

## **ASE's Outdoor Science Working Group**

### **Our Mission statement and four aims:**

To encourage and support outdoor science education, as an essential component of science education, by seeking more regular and high quality experiences in a wide range of urban and rural learning environments.

- To make outdoor science education a valued teaching and learning contribution to the science curriculum
- To engage more science teachers and trainee teachers in delivering high quality outdoor science as part of the science curriculum; and to have their contributions recognised
- To encourage head teachers, senior management and governors to facilitate regular outdoor science educational opportunities
- To gain further policy level support for outdoor science education in schools.

### **Our working group consists of the following members:**

David Cumbers is a secondary physics teacher at Kingsbury High School, Brent. He is a great believer in extending learning outside the classroom, placing a high value on the social as well as curricular benefits. He believes in stretching the boundaries of science education and is enjoying the challenge of the new KS4 curriculum and the opportunities it provides. Current projects include outreach work with feeder primaries, and cross-phase activities to promote science in the wider community.

Marianne Cutler is Director of Curriculum Development at ASE. Outdoor learning experiences are encouraged through all the topics covered in ASE's Science Across the World programme, and most recently in the suite of plants topics developed as part of the Gardens for Life project with DfID funding. As a biologist and ecologist Marianne is particularly interested to explore and promote how all the sciences can make best use of the outdoor environment.

Karen Devine was a secondary science teacher and currently works as the education officer for the British Ecological Society. Her work involves sharing good practice through the teaching ecology newsletter from primary to undergraduate education and supporting teachers in the development of outdoor education opportunities within biology curricula.

Justin Dillon is a lecturer in science education at King's College London and a member of the Centre for Informal Learning and Schools.

Justin has researched and published widely in the area of environmental education and is currently carrying out research for the DfES and others into training during initial teacher education courses in using the outdoor classroom. He is Chair of the London Wildlife Trust and of the London Environmental Education Forum.

Melissa Glackin is the London Outdoor Science Officer, working for the Field Studies Council in partnership with Science Learning Centre London in a project that is creating site specific resources for schools in the inner city to teach some KS4 science outside.

Marcus Grace teaches environmental education and co-ordinates the science PGCE at the University of Southampton, and as Director of the Science Learning Centre South East he is keen to help develop CPD courses in outdoor science education. He has a particular interest in helping secondary school pupils to develop 'green skills' for careers in the environmental sciences, horticulture, agriculture, etc.

Sam Hillcox is Director of Studies, Discover Ltd. She is currently based at the Eagles Nest field studies centre in France, and has worked in field studies in the UK and overseas since 1993. A trained ecologist and secondary science teacher, Sam combines a lively interest in professional ecology with an imaginative approach to teaching science in the outdoor classroom. During research for an MSc in 2003, Sam highlighted a paucity of students entering the ecological profession with good field skills, and joins this group with a keen interest in raising the profile of ecology in science, as a valuable and sought-after vocational subject. Sam also sits on the Executive Committee of the National Association of Field Studies Officers, representing the views and ideas of this professional body within this working group.

Chris King is Professor of Earth Science Education and Scientific Director of the Science Learning Centre West Midlands at Keele University. Chris appreciates the power and potential of outdoor education through his experience of leading lower school earth science fieldwork, A-level geology field excursions, fieldwork for PGCE students of biology, chemistry and physics and ASE Conference and Science Learning Centre 'through the window' activities.

Nick Laphorn is Head of Centre of the Field Studies Council's Juniper Hall Field Centre. He is a physical geographer by training but also classifies himself as a 'pseudo-ecologist'. Nick is currently the Secretary to the Geographical Association's Field Studies Working Group and an examiner in A level geographical fieldwork skills.

Neil Rutledge currently lectures on undergraduate and post graduate primary initial teacher education courses at St. Martin's College, Carlisle. He has worked in primary science education in Northern Ireland, Scotland and England and has always had a keen interest in science education beyond the classroom. He is a firm believer in collaborative, community-based approaches to education and has developed materials and run projects with a wide variety of museums and environmental organisations. Projects have ranged from the highly serious, such as surveying dog whelks to trace the effects of marine pollution, to the rather more light hearted such as teaching Cumbrian school children to 'speak' barnacle goose. Another key strand in Neil's approach to science education is to utilise cross-curricular contexts. His original background in archaeology has been very helpful in this respect and so it's not surprising to find his science learners engaging in activities from building replica siege engines at local castles to butchering and cooking salmon in their school grounds using Neolithic techniques.

Jane Thompson is the Teaching and Learning Consultant (Science) at Bolton. Jane was formerly a head of science and is interested in physics in the environment and has many years experience of taking KS3 and 4 pupils on cross curricular science field trips.

Steve Tilling is Director of Communications at the Field Studies Council. An ecologist by training, he has fieldwork teaching and training experience in many countries and has written and edited practical resources to support this work. He believes that practical hands-on experience outdoors should be at the heart of all science education.