

# Improving Science Education 5-14 CPD Project News

Number 1  
Autumn/Winter 2003



CPD and website project teams at SSERC:

Helpline: 0131 558 8180 Fax: 0131 558 8191

ISE 5-14 website : [www.ise5-14.org.uk](http://www.ise5-14.org.uk)

© SSERC 2003 ISSN 1369-9962

Innovative assessment and homework projects:

E: [ise@LTScotland.org.uk](mailto:ise@LTScotland.org.uk)

## Background

This Newsletter has been produced in response to requests, from members of the consortia currently engaged in the project and others, for a simple paper-based overview of current activity in each of the other sub-projects or centres of activity. One major purpose of this first issue is to ensure that key members of each consortium and their contact details are known to one another. A second purpose is to simply flag up relevant events or developments - either planned or just past. A third, related aim is to attempt to ensure that everyone is kept informed of recent publications, policy statements or other sources of information of possible application within the consortia.

### **Tayside Science Education Consortium (TSEC)**

Specialising in Living Things and the Processes of Life. In association with Sensation the Dundee science centre. Special interest in ICT applications. Project Manager Peter Duguid of Angus Council (designated budget holder).

Partners - Angus, City of Dundee, Perth and Kinross.

### **North East Scotland Science Consortium (NESSC)**

Covering all three AOs (Attainment Outcomes). Specialist expertise in the assessment of skills. Associated with SATROSPHERE. Designated Project Manager Mrs Jackie Heaton. Institution or organisation designated as budget holder - University of Aberdeen. Partners Aberdeenshire, City of Aberdeen, East Dunbartonshire, Moray Councils.

### **ISE 5-14 Team at SSERC and SAPS**

Facilitating the setting up of consortia. Central support and monitoring. Development of additional exemplars by adapting and enhancing a selection of existing practical protocols. Setting up 10-16 Summer Schools. Negotiations for setting up additional consortia (one, or possibly two, more).

### **South East Earth and Space Consortium (SEES)**

Access to specialist facilities at the Royal Observatory Edinburgh and at Our Dynamic Earth. Specialist expertise in Earth Sciences. Designated Project Manager Dan Hillier. Institution or organisation designated as budget holder - Royal Observatory (Edinburgh) Trust. Partners - East, Mid- and West Lothian and Edinburgh with Scottish Borders.

**Figure 1 - summary of any specialist interests within the ISE 5-14 CPD consortia together with details of fundholders and designated project management contacts.**

## The consortia

At the time of writing three consortia or centres of CPD activity are operative. In alphabetical order these are:

- **NESSC** - the North East Scotland Science Consortium
- **SEES** - the South East Earth and Space Consortium
- **TSEC** - the Tayside Science Education Consortium

Negotiations and discussions continue on a proposed fourth consortium probably to be known as **WSSEC** - the West of Scotland Science Education Consortium. Active discussions on other possible arrangements with groupings of 'rural and remote' areas are also underway.

## Consortia partners

In keeping with the original requirements for funding, each of the consortia features not only cross-authority collaboration but also involves cross-sectoral working between practitioners in primary and secondary schools.

The partners and authorities involved with the various consortia are summarised in Figure 1 on the front page.

## Consortia specialisms

Some consortia are concentrating on specific areas (usually by Attainment Outcome) of the 5-14 science curriculum. These special interests tend to be tied to particular strengths in the *locale* or to those of certain of the consortium partners.

Note, however, that the major focus of all of these groupings is on learning and teaching approaches rather than on specific areas of content *per se*. This information as to specialisms is also summarised in Figure 1.

## Consortia contacts

Contact details for the various consortia project managers and team members are also provided in Table 1.

The names, contact details and, where appropriate, responsibilities of individual officers and others active within each consortium are also shown.

For reference the roles of various officers in SSERC, SAPS (Science and Plants for Schools) and within Learning and Teaching Scotland are listed in Table 2.

Consortium	Designated Manager	Contact Details	Project Team
<b>NESSC</b>	University of Aberdeen  Mrs Jackie Heaton	University of Aberdeen School of Education Hilton Place, Aberdeen AB24 4FA T: 01224 274691  j.a.heaton@abdn.ac.uk	Christine Fraser, University of Aberdeen T:01224 274839 E: c.a.fraser@abdn.ac.uk  Peter Gorrie, East Dunbartonshire Council T: 0141 578 8930 E: peter.gorrie@eastdunbarton.gov.uk  Anne King, Aberdeen City Council T: 01224 346027 E: AnKing@education.aberdeen.net.uk  Fiona Mitchell, Aberdeenshire Council, T: 01569 766960 Fiona.Mitchell@aberdeenshire.gov.uk
<b>SEES</b>	Royal Observatory (Edinburgh) Trust  Mr Dan Hillier	Royal Observatory Edinburgh Blackford Hill Edinburgh EH9 3HJ T: 0131 668 8348 E: djh@roe.ac.uk	Diane McMichael, Project Co-ordinator, E: dbm@roe.ac.uk  Carole MacLaren, National Trainer, E: crm@roe.ac.uk  Ron Clarke, National Trainer, E: rhc@roe.ac.uk
<b>TSEC</b>	Angus Council  Mr Peter Duguid Senior Adviser	Educational Development Service Bruce House Arbroath DD1 3TE T: 01241 435058 E: Duguidp@angus.gov.uk	Mary Logue, Angus Council E: LogueMA@angus.gov.uk T: 01241 435102 David Johnston, Dundee City Council E: david.johnston@dundeecity.gov.uk T: 01382 462857 Fran Revell, Perth & Kinross Council E: fmrevell@pkc.gov.uk T: 01738 477868

**TABLE 1** Contact details for consortia, designated project managers and other team members.

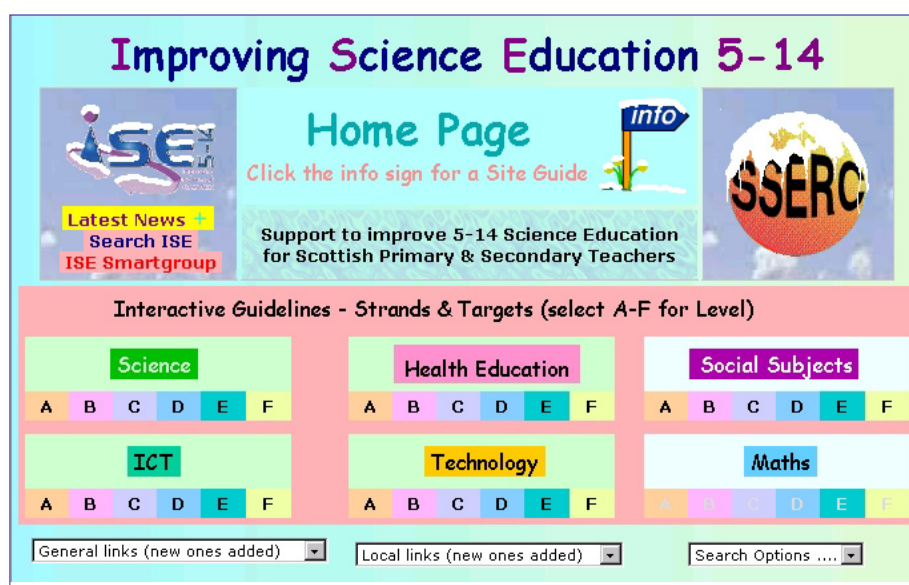
Organisation or Agency	Officer	Role and responsibilities	Contact Details
SSERC	Ian Birrell	Website design and development.	Ian.Birrell@sserc.org.uk
SSERC	John Richardson	CPD through practical activities and website project management.	John@sserc.org.uk
SSERC and SAPS Scotland	Kath Crawford	Support and training for development of practical activities particularly in plant biology, microbiology and biotechnology aspects.	Kath@sserc.org.uk
SSERC and SAPS Scotland	Anne Adams	Technical support as above	A.Adams@sserc.org.uk
SAPS Scotland (Quest Lab Dollar)	Marjorie Smith and Pam Ferguson	Development of cell biology materials for 5-14 (Astra Zeneca supported project) and 10-16 Summer School.	masmith@dollaracademy.org.uk pferguson@dollaracademy.org.uk
Learning and Teaching Scotland	Janette Kean and Neil Taylor	Innovative assessment for learning, and homework projects.	J.Kean@LTScotland.org.uk N.Taylor@LTScotland.org.uk

**TABLE 2** Contact details for relevant SAPS, SSERC and LT Scotland members engaged in ISE 5-14.

### ISE website

The site continues to grow as content is developed and made available to the SSERC team. Of particular interest to developers, and others who need an overview of 5-14 Environmental Studies, are web page versions of sections of the Guide for Teachers and Managers other than science. These allow for relatively easy cross-referral to the other components such as ICT, Technology and the Social subjects. See figure 2 below.

Similarly, Ian Birrell has built up a spreadsheet which will allow for cross-referencing of different schemes of work or planning frameworks as well as providing links with third party materials such as Concept Cartoons and CASE materials etc. We are grateful to Bill Fleming and the Renfrewshire team for allowing us to access the original work which provides such cross referencing facilities.(See figure 3 overleaf).



**Figure 2** Linkage of the science components of Environmental Studies to other elements.


	A	B	C	D	E	F	G	H	I	
1	<b>Renfrew Science Pack</b>						<b>Science Guidelines Checklist</b>			
2	P/S yr	Group No., Name, Target Menu	Renfr. Assess	Target	Attainment Outcome	Strand	done ?			
84	P 7	21	<a href="#">Space &amp; the Solar System</a>	AP6/1	<a href="#">ES-C1.1</a>	Earth & Space	The Earth in space	N		
85	P 7	21	<a href="#">Space &amp; the Solar System</a>	AP6/2	<a href="#">ES-D1.1</a>	Earth & Space	The Earth in space	N		
86	P 7	21	<a href="#">Space &amp; the Solar System</a>	AP6/4	<a href="#">ES-C1.2</a>	Earth & Space	The Earth in space	N		
87	P 7	21	<a href="#">Space &amp; the Solar System</a>	AP7/1	<a href="#">ES-D1.2</a>	Earth & Space	The Earth in space	N		
88	P 7	21	<a href="#">Space &amp; the Solar System</a>	AP7/2	<a href="#">ES-E1.1</a>	Earth & Space	The Earth in space	N		
89	P 7	21	<a href="#">Space &amp; the Solar System</a>	AP7/3	<a href="#">ES-E1.2</a>	Earth & Space	The Earth in space	N		
90	P 7	21	<a href="#">Space &amp; the Solar System</a>	AP7/4	<a href="#">ES-F1.1</a>	Earth & Space	The Earth in space	N		
91	P 7	21	<a href="#">Space &amp; the Solar System</a>	AP6/3	<a href="#">ES-D2.5</a>	Earth & Space	Materials from the Earth	N		
92	P 7	22	<a href="#">Energy sources</a>	AP7/9	<a href="#">EF-D2.3</a>	Energy & Forces	Conversion & transfer of energy	N		
93	P 7	22	<a href="#">Energy sources</a>	AP7/10	<a href="#">EF-E2.3</a>	Energy & Forces	Conversion & transfer of energy	N		
94	P 7	22	<a href="#">Energy sources</a>	AP7/11	<a href="#">EF-E2.1</a>	Energy & Forces	Conversion & transfer of energy	N		
95	P 7	22	<a href="#">Energy sources</a>	AP7/12	<a href="#">EF-E2.2</a>	Energy & Forces	Conversion & transfer of energy	N		
96	P 7	23	<a href="#">Electric circuits</a>	AP6/9	<a href="#">EF-D1.5</a>	Energy & Forces	Properties & Uses of Energy	N		
97	P 7	23	<a href="#">Electric circuits</a>	AP6/10	<a href="#">EF-D1.6</a>	Energy & Forces	Properties & Uses of Energy	N		
98	P 7	23	<a href="#">Electric circuits</a>	AP6/11	<a href="#">EF-D2.1</a>	Energy & Forces	Conversion & transfer of energy	N		
99	P 7	23	<a href="#">Electric circuits</a>	AP6/12	<a href="#">EF-D2.2</a>	Energy & Forces	Conversion & transfer of energy	N		

Figure 3 Spreadsheet (Excel) linking science targets to schemes of work and resources etc.

## SAPS'n'SSERC

As well as assisting in the business of more general support for science 5-14 CPD, SAPS (Science and Plants for Schools) Scotland has been engaged with SSERC in developing novel materials for microbiology and biotechnology at levels E and F. These have been trialled extensively in practical workshop days and have been well received. Trialled drafts of the workshop materials have been posted on the SSERC ISE 5-14 website.



Figure 4 The World of Plants" - image, © and courtesy of the Royal Botanic Garden Edinburgh.

## Plant Science Day

The SAPS team based in Cambridge have also been reviewing earlier materials intended to support plant science and related topics at the primary level. A primary writing group has been convened with which ISE 5-14 staff based both at SSERC and within Learning and Teaching Scotland have been liaising closely. These SAPS materials have been mapped to the 5-14 science guidelines.

A number of local authority based developers are to be introduced to these resources, as potential materials around which to base innovative investigative work. To that end, a 5-14 Plant Science day is scheduled for the 16th of January 2004 within Moray House Institute. Tutors will be provided by SAPS, SSERC, LTS and the Royal Botanic Garden Edinburgh.

## Applying your Science

Last session Astra Zeneca (the company, not the related educational trust) supported the SAPS Scotland Biotechnology Education Project team at Dollar Academy in the production of a resource entitled: "Applying your Science: Lungs, Pollen, Asthma and Allergies". These resources are now available on the SAPS website and should soon also be available on the ISE 5-14 site. The team has begun work on a second set of resources on cell biology and cancer.