

TSN News

...things are looking good.

This is what one scientist said about his partnership. Last term everyone in the network received a questionnaire to find out what they thought about their partnerships so far, and what network activity had taken place.

It seems that as well as the usual telephone contact for information, a great deal of activity has been involved with children in their classroom. And, after some initial nervousness on both sides, most said they enjoyed the experience and found it very useful. Here's what some teachers said:

'I think we work well together.'

'Excellent, wonderful work by partner, children enthusiastic.'

'Two very busy centres have found time to communicate and children have benefited.'

'It has been very enjoyable so far.'

'My partner has been so enthusiastic and brought to the lab exactly what I needed.'

'Our partnership has been very useful.'

'We are learning from each other.'

Scientists, too, seem pleased:

'Great fun.'

'...very worthwhile.'

'I found the kids very enthusiastic.'

'...felt at home right away.'

'I found this very rewarding...'

The considerable measure of success that most partnerships have is partly due to advice received from networks in U.S. Their experience of starting up networks was particularly useful when we were first beginning.

Some members, due to pressure of work, a change of job, or a house move, have left the network or have asked for a new partner, so there are at the moment some people waiting for new partnerships to be arranged.

You live and learn

TSN experience so far shows that careful matching of partners is most important; making sure that new members fully understand what it is that their partner wants, or is able to give, is crucial. We have also found that a personal one-to-one partnership is important; where a scientist has been 'shared' around several teachers in a school, difficulties have often arisen—mainly



Scientist working with school children

through teachers not belonging to the network misunderstanding the role of the scientist.

Perhaps the most interesting thing to have emerged in our first year is the huge variety of partnership activity—everything from the occasional telephone call, to regular planning meetings in the 'local', to classroom projects involving children and their parents.

Now into our second year the TSN seems soundly established here and is

growing. Inquiries from around the country continue to arrive and interested people and organisations outside the network all speak positively about us and feel that our first year has been a success. Not bad!

TSN off to US

(Well, maybe)

It has been suggested that a small delegation of TSN members go to US to see how teacher scientist networks operate there. We hope to be able to represent all school phases. The idea has been talked over with Bruce Alberts (President of National Academy of Sciences) who began the schemes in San Francisco several years ago. He will arrange the schedule of visits which is likely to include Washington and San Francisco. If we can manage to get sufficient funding in time, the trip will probably take place in the Spring. If you are interested in representing your phase please write to the TSN Steering Group before the end of November.



Annual Meeting

For your diary...

Next Year's Annual Meeting will be on Thursday 28 March 1996

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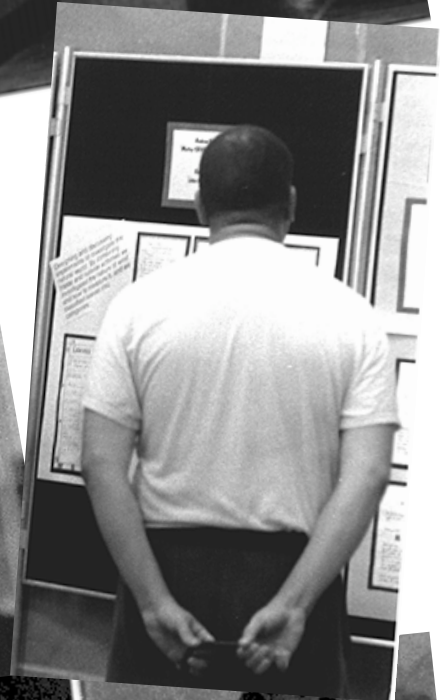
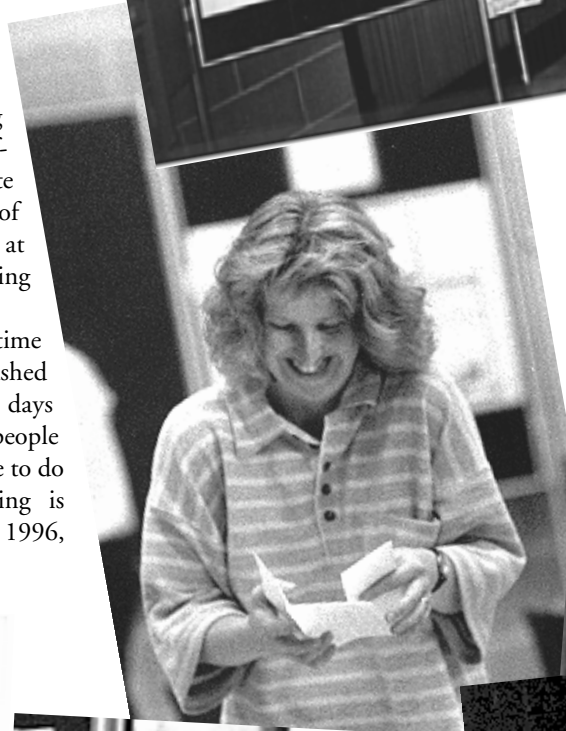
Annual Meeting 1995

All over Norfolk TSN partners are developing new investigations, and trying out new ideas. It seems sensible that all this experience should be shared around so that we don't keep re-inventing the wheel. This is the main purpose of the Annual Meeting—to give people the chance to share and discuss ideas that have worked well (and those that have not).

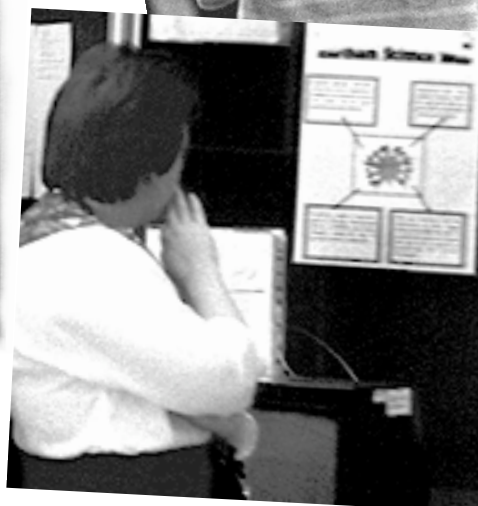
Our first Annual Meeting took place at the John Innes Centre on 6 July. About 40 teachers and scientists arrived, many bringing with them displays of partnership work that had taken place during the year. A very wide range of displays, from all phases of schools, showed class work done by children, photographs of outdoor projects, samples in jam-jars and even a video display. The range of activity was quite remarkable.

The first twenty minutes of the evening was spent arranging and pinning up displays, then, after a brief introduction and update on the network, the remainder of the meeting was spent looking at the displays, swapping ideas, eating and drinking.

July, it seems, was not a good time for the Annual Meeting; it clashed with a number of schools' open days and parents' evenings and many people who wanted to come were unable to do so. Next year's Annual Meeting is planned for Thursday 28 March 1996, which should be a better time.



*Avenue Road First School:
Pupil's drawing of their
scientist*



Bawdeswell Smarties

Denise Bristow

Bawdeswell Primary School

My new TSN partner, Dave Hart, a Research Scientist from the Institute of Food Research approached a school dinner table in the corner of the hall surrounded by pupils. They were gamely attempting science using various old bits and pieces liberated from a dusty drawer in the staff room.

Undaunted by this introduction, Dave Hart returned to work with a small group of bright pupils in years 3-6. 'Dave the Dude', dressed in motif laden T-shirt, baggy 'cool' trousers and the suggestion of a pigtail, formed an instant rapport with the pupils and dispelled any stereotypes of bespectacled, white-coated eccentric scientists.

The children chose to study the perception of taste and its link to colour. Initial research involved eating vast quantities of smarties. It was at this point that queues began to form to join the science group as first reserves.

The original group consisted of seven boys and girls from years 3-6. They designed a test using flavoured and coloured water and prepared to 'experiment' on the staff and pupils. The children were asked to identify the flavour of prepared and coded drinks. The flavours were strawberry, blackberry and tangerine but in usual and unusual colours. The children found that although the colour of the drink had a powerful influence on taste perceptions for some flavours, for others it didn't.

At the school fete, parents and visitors were also roped into the testing, (whilst Versatile Dave juggled and made animals from balloons!).

As the group worked alone with Dave an important feature was for them to explain to me and to the rest of the class what they had been doing and for them to present to us what they had found out. The enthusiasm and confidence displayed—particularly by the girls—was a reflection of Dave's abilities to communicate his own expertise and knowledge at the children's level. The group have now shared their knowledge of food flavourings and E-numbers with the class (beware of red Smarties!). We are now following up with the whole class in maths and science.

As the school's Special Needs Coordinator it is rewarding for me to see able pupils working on complex projects and on one occasion to hear an eight year old girl questioning 'her' scientist on the ethics of his research.

Thank you Dave and TSN from all of us at school; staff, pupils and parents for allowing us to benefit so much.

Science Challenge

Joanna Cheall

North Elmham Primary School

During the Spring term Year 5 and Year 6 children and their Scientist, Dr. Peter Shaw, embarked on the *Science Challenge*—an initiative which aims to help pupils enjoy science and develop their understanding. As well as supporting good science it is designed to recognise the children's achievements.*

With Peter on hand at each stage with advice and help, my class brainstormed suitable questions about forces; questions that could be answered by an appropriate investigation. Then small groups chose their investigation and, after planning and carrying it out, they presented their work by producing a wall poster and by making an oral presentation to 'their scientist'. Everyone received a certificate.

This turned out to be an excellent way of working with my scientist partner. The children had a real sense of

purpose, working with dedication and enthusiasm and were thrilled to receive a certificate at the end. Here's what the children thought about it:

I liked the science challenge because Mr. Shaw helped us and he told us what things we could change and test things at different angles (Lee Curson)

I enjoyed working with Mr. Shaw because it was very helpful for us to have him there so he could advise us on how we were doing the investigation. (Mark Jordan)

It was really good working with a real scientist because I had never even thought in my life that I would work with a professional. Mr. Shaw gave us lots of advice and tips which was very handy. I was a bit nervous that I would say something stupid and blow my chances of getting a science Challenge certificate. I was thrilled when I did get it though. (James Steele)

*Science Challenge Pack from:

Caroline McGrath, The Science Centre, The Runnymede Centre, Chertsey Road, Addlestone, Weybridge, Surrey, KT15 2EP, Tel:01932 564157 or 567243



New TSN Members

WELCOME

Ms Elaine Edwards, Manor field first School

Mr Peter Marshall, Production Leader at Dow Chemicals

Mr David Press, Senior Scientist at Dow Chemicals

Mr David Winstone, Operations Manager at Dow Chemicals

Mr Keith Beales, Instrument Project Engineer at Dow Chemicals

Dr David Hughs, Senior Research Scientist at IFR

Mr David Bint, Distribution Safety Officer at Dow Chemicals

Dr Arjan Narbad, Research Scientist at IFR

Mr Gary Hewitt, Manufacturing Manager at Dow Chemicals

Mr Terrence Moon, Engineering Support Leader at Dow Chemicals

Mrs Louise Akers, Science Coordinator at Burston Primary School

Mr Mark Hellen, Science Coordinator at Bignold Middle School

Mr Trevor Daubié, West Earlham Middle School

Ms Jennifer Roberts, Science Coordinator at Nelson first School

Ms Christine Beverly, Bawburgh Primary School

Mr Robin Turner, Morely VA Primary School

Mr Simon Emerson, Biology Coordinator at Paston Sixth Form College

Dr Richard Hughs, Research Scientist at JIC

Mrs Kerry I'Anson, Scientific Officer at IFR

Letters:

Dear TSN teachers,

Safety: Help is at hand

I am hearing good things about your exciting initiative and I don't wish in any way to hinder, but I am a little concerned that sometimes experiments might be undertaken in schools without a suitable risk assessment. Scientists who work in perfect safety in research laboratories may not be aware of what needs to be considered in a school environment. There may also be ethical problems to consider and sometimes appropriate authorisation needs to be granted. You should be satisfied that what is happening in your classrooms is safe. If an activity is unusual or uses unfamiliar chemicals or organisms you should first refer to the normal safety literature. If that doesn't help, you could contact CLEAPSS who will give a 'one-off' risk assessment for any unusual experiment. (CLEAPSS School Science Service, Brunel University, Uxbridge UB8 3PH Tel: 01895 251496 Fax: 01895 814372). This should reassure you that you will not inadvertently be at risk professionally in an area that might be outside normal experience.

CLEAPSS is available to all Norfolk LEA schools. GM and Independent Schools may have their own arrangements.

I am sure this will not inhibit most of the interesting work taking place in TSN partnerships.

John Mallott

(County Science and Environmental Education Centre)
Inspection Advice and Training Services

partnership operating on a regional scale.

The Community Scientists Project aims to review existing schemes and explore the potential for a nationally coordinated but regionally implemented scheme, one that would enhance existing provision rather compete with it.

I am eager to talk to scientists and teachers who have experience of science links, to identify examples of good and bad practice and to assess the capacity, enthusiasm and availability of teachers and scientists for such activities. Suggestions of other useful ideas are also invited.

If you can help or would like more information please contact: Alison Evans, Community Scientists Project Officer, School of Education, University of Bath Claverton Down, Bath BA2 7AY. Tel: 01225 826826 ext. 5450, Fax: 01225 826113

Scientific Research in Schools: A Compendium of Practical Experience



This booklet from the Clifton Scientific Trust describes situations in which schools (mainly secondary, but one or two primary) have linked with scientists. As well as individual examples, it also gives useful information regarding Agencies, Trusts and Professional Bodies who link with schools or help them. All secondary schools in U.K. and NI have received this book free of charge. All scientists in TSN have also been sent one. If any TSN scientist has not received their copy, or if any primary teacher would like a copy, please let me (Frank Chennell) know; I have a few left.



Redundant Equipment for Schools

A huge amount of equipment donated by John Innes Centre and the Institute of Food Research has gone out to schools in the TSN and beyond; computers, balances, glassware, plastic containers, etc. We still have:

1 Amstrad PCW 8256 with manual, disks and printer

1 Box of thermometers (various, mercury in glass)

Anyone interested?

Talking Science: The National Database of Speakers on Science and Technology

Talking Science is an information service that supplies details of good speakers on science, medicine, technology and engineering.

The heart of this service is a database of experts willing to communicate their knowledge and enthusiasm to the public. It is administered by the British Association for the Advancement of Science on behalf of COPUS with financial support from the DTI.

Talking Science can offer advice and suggestions to schools on a range of science activities and events and will suggest subjects for debates; it can also provide information on current areas of discussion and 'hot topics' of science and technology.

If you think you could make use of, or contribute to, *Talking Science* then please contact

Jane Mole

Administrator, Talking Science
British Association

23 Savile Row, London W1X 2NB.

Community Scientists: A National Initiative

Alison Evans, University of Bath

Recent encouragement for the scientific communities to communicate with the public has led to a number of partnership schemes and other projects. These have become the subject of a twelve month project run under the British Association for the Advancement of Science and funded by the Nuffield Foundation. The TSN is a good example of a

Teacher Scientist Network

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