

TECHLINK

a newsletter for science technicians

No: 69 January 2009

CLEAPSS CDROM 2009

Accompanying this issue of Techlink is the latest cdrom from CLEAPSS. Remember that the 2008 one will cease to work at the end of January. The HSE have said that the lack of IT will not be an acceptable excuse for not receiving health and safety information so use this opportunity to request an internet connected computer in the preparation room – if you have not already got one. Try to get the CD installed on the school network it will then be accessible to all.

FREE RESOURCES for schools

Memory 4 Teachers is a national campaign funding the distribution of 750,000 memory sticks to teachers across the country. All teachers and support staff are able to register to receive a free USB memory stick.

The memory sticks are password secure and are preloaded with a fully interactive control panel, various educational resources and software applications. The applications provide teachers with functions such as a diary, timetable and lesson plans as well as offering support for all national curriculum subject areas. The memory sticks also provide teachers with direct access to recommended educational websites.

To register for your free USB stick visit www.memory4teachers.co.uk/register.asp

In March 2009, every state primary school in the UK will be sent a *Darwin Treasure Chest* put together by the Wellcome Trust and the Royal Botanic Gardens, Kew. It will be packed with resources enabling the children to do real science inside and outside the classroom by exploring habitats, growing plants and collecting seeds.

Survival Rivals <http://www.survivalrivals.org/>

Kit boxes of experiments are also being developed for every state secondary school. Different experiments are aimed at Key Stages 3, 4 and 5 that illustrate the evidence for, and contemporary examples of, evolution such as

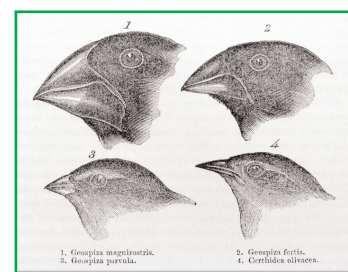
mate choice and antibiotic resistance. Teachers can request the kit from early 2009 and it will be available from March 2009.

Darwin's Footsteps is an online interactive game, developed by a primary school in Bolton, aimed at children aged 7–11 years. Follow the journey of Charles Darwin around the world with a series of mini-challenges and information about his discoveries. Teachers' notes are also available. The project is supported by Rolls Royce Education, and won the Science Prize Award 2007.

Evolution Megalab is a Europe-wide, mass experiment run by the Open University and Royal Society asking people to record observations online about banded snails in gardens or in parks. Primary schools' resources will be developed for 2009.

Take a look at the Natural History Museum's **Great Debate school programme** for Key Stage 4. Plunge your students into the fiery debate surrounding Darwin's theory of evolution. See the Museum's **programme for schools** to find out about the Charles Darwin gallery character Annie Darwin puppet workshops and performances of 'How the Giraffe got its neck'.

Explore the Natural History Museum's **Evolution**



web pages for a summary of evolutionary theory, and the **Wallace Collection web pages** for AS and A-level activities for history and history of science courses.

If you have a question about evolution, **ask a biologist**.

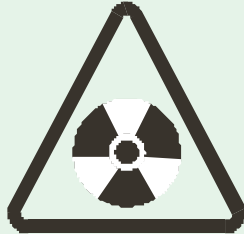
CLEAPSS Radiological Protection Supervisors (Schools) Course

Norwich Professional Development Centre,
Woodside Road, Norwich

June 25th 2009

Look on Norfolk's esinet website, INSET Opportunities or contact Cindy Burton on 01603 433276.

This course is not really aimed at technicians but if a school has decided to appoint a technician as the RPS (Schools) then they should attend the course.



From the SCITECH-L@UCLAN.AC.UK technicians site

Although there is often a great deal of time wasting issues on this email site, every now and again there are some very useful subjects. If you have time to look at thirty to forty emails a day you will see that all technicians have the same problems and there is always an 'expert' out there to help you. But be aware that just because someone offers you an answer it does not mean that it is correct. It is safer to ask CLEAPSS!!

Storage of vertical Petri dishes - the plastic dishes that most supermarkets sell pate in are ideal for many storage uses e.g. motor kits, Petri dishes, etc. The supermarkets throw them away and are generally happy to donate them.

The clear plastic boxes that Tesco sell Rolo doughnuts in allow you to rest four Petri dishes at a 45 degree angle. I know it's not perfect but it is probably better than storing them flat. All I have to do now is eat loads of Rolo doughnuts!!

Digestion demo

Try 'Teachers TV', there is a practical programme that does a digestion demo, it's called 'Gums to Bums'. Our teachers and children love it.

Gums To Bums (Demo) Apparatus:

Can of beans, hot dog sausages and chocolate biscuits
3x bowls labelled - Mouth, Small Intestine, Large Intestine
2x buckets labelled - Blood and Toilet (put a small amount of water in toilet bucket!)
Potato masher
2x large poly bags labelled - Stomach and Rectum
Scissors
Sponge
6x 2L pop bottles labelled - Saliva and water
Enzymes = washing up liquid, water and red food colouring
Acid = malt vinegar
Sodium Bicarbonate
Bile salts = washing up liquid
Bile pigment = gravy browning and water

Method:

1. Place beans, sausages and biscuits in MOUTH bowl and mash with masher (teeth). Add SALIVA and ENZYMES to help break down food. Then use hand to break down further (tongue). The food then passes down the oesophagus to the
2. STOMACH (large poly. bag), the stomach is a large muscular sac. Add ACID and ENZYMES (pepsin) which begins the digestion of protein. Cut a hole in the corner of the bag and squeeze the contents, the chyme, in to the
3. SMALL INTESTINE bowl, add SODIUM BICARBONATE, BILE SALTS and more ENZYME. Use the sponge, this acts like the villi, to absorb the nutrients - squeeze out into the BLOOD bucket. Add BILE PIGMENT and transfer to the
4. LARGE INTESTINE bowl, absorb the remaining water and minerals, and the faeces that remain pass into the
5. RECTUM (large poly bag), cut a hole in the corner and empty into TOILET bucket.