

Towards inspirational outdoor science for all...



Improving Practical Work in science

■ Justin Dillon

...the work of the ASE's Outdoor Science Working Group

In November 2006, the Department for Education and Schools launched a Manifesto for Learning Outside the Classroom. The Manifesto states that all children educated in England should gain direct experience of learning in different contexts. The ASE's response to the Manifesto has been led by the Outdoor Science Working Group. The group is made up of representatives from the ASE, the British Ecological Society, the Field Studies Council, Science and Plants for Schools, King's College London and the Universities of Birmingham, Keele and Southampton.

With the aid of a generous grant from the Nuffield Foundation, the group has organised a series of five invitational seminars focusing on the theme of outdoor science for all. Specifically, the seminar addressed the following questions:

- What have been the successes, failures and resulting impacts of recent 'outdoor learning' initiatives on teaching and learning, particularly in STEM subjects?
- How do we identify and build on existing good practice in terms of learning science outside the classroom?

■ What changes in curriculum, assessment, pedagogy, training and supporting resources are needed to enable teachers of STEM subjects to work together beyond the classroom?

■ What can we learn from research, in the UK and elsewhere, about effective teaching beyond the classroom and how can we implement transferable solutions into mainstream STEM education?

The questions were addressed through a series of themes: initial teacher education; CPD; policy; assessment and examinations; and learning in informal contexts. The seminars were held in a variety of venues around the country, including At-Bristol, Cambridge University Botanic Garden and the National Science Learning Centre in York.

The seminars examined opportunities for cross-curricular work involving STEM subjects and other aspects of the curriculum, particularly in the light of the new GCSE criteria. Attendees at the seminars included teachers and educators in the formal and informal sectors, representatives of learned societies and non-governmental organisations, HMI, CPD providers and academics.

The seminars involved a mixture of short inputs as well as two sets of discussions. For initial information

about the seminars, please visit www.gettingpractical.org.uk/OutdoorScience

The conversations that took place during the seminars were recorded and formed the basis of a draft summary with recommendations that should be available in the autumn. This draft report will be circulated widely for consultation and the final report will be launched at the ASE Annual Conference in Reading in January 2011.

Professor Justin Dillon is Professor of Science and Environmental Education at King's College London and sits on the Advisory Group for the *Getting Practical* Programme.

The ASE's Outdoor Science Working Group is part of the ASE's contribution to the *Getting Practical: Improving Practical Work in Science* Programme (www.gettingpractical.org.uk), which is aimed at improving the quality and effectiveness of practical work available to all school students through free and local professional development for teachers of science and their support staff.

🔗 Professor Justin Dillon (King's College London) presented his initial work on benchmarking effective practical work in schools. This work is looking to identify key indicators for benchmarking practical work, and attempting to quantify what facilitates effective practical work in a sample of schools with an excellent track record in practical science.

The keynote lecture for the Conference was delivered by Professor Sir John Holman and we were treated to a demonstration lecture based upon the results of a recent online survey of

views on practical work carried out by the NSLC.

The day certainly inspired stimulating conversation about how we can proceed with the *Getting Practical* Programme in the next year and what its legacy should be.

Keep an eye on our 'Local CPD Events' page of the website for information on when *Getting Practical* training is available near you. *Getting Practical* is available to teachers, technicians and HLTAs from secondary and primary schools and post-16 FE colleges and is offered free of charge.



Getting Practical

Dr Georgina Westbrook is the Programme Manager: Communications for the *Getting Practical – Improving Practical Work in Science* Programme