPSS 2007 CDROM can help you with this. If other storage arrangements are as they should be then the local fire risk assessment should not cause a problem. You could try the CLEAPSS E233.xls stocklist spreadsheet on the 2007 CLEAPSS Science Publications CD-ROM. From the CD-ROM 'Start Page', click 'E-documents', then click 'E233 Chemicals stocklist' and then double click on 'E233.xls'.

Imitation Firearms

Just a word of warning if you use a starting pistol in your science lessons for the speed of sound experiment. Blank firing handguns and starting pistols are classed as imitation firearms. The Anti-social Behaviour Act 2003 amends Section 19 of the 1968 Firearms Act to include such imitation firearms. In essence it is an offence to possess an imitation firearm in a public place (including buildings accessible by the public) without a reasonable excuse. A reasonable excuse for the possession of an imitation firearm in a public place would be for dog training. Schools may not be 'public places' but playing fields are in view of the general public and the public do have limited access. A well-meaning member of the public could start an armed police response if they see what they think is someone with a gun in a school! Always store the pistol and ammunition under lock and key and ensure that it is not loaded when issuing it and when you receive it back. A laminated sheet of printed instructions on how to use the pistol safely and giving the above warning would also be helpful.

Plaster of Paris Accident

A recent accident at a foundation school in Lincolnshire resulted in horrific, injuries to a sixteen year old girl. It appears that during an art lesson the pupil submerged her hands in Plaster of Paris. When it started to get hot she tried to pull her hands out but the plaster had set too much to allow them to be freed. The emergency services were called but she suffered third degree burns to her hands which required the amputation of both thumbs and all but two fingers. I am not sure of the detail, maybe additives were used, but be warned, it does get hot and even a surprisingly low temperature can cause severe burns if you cannot remove your hands.

Future Courses

CLEAPSS Health and Safety for Science Technician
September 17th 2007
Norwich Professional Development Centre, Woodside Road.

CLEAPSS Health and Safety Management for Heads of Science or their Deputies September 18th 2007 Norwich Professional Development Centre, Woodside Road.

CLEAPSS First Chemical Handling Course - venue tba October 10th 2007.

All of the above courses are essential from a health and safety point of view. If you have difficulty attending use the health and safety argument. The employer (your school) is responsible for ensuring that all new staff are trained to be able to do their job safely. Children's Services are providing the opportunity for training by using me to arrange the above courses. If you are new to the job please try to attend the Chemical Handling 1 session, as this covers the hazards associated with chemicals and the correct disposal methods. To be a safe technician you need these skills. Funding should be available from your school's health and safety budget.

Changes to How we Store Radioactive Material

Please read the attached document on the changes suggested by our RPA and then pass this information on to your RPS. It is the RPS's responsibility to ensure these changes take place but the jobs may well be allocated to you! For disposal see the CLEAPSS website but do not dispose of good sources as curricula content changes and at the moment the 21st Century Science has a section on radioactivity.

Having Trouble with the New Experiments?

Twenty First Century Science has caused a few problems for technicians. Some of the experiments don't work and some of the instructions are not very helpful. There have been so many problems that CLEAPSS have produced a Position Statement listing them. They also provide the solutions and ways to make the experiments work. Look on the members only part of their website and find PS67 Practical Activities in the New Science GCSE's. You will need your password or access from the CDROM.