



SCOTTISH SCIENCE ISSUES

President: Prof Anne Glover, University of Aberdeen

Chair: Stuart Farmer, Robert Gordon's College, Aberdeen

Dear Colleagues,

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My letter in this edition is an edited version of my speech as Chair at the ASE Scotland Annual Dinner held in Dunblane on 5 March 2010, with some of the riskier and more amusing bits taken out. I hope that if you were not able to make our Annual Conference this year you will be able to join us in Crieff next March.

"I hope you have enjoyed the dinner and the wine is flowing. I found out recently that Tony Blair gets a quarter of a million pounds for an after dinner speech. I am doing this one for free, so at least you know you will get your money's worth.

In thinking about my speech for tonight I remembered a little section from the West Wing where Jed Bartlett, the President played by Martin Sheen, was talking about pessimists and optimists. I am sure you can find them in your staffrooms.

There are the pessimists sitting in the corner, the sort of people who can even turn a double positive into a negative, "Aye, right!". I am sure you can hear them saying "There is no money; staffing is getting cut back; we have Curriculum for Excellence to implement and new Highers and still no idea about what to do in S4; things in Scottish science education can't possibly get any worse". To which the optimist sitting opposite replies "Oh yes they can".

Well times might well be difficult, and I am sure the financial situation is not going to improve for a while, but we need to look forward. CfE is an opportunity for us to take the initiative but to do so we need a strong profession.

Some say, that central government should be taking the lead. Some say, that local authorities should be providing all we need. But that is just as likely as what Jeremy Clarkson says about The Stig. I know I have worked in an Independent school for the last thirteen years, but

from speaking with many of you, as well as from my experience working in three different state schools in two local authorities before that, I know this never has been and never will be the case. Governments, national or local, are not always in the best place to tell us what we need.

However, as a profession we need to be able to take responsibility for ourselves and to have a strong representative voice; today in this brave new world of CfE more than ever. So that got me thinking. If ASE didn't already exist would we now need to form a professional body for teachers of science? And if that was the case, what would it look like, and what would it need to do?

Well we are not starting from scratch, ASE does exist. ASE provides a means for teachers of science, technicians and the many others with an interest in science education to network and support each other. I don't think there is a collective noun for science educators but "an ASE" probably comes close.

ASE is only as strong as its members and it has various ways of recognising those that have done sterling service for it over a significant period of time. This year ASE has awarded three of its members Special Service Awards: Pierluigi Carena, Rhona Duncan and Nicola Jones. They now bring the number of Scottish ASE Special Service Awards up to twenty. (Janette Kean was then presented with her ASE Scotland Chairs badge for 2010-11.)

This is the third time in our history that we will have a Chair from a Primary science background. Scottish Primary science has also been recognised this year through Laura McFarlane from Milngavie Primary School who has been awarded one of the ASE/AstraZeneca Primary Science Teachers of the Year Awards.

So does ASE Scotland live up to my ideals of what a professional body representing science education should be? Well it is not far off. ASE Scotland does provide a means for science educators to network, it does organise, both itself and in partnership with other organisations,

The Association for Science Education Scotland: Promoting Excellence in Science Teaching and Learning

ASE, College Lane, Hatfield, Herts. AL10 9AA Tel: 01707 283000 Fax: 01707 266532 Email: info@ase.org.uk Website: www.ase.org.uk
ASE Scotland Editor: Stuart Farmer, 27 Deeside Crescent, Aberdeen, AB15 7PT Tel: 07765 500172 Email: stuart.farmer@yahoo.co.uk
ASE Scotland Field Officer: Stuart Cuthbert, Email: stuartcuthbert@ase.org.uk

high quality CPD, it accredits professionalism in science education through Chartered Science Teacher and the Primary Science Quality Mark, it publishes books, journals and websites and provides other membership benefits and support. ASE Scotland also gives a voice to science educators on as many occasions as possible. However, its support and its voice are only as strong as its membership allows. It should be natural for any member of a profession to automatically become a member of their professional association. In doing so, the status of that profession and membership of it is enhanced.

So, returning to paraphrase a real American President this time, "Think not what your professional association can do for you, but what you can do for your professional association".

But where to start? There is the ASE Scotland ABM, it shouldn't be the habitat of the same old fogies, and I am glad to say that I do expect to see some younger faces there in addition to the ones like my own. But if you don't feel you want to jump in at the deep end then all four of the existing ASE Scotland Sections: West of Scotland; South East Scotland; Tayside and Grampian will be having their ABMs in May and under revised constitutions are looking to form strong committees with at least nine members involved in each case. Why not go along and get involved in more local ASE activities?

ASE Scotland is also always looking to do outreach activities in more remote areas, and BP's support this

year has been a big help with this. So if you are from a more outlying area, or even from this part of the world which falls somewhat between Edinburgh, Glasgow and Dundee, and feel you can help please get in touch. If a lot of people each do a little we can achieve much. I made the move from a passive to an active ASE member when Colin Campbell made a very similar request at the ASE Scotland Annual Conference in Ayr in 1986. However, you don't have to commit yourselves to 24 years' service! You do get less for murder.

The organising group for this conference also asked me to invite you to consider becoming involved in the group that puts this event together. Currently there are seven ASE members who meet with Paul and Sheila from SSERC for a couple of hours about eight times a year to put the conference programme together and to make sure all the different aspects of this event are in place. If you want more information about what is involved then get in touch with Jenni Rees-Jenkins who is in charge for this year and for 2012 and Lauren Boath who is already pulling the programme together for next year in Crieff. Again, a lot of people each doing a little can achieve much.

So, on Monday, when you return to your staffrooms, I hope you see there is a lot to be optimistic about and that by working together we can make a real difference.

I look forward to seeing you all again in Crieff Hydro next year."

Stuart Farmer - Chair, ASE Scotland

Forensic Science and Renewable Energy

The Robert Gordon University hosted the ASE Grampian Section on 23 Feb 2010

Delegates could choose from workshops on Forensic Science or Renewable Energy and with a limit of 15 places in each, unfortunately several applicants left without places.

In the Renewable Energy session Dr Alan Owens demonstrated equipment RGU students use to investigate wave, tidal, wind and solar power.

The Forensic and Analytical Science workshop was enjoyed by all who attended. It focussed on: analysing fibres using microscopes; identifying footwear marks



Rubber ducks in the "tidal tank"



Delegates measure drag and lift on a wind turbine blade section in the RGU wind tunnel

at the scene of a crime and using chromatography to determine which pen was used to write a ransom note.

Prof. Andrew Morrison also gave delegates a tour of the Imaging Suite and rooms set up as crime scenes for analysis by RGU students. All of the staff were extremely friendly and helpful and I certainly found out useful information to use in class and with our S1 Science Club.

Kanola David

Hysterical Historical Science at Stanley Mills, Perthshire

This ASE Tayside Primary Science Day Conference on 6 Feb 2010 event promised the chance to explore cross-curricular teaching opportunities and to support primary teachers with novel science activities and themes.

Dr George Gray from HMle opened proceedings with an inspiring presentation that outlined many possibilities for cross curricular working. Case studies detailing the ways in which some schools had involved local communities, regional businesses and environmental agencies were presented. [Details are available on LTS's website.] George encouraged us to work with a range of partners and highlighted ways that the local community and local environmental priorities could assist and enrich our teaching with cross curricular activities.

Our host, Fiona Davidson of Historic Scotland, showed us some of the ways that Stanley Mills could support teachers. The site which spans over two hundred years, only closing as a working mill in 1989, offers fascinating learning possibilities. We had the chance to research and survey an unused floor in the Mill. An example of an activity that is open to class groups, possibly as part of a much wider project. Themed literacy, numeracy, history and science tasks were outlined and could all be easily envisaged in the Mill's inspiring buildings.

Ann Larkham of K'Next Generation took us through an engaging activity that toured the site and linked the water wheel technology of the Mill to an interactive challenge to build our own waterwheel. Our teams were able to build working models and assess their performance.

Hannah Crookes and Linda Wallace of the Dundee Science Centre and Moira Foster of Dundee City Council's Education Development Service detailed their 'Crazy Creatures' project, which successfully links literacy and science. Participating primary schools are supported with both teacher CPD and resources for the classroom. A carefully selected science book is given to all participating pupils, and staff from Dundee Science Centre run related school based workshops. The final phase allows pupils to meet the author of the book. By all accounts pupil engagement has been fantastic and the project provides numerous spin off activities into other curricular areas.

A key message from the day was that cross curricular working is a vital component of CfE but that classroom teachers do not have to "do it alone".

Partnership working, illustrated in all of the day's sessions, allows teachers to connect with specialists; to set up and run rich projects; to capitalise on local community input and to engage and challenge their pupils. Earlier in the day, Dr Gray reported on the range of methods used by teachers to plan and setup cross curricular activities. These mutually supportive CPD meetings had allowed teachers to share the load and will hopefully become increasingly common as CfE implementation progresses. The cross-curricular project examples outlined during the day inspired all of those present and hopefully reassured us that this poorly discussed requirement of CfE is possible.

Many thanks to Fiona and the staff of Stanley Mills and to representatives from YPO, Timstar and K'Next Generation who enticed us with their wares!

Stanley Mills details available at:

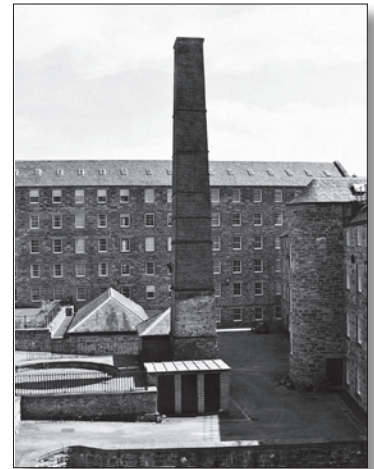
www.historic-scotland.gov.uk/propertyplan/propertyabout.htm?PropID=PL_273&PropName=Stanley%20Mills and

www.undiscoveredscotland.co.uk/stanley/stanleymills/index.html

An example of an LTS Primary Case Study:

www.ltscotland.org.uk/sharingpractice/f/fallahillprimaryschool/introduction.asp?strReferringChannel=takinglearningoutdoors

Ed Twentyman



ASE Scotland Meeting Notices

Grampian

Monday, 10 May 2010, 17:00-19:00

Institute of Medical Sciences: Translating Science from Bed to Bedside and ABM

Institute of Medical Sciences,
University of Aberdeen, Forresterhill

Tuesday, 15 June 2010, 19:00-21:00

Exam Review at Ellon Academy

Secretary: Marie Rennie
marierennie2007@btinternet.com

South East Scotland

Monday, 17 May 2010, 17:30-19:30

The Science Education Community and ABM

Moray House, Edinburgh

Saturday, 12 June 2010

"Share-a-thon": sharing teaching ideas

Moray House, Edinburgh

Contact:
Heather Earnshaw h.earnshaw@fc.gwc.org.uk

Tayside and Fife

Wednesday, 5 May 2010, 18:00 - 20:00

Hydrogen City Tour and ABM

Methil, Fife

Secretary: Pierluigi Carena plcarena@mac.com

West of Scotland

Thursday, 6 May, 2010

Members Night and ABM venue to be confirmed

Contact:
Martin Armitage: martinarmitage@hotmail.com

LabSkills – Supported by Getting Practical

LabSkills is an interactive software resource designed to help teachers and their students get more out of chemistry laboratory sessions at A-level and GCSE levels.

This resource helps to develop problem-solving skills and encourage a life-long learning approach to education. Put together through the Discover Chemistry Programme run by the RSC and Pfizer, these resources are to be made available to all state secondary schools and FE colleges across the UK throughout the spring and summer of 2010, free of charge.

Available as a USB stick, a teacher can use the material to prepare students for a laboratory session. LabSkills supports and encourages the student and enhances the practical work. It is not designed to be a substitute for practical work in science. It can however play an important role in promoting best practice in lab skills in a stimulating and engaging way.

To obtain the LabSkills resource, please contact Dr Georgina Westbrook mail to: georginawestbrook@ase.org.uk, with your name and school details and we will arrange for you to receive the USB stick. Only one USB stick is available per school or college. For more information, visit the resources section of the website www.gettingpractical.org.

Researchers in Residence

Do you need to access extra support to motivate, inspire and improve your 11- 19 students' learning potential using 'real-life' researchers? Researchers in Residence exposes students to new faces, concepts and novel ways of teaching the curriculum in the classroom. This is valuable support and it is across social, physical, life and earth sciences and arts and humanities subjects, so tell your colleagues in other subjects.

How does it work? Researchers in Residence organise placements between early-stage researchers and secondary schools. Placements last for up to 24 hours over an academic year. Researchers might work with a small group of students on a particular project, assist in practical lessons, conduct demonstrations or give presentations about their research.

For further details go to:
www.researchersinresidence.ac.uk
or call 0845 365 7470. You can follow on twitter at ResinRes. Your Scotland regional contact is Fiona Porter, fiona.porter@aeat.co.uk, 0870 190 6228.

Get involved today and enhance engaging tomorrow's talent today!