

FREE Workshops Offered by the Earth Science Education Unit (ESEU)

Earth Science Education Unit provide free Earth Science INSET (in-service training) workshops to teachers and PGCE students all over the country. The workshops are funded by Oil and Gas UK which means the only costs to you are the travelling expenses of the Facilitator at 40p per mile plus other minor expenses such as photocopying etc. As our Facilitators are based all over the country, we usually manage to find one near to you in order to keep the travelling expense to a minimum.

The workshops are activity-based, stress the importance of enquiry in science, address pedagogical issues as well as subject content and have been based on materials and strategies developed initially, and supported by the Earth Science Teachers' Association (ESTA). All teachers who attend a workshop are given a free CD which all of the materials from the workshop.

Participants give very enthusiastic feedback to the workshops and we are really keen to make sure that as many PGCE students and teachers as possible benefit. We usually expect between 5 and 25 participants for each workshop, however we are happy to come to some arrangement to accommodate more.

Details of the various Primary and Secondary workshops

ESEU's Primary workshops, **Key Stage 2/3** include:

How the Earth Works in Your Classroom (Earth science for Years 5/6)

Bring the world into your classroom through a wide range of Earth science practical and thinking activities that cover aspects of both Science and Geography Programmes of Study and Schemes of Work for the Years 5 and 6.

See the 'world in a grain of sand' as you consider different practical activities that teach about erosion, transportation and deposition and help you to pan for gold! Use sand and water to show how rivers work and coasts can crumble - see the grains move, see the bank's collapse, think where the safest place might be.

Clean up your pond water, then create your own mini water cycle in the classroom before taking the ideas back out into the 'real world'.

The Rock and Soil Circus Comes to Town (Earth science for Years 3/4)

Join our circus and explore the world! Experience how KS1 pupils might tackle an Earth-related activity. Then tackle the rocks and soils part of the National Curriculum the scientific way. Test the rocks, test the soils -find out what they can tell us about the Earth we live on. Try different interactive and hands on practical activities that spotlight rocks and soils as you may never have seen them before -and enjoy the thrills and spills of 'the rock and soil circus' in your classroom.

Spot that Rock: sorting rocks the scientific way (Earth science for Years 3/4)

'Spot that rock' leads step by step you through a series of investigative practical activities that will allow you to teach children to investigate and sort most rocks from first principles (and distinguish them yourself). These methods can then be used on a series of unknown rocks. The activities not only explain why rocks have the characteristics that they do, but also what this means in the development of the local and UK landscape and in the uses of rocks.

So, these simple but widely applicable methods can help you not only to investigate and understand major rock groups, but also to explain the landscapes of the world!

The Secondary **Key Stage 3** workshops include:

The Dynamic Rock Cycle

This 90 minute workshop shows how the rock cycle may be used to organise schemes of work for the geological sections of the National Curriculum for Science at KS3 and how the major geological processes may be taught through a range of practical and investigative lab activities.

Spot that Rock

This 60 minute workshop, aimed primarily at Key Stage 3, introduces activities relating to rock identification and interpretation, in line with National Curriculum requirements.

Earth Science Out of Doors

Earth Science out of doors consists of several different activities which are suitable for both Key Stages 3 and 4. Activities can take place around the school (30 minutes), or can involve a visit to a local cemetery or town centre (at least 60 minutes). Workshops include:

Earth Science Around Your School Grounds

An Earth Science investigation around your school grounds, studying building materials and how they are being weathered and establishing geological principles from the building and its surroundings.

Will My Gravestone Last?

How to use your local churchyard (or town centre) in teaching Earth Science.

Any Quarry Guide

A guide for teachers wishing to lead their own visit to a quarry or small local exposure of rocks, (ESEU facilitators would be happy to help you realise the potential of such a site if you allow time for it whilst they are delivering ESEU INSET).

The **Key Stage 4** workshops are targeted at the Earth-related parts of the WJEC, AQA, CCEA, EDEXCEL, OCR Gateway and OCR 21st Century science specifications. They include:

The Earth & Plate Tectonics

(AQA Science, CCEA Science, OCR Gateway Science, OCR 21st Century Science, WJEC Science)

How do you teach plate tectonics and the structure of the Earth in an interactive way? What are the scientific explanations for a dynamic Earth on a global scale? How can you use the “Wegener Story” to exemplify “How Science Works”? This workshop has been devised to cover the requirements of each of the Awarding Bodies. It consists of a major presentation, interspersed with a range of practical activities.

Life, the Atmosphere & Everything

(AQA Science, CCEA Science, OCR Gateway Science, OCR 21st Century Science, WJEC Science)

This workshop has been devised to cover the requirements of each of the Awarding Bodies, to cover much of the Earth science, other than plate tectonics. It focuses on the Earth science often linked with the biology, chemistry and physics parts of specifications, ranging from the evolution of the atmosphere to materials from the Earth. It consists of a mixture of practical activities and mini-presentations.

If you would like to find out more about the work that we do, including free resources for schools, then please take a look at our web site www.earthscienceeducation.com.

You can have one or more workshops on the same day, we are also happy to come back to do further workshops on more than one date. If you are unsure of which workshop you would like, the Facilitator can also help you to decide which of the workshops are most suitable for your needs.

As well as our Primary and Secondary workshops, we now offer Earth Physics workshops which are mainly aimed at the 14 to 19 age group. Please contact us should you like further information.

If you have any questions, or would like to book a workshop, please don't hesitate to contact Hazel Benson.

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