

# Wanted:

## Teachers interested in the Environment



ESPERE – ENC  
Environmental Science Published for Everyone Round the  
Earth  
Educational Network on Climate.  
[www.espere.net](http://www.espere.net)

ESPERE-ENC will make our current knowledge on the whole climate system available on the internet in a form which is easily understood. The initial stage of the project will produce a climate encyclopaedia made up of a series of teaching units and worksheets for schools. The subjects include atmospheric processes, oceanography, weather, aerosols and clouds, the urban climate, how humans have influenced climate and how changes in climate are likely to affect agriculture. The project's second stage will test the teaching units in schools. The School of Environmental Sciences at UEA is producing the oceanography section.

If you would like more information on ESPERE or would be interested in testing the oceanography part please contact Lucinda Spokes...

l.spokes@uea.ac.uk  
01603 593394  
School of Environmental Sciences  
University of East Anglia, Norwich, NR4 7TJ.

## New People, New Places

For several months now, we have been fortunate to have the assistance of Pauline Burton as a volunteer. Pauline – a former science teacher – is working with Sheila McCarter, helping with the maintenance of existing kits and the preparation of new ones.

With the arrival of new coordinator Phil Smith (who is 6'4"!), we have outgrown our space within the Science Communication and Education offices at the JIC and have moved into more spacious offices and lab space in JIC's Building 35.



Pauline is pictured with a former occupant of the old lab (now a TSN kit).

## Share your Ideas

TSNNews is very much designed to keep members informed about what's happening in TSN – not just news & events, but ideas and the sharing of good practice. Let us know what you've been up to, describe activities that have worked and that others may find useful and send them, preferably with pictures, to Phil Smith for inclusion in future newsletters.

## Police Checks - what it means to TSN

Volunteers who regularly visit schools are sometimes required to undergo a police check.

At a recent Steering Group meeting we decided that schools requiring their TSN scientist to have a police check should make their own arrangements. TSN partnerships vary in the way they work and the onus is upon the school to decide if it is necessary for their scientist to be police-checked.

The procedure involves completing a

disclosure application form (issued by the Criminal Records Bureau and provided by the school secretary), giving the name of a referee and 3 documents to verify the applicant's identity. We recommend that TSN scientists describe their position as 'School-linked scientist—voluntary'. We hope all TSN scientists will co-operate with their schools in making these arrangements and believe this is the easiest way to administer the procedure. A letter to all teachers and their heads is enclosed with this newsletter.

## New Members - Welcome

### Teachers

Mrs. Maggie Lefever, Neatishead Primary School  
Miss Stacey Coleman, Heather Avenue First School  
Mrs. Karen Barker, Kenninghall Primary School  
Ms. D. McGee, Rockland St Mary Primary School  
Mrs. Jane Marchant, Winfarthing Primary School  
Mr. Chris Derrett, Reepham High School  
Mrs. Vicky Redgwell, Banham Primary School  
Mrs. Sarah Coppard, Attleborough Junior School  
Mrs. H. Brockman, Thompson Primary School

Mr. Piers Ranger, Earlham (County) High School  
Mrs. Lesley Deane, Earlham (County) High School  
Mrs. Jeannine Whiffen, Norwich High School  
Miss Gillian Bee, Falcon Middle School  
Mr. John Reading, Thorpe Hamlet Middle School

### Scientists

Dr. Elodie Morton, Institute of Food Research  
Dr. Preeti Dahiya, John Innes Centre  
Ms. Barbara Woodward, John Innes Centre

Mrs. Helen Simmons, The Open University  
Dr. Birgit Teucher, Institute of Food Research  
Dr. Joanne Doleman (née Christer), Institute of Food Research  
Miss Rose Chambers, ENV, UEA  
Mrs Vanessa Tarling, NRP Science, UEA

## Teacher Scientist Network

Coordinators: Frank Chennell & Phil Smith, Chairman: Prof. Keith Roberts  
John Innes Centre, Norwich Research Park, Colney, Norwich, NR4 7UH  
Telephone +44(0)1603 450304, Fax +44(0)1603 450015, Email [ts.network@bbsrc.ac.uk](mailto:ts.network@bbsrc.ac.uk), [www.tsn.org.uk](http://www.tsn.org.uk)



## TSN's new Coordinator—Phil Smith

Phil hails from 'just over the river from Liverpool' (the Wirral to be precise), a pretty 60 sq. miles peninsular, famous for such diverse things as shipbuilding, Tranmere Rovers and the musical talents of OMD, oh and the longest promenade in Britain!

A comprehensive co-ed education, with 'O' and 'A' levels led Phil to the University of Newcastle-upon-Tyne to study Agricultural Biology, a Biology-based course with a slice of Chemistry. So what about physics? "... dropped that as soon as I'd struggled to get my 'O'-level. Sorry!" Graduating in 1990 with a 2(i) he moved to the John Innes Centre for a 3-year job contract ... thirteen years later, he is still in his adopted county, has completed his PhD and spent the last four years developing his enthusiasm and experience of classroom science as a partnered scientist in TSN (with Mrs Maxine

Woods). Scientifically, Phil is trained as a plant pathologist, studying fungal diseases of crop plants, at the plant, cellular, and molecular level, a background that contributed to his development of a micro-organisms course for the Primary Science Workshops. His partnership began at Heacham Middle School and has headed out of the county when Maxine moved to Essex. "I must be the only partnered scientist who heads off to school with a sleeping bag in the boot!" commented Phil. "Being in the classroom has taught me a lot about education and I am still learning – planning whole science days for year 5/6 has been eye-opening! I am indebted to Maxine for all her advice over the years. We will continue with our successful partnership but I am thrilled to have the opportunity of succeeding Frank, in what I truly believe is my dream job!"

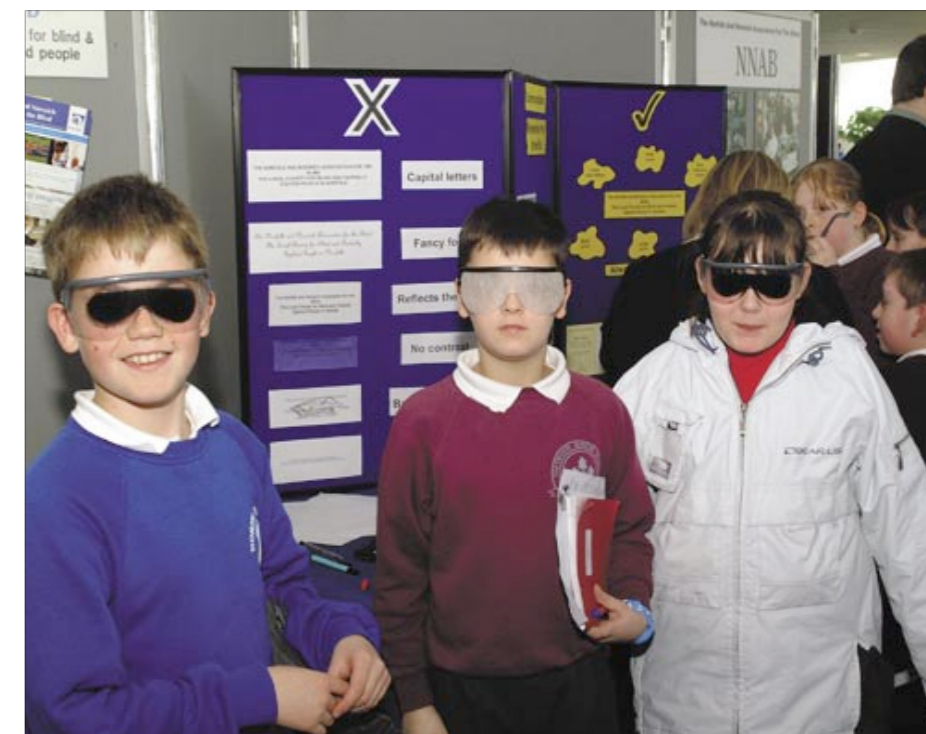


## Science Week 2003: 'Getting the Message'

Our fourth production in the Secrets and Science of Survival series took place in March. Nearly 4,000 children and their teachers visited the John Innes Centre where they saw a multimedia presentation by Mike Linley and interactive displays and demonstrations. From singing whales to grinning chimpanzees, from super highways of ants to colour-changing cuttle fish, children learned how organisms communicate using light, smell and sound. They saw how humans develop technology to extend the ways in which we communicate with one another. More pictures overleaf.

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# Science Week Scrap Book

more pictures...



## Retiring Coordinator

Frank Chennell has been our coordinator since TSN first began.

Frank was born in Kent although he can never remember if he is a *Kentish Man* or



a *Man of Kent*. Leaving school to train in electrical engineering, he later decided to become a teacher and then taught science in high schools for 27 years in the UK, Africa and Saudi Arabia. A few years after moving to Norfolk he joined the advisory team for secondary school science in the Norfolk Education Department. It was shortly after he left advisory work that I told him about a teacher-scientist partnership scheme I had seen in San Francisco. Frank was enthusiastic about the idea and so we got together a working group of local scientists and teachers and set up TSN in summer 1994. Frank has been the coordinator of TSN ever since.

Frank has seen TSN grow from its beginnings as a small network of teacher-scientist partners to its present size and range of activity—a hundred or so partnerships, master classes for high school teachers, science workshops for primary

school teachers, the Kit Club and large science week events for school children.

Is he looking forward to retirement? “Yes, but I will miss the work. I think it’s been the most exciting job I’ve ever had, and it’s certainly my longest; six years is the longest time I’ve ever stayed in one job before. I’ve really enjoyed being TSN’s coordinator, but I have lots of interests and things to do at home, so I leave with mixed feelings. But I’m happy that Phil is going to take over the TSN’s management—he has lots of energy, enthusiasm and an excellent working knowledge of how TSN works.”

We all wish Frank a long and happy retirement, but I will make sure he remains engaged so that we can all continue to see him and benefit from his accumulated wisdom! We all owe him a great debt for the time, energy and enthusiasm he has put into TSN. Thank you Frank!

Keith Roberts

## Spring Master Class

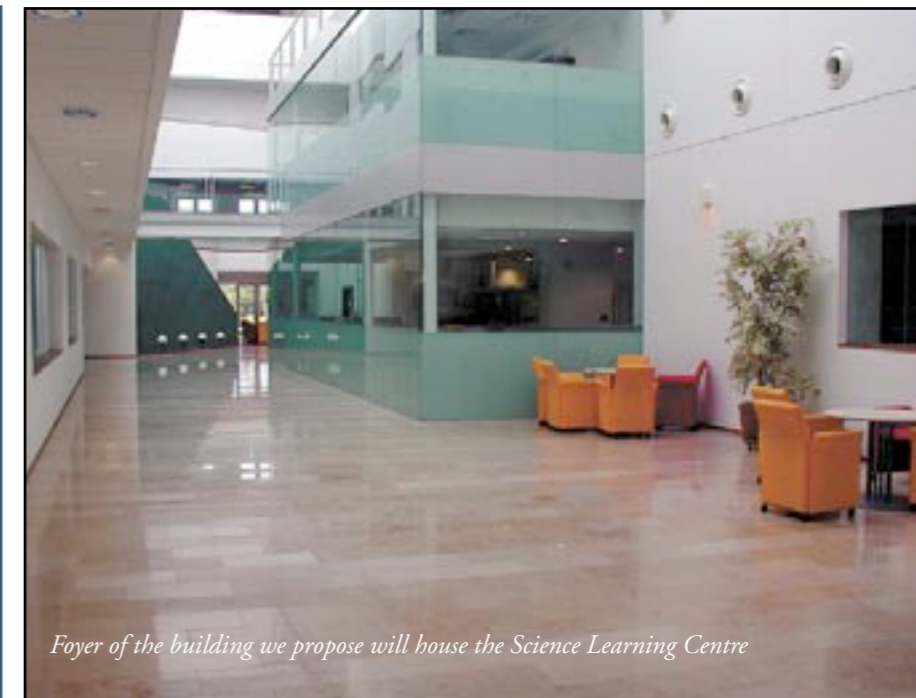
Our ninth one-day Masterclass for High School teachers, *Artificial Intelligence*, took place on May 2. Teachers spent the afternoon in practical work that related to the morning’s speakers, who were...

*Dr. Stephen Cox* (School of Information Systems, UEA) who spoke about recent advances in computer translation of human language. He outlined the exciting possibilities of linking this technology to speech recognition and synthesis technology, and the fascinating problems that remain to be solved in these areas;

*Prof. Kevin Warwick* (Dept. of Cybernetics; School of Systems Engineering, University of Reading) who discussed whether robot machines can really be intelligent. Many scientists have pointed to a way in which humans might be able to stay in control of machines, no matter how intelligent they are. But this requires a human/machine symbiosis with the two entities physically linked together;

*Dr. George Smith* (School of Information Systems, UEA) who spoke about the understanding of event sequences, artificial neural networks and data mining. Organisations store vast amounts of information and these ‘data warehouses’ can be ‘mined’ for interesting and useful patterns;

*Prof. Maggie Boden OBE* (Cognitive and Computing Sciences, Sussex University) who focussed on the two main thrusts of AI: on the one hand AI-researchers are ‘engineers’ who want to build a program, or a robot, to do useful things—on the other hand, there are AI-researchers who are interested in how the human mind works, and try to use AI to find out more about how we manage to do things.



Foyer of the building we propose will house the Science Learning Centre

## East of England Science Learning Centre

TSN is one of six members of a local consortium hoping to open the East of England Science Learning Centre in Norwich. The consortium also includes the the University of East Anglia, John Innes Centre, The Institute of Food Research, Norfolk LEA and the University of Essex. The Science Learning Centre, to be funded by the DfES, will provide novel sources of CPD for science teachers across the East of England (Norfolk, Suffolk, Essex, Herts, Beds & Cambridgeshire). Our bid includes many of the ideas that have worked so well in TSN activity such as Partnerships, the Kit Club, Masterclasses and Primary Science Workshops. If we are successful, the Science Learning

Centre will offer a range of CPD for teachers of science at all phases, science technicians and classroom assistants. There will also be a ‘TravelLab’: a fitted-out vehicle that can bring equipment and activities to schools in outlying areas, and new teacher-scientist partnerships and Kit Clubs in other counties of the region. TSN will be housed in the new centre with full access to all its facilities and will contribute to its programme. Importantly, TSN will continue to support school science in Norfolk in the way we have done for the past nine years. The pictures show the inside of the building on the JIC site that we hope will house the SLC and the view from one of the seminar rooms.

### TSN MASTER CLASS



University of East Anglia

May 2 2003  
9.00 AM – 4.30 PM

