

OF EARTH AND WATER (II)

LOOK UNDER YOUR FEET!

Dr Stephen Hallett, Principal Research Scientist, National Soil Resources Institute

Some fascinating facts about Soil:

Soil! It's one of the world's three most important natural resources, alongside Air and Water. It is an amazingly versatile material and though it is always somewhere under our feet, its wonderful properties are only appreciated by a few. Perhaps first and foremost, soil is the pillar of our food production. The vast majority of our food is produced through the soil medium and with the world's population rapidly increasing, this precious relationship needs to be nurtured more than ever. Soil is at the heart of our wonderfully diverse flora worldwide: it is why many plants grow where they do, and can affect the colour of some of the beautiful flowers that grow. It has one of the best kept secrets in the universe - *there are more organisms in a spoonful of healthy, good quality soil than there are people in the whole world!* But because there is much to learn about these organisms and their role, soil is described as the last biotic frontier. Soil filters most of the rainwater reaching the earth's surface; water we all go on to drink. Soil is also the foundation for most of our houses and built infrastructure and importantly it helps to preserve many of our archaeological relicts.

Increasing our knowledge

Soil also plays a key role in the story of climate change. We tend to think of atmospheric carbon as only coming from chimneys and exhaust pipes, but did you know that soil contains more carbon than the atmosphere and plant kingdoms put together? Hence soil management is now seen as a key factor in regulating climate change. With our increasing interest and respect for the environment, soil-related issues are stimulating more interest among various sectors of the world community, governments, NGOs and academia, alongside the long-standing respect for soil held by the farming and gardening community. To date, however, soil has still not made the impact it deserves in the School curricula.

Enhancing the Curriculum

The importance of soils has been recognised in

some parts of government and DEFRA have now sponsored the development of a web-portal specifically for schools at www.Soil-Net.com. Developed by Cranfield University's National Soil Resources Institute (NSRI) in association with Norwich School of Art and Design (NSAD), Soil-Net is a free website, launched in January 2007 at the Association of Science Education South East Annual Conference, for students from 5-16 years and their teachers.



Student enjoys a 'Hands on Soil' experience with Soil-Net at Cranfield University

New resources for Schools

With an eye-catching introductory section mainly for 5-11 years, enhanced by interactive graphics and animation, Soil-Net contains major sections on soils as part of the major *global cycles* (such as the carbon and hydrological cycles), descriptions and illustration of the *main functions* of soils, examples of *main soil types* of the United Kingdom and other parts of the world, the main threats such as desertification, and concerns for the future. Supporting resources and

extra material to help teachers and interest the children include over 100 freely-downloadable pages of activities and exercises, quizzes, games, 3-D soil walks, special features about school gardens, and interactive postcode-driven maps showing information about the soils in the area around your school.

Feedback from users of Soil-Net:

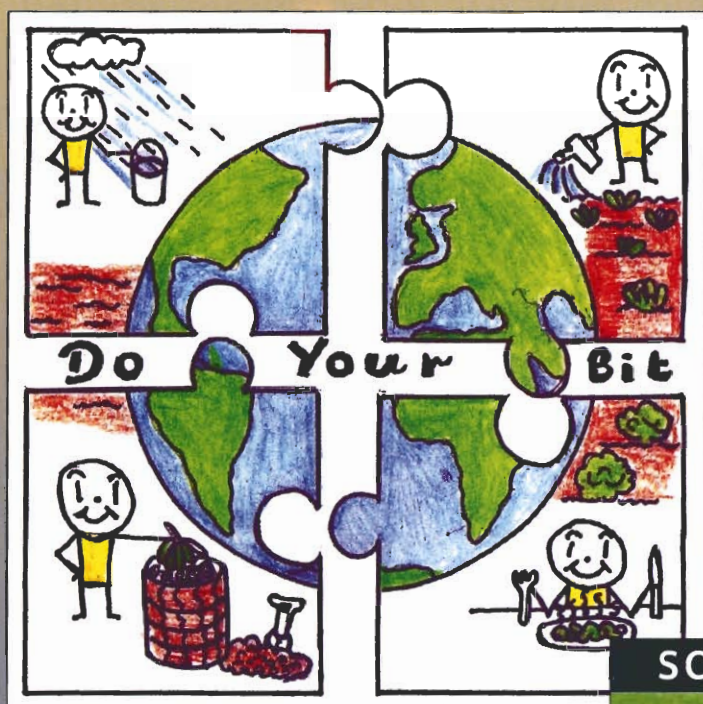
'At last, a really great website on soil'; 'I have been looking for soil pictures for ages and this website has heaps'; 'It's a well-suited source of information for projects such as Eco-Schools'; 'Provided a very good framework for my lesson on soils. Thank you'; 'I have a degree in agriculture and am visiting my local school - I shall recommend this'; 'I think this will inspire parents to help create an outdoor 'crafty' area'; 'What a brilliant website - I am a learning support advisor at Birmingham University and will recommend it to my students'; 'You have done a first rate job here - feel free to extend to A-level'.

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- Cumbrian school's eco-visit to Japan

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Scouts Centenary Year: 'Cubs in Nature' by Henricus Peters

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