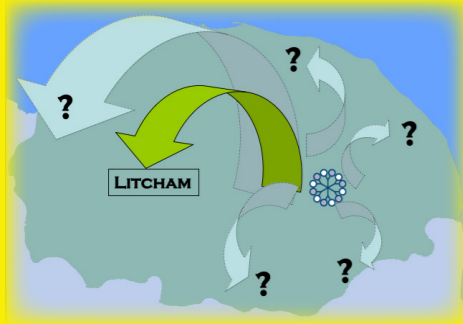


KIT CLUB NEWS!

TSN Go West! - Satellite Centre opens
Damaged Goods
Checking Kits

A collaboration between ourselves and Litcham High school has seen the development of our first Kit Club satellite centre at the school. Funded by the schools Science College status, the school now houses 9 of our most popular kits for primary schools. Initially the beneficiaries will be the 9 schools within their primary cluster but both ourselves and Litcham are keen to see provision extended to enable more school in the West of the county benefit.



Could this be a model to replicate Kit Club activity around the county & beyond? If your school has science college status and is interested in this idea do get in touch.

Occasionally some kits are returned to us with breakages or losses, its inevitable, even with the most diligent teacher borrowing the kit, however

please tell us when this happens rather than leaving us to find the breakages when the kit is checked back. We must add that despite having almost 80 kits in circulation such instances are rare - THANK YOU!



Sometimes the turn-around time on a kit being returned and going out to a different school is a matter of hours ... it would help us enormously if you could have checked the kit

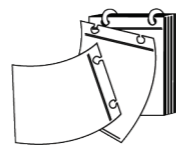
carefully before the kit is returned to us. We have spent a great deal of time and resources making this process as easy as possible with colour coding and extensive labelling and your help would be appreciated.

We are now taking Kit Bookings for next year, we look forward to hearing from you. Remember be as flexible as possible with your timetable to increase your chance of having the kit you want available.

Full kit information available at www.tsn.org.uk, under Kit Club, or contact tsn.kits@bbsrc.ac.uk email is our preferred method of kit booking. Alternatively telephone Carol Hince on 01603 450619, Wednesday - Friday inc.

Dates for your diary

- 6th Sept. - Cells Alive, The Forum, Norwich (see p.3)
- 6-11th Sept. - BA Festival of Science (Liverpool) - some events available online, check TSN website
- 17th Sept. - Microscopy Day at JIC (above)
- 24th Sept. - Primary Science Conference, JIC (see p.2)
- 20th Oct. - TSN Annual Meeting, JIC (see p.3)



Teacher Scientist Network (TSN)

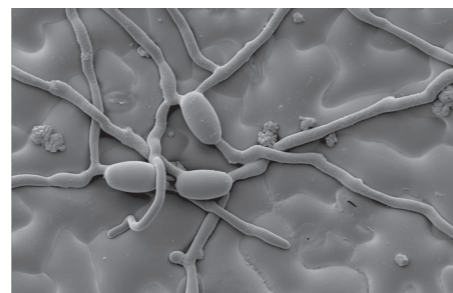
Telephone +44(0)1603 450304, Fax +44(0)1603 450045,
Coordinator: Dr. Phil Smith

Email ts.network@bbsrc.ac.uk,
Chairman: Prof. Keith Roberts

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Registered office: John Innes Centre, Norwich Research Park, Colney, Norwich, NR4 7UH

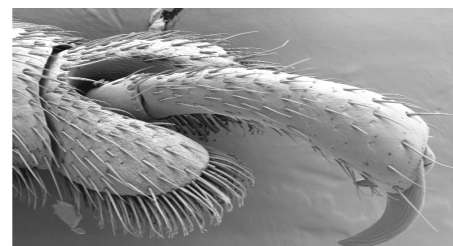
Microscope Day JIC

Year 11 and above, Sept. 17th



A limited number of places are still available for the forthcoming open day of the Bio-imaging Unit at the John Innes Centre on September 17th, a chance to see and hear all about the latest techniques in microscopy. There will be a small exhibition, talks and tours throughout the day and schools can book into sessions at 09:30, 11:30, 13:00 and 14:00. Please contact dawn.barrett@bbsrc.ac.uk or call 01603 255328 to reserve places.

It would help if teachers did some preparation with parties before they come using the dedicated part of the JIC website to help teachers with this topic (<http://www.jic.ac.uk/microscopy>).



New Members - Welcome

Teachers

- Mr. Christopher Smith, Hopton Primary School
- Miss Juliet Pennell, Taverham Hall School
- Mrs. Suzi Lambourne, Drayton Junior School
- Mrs. Becki Jennings, Costessey Junior School
- Miss Emma Dacre, Terrington St. Clement Primary School
- Ms. Julie Williams, Terrington St. Clement Primary School
- Mrs. Susie Johnson, Fairstead Primary School
- Miss. Polly Church, Elmtree Primary, Lowestoft
- Mrs. Susanna Johns, Falcon Junior Sch, Sprowston
- Mrs. Judy Brady, Larkman School, Norwich
- Miss. Polly Church, Elmtree Primary, Lowestoft

Scientists

- Dr. Helen Spriggs, University of Cambridge
- Dr. Jillian Perry, John Innes Centre



TSN News

Birthday honour for TSN Coordinator

We were delighted to see science education singled out in this years Queen's birthday honours announced on 14th June. Phil Smith, TSN coordinator since April 2003 received an M.B.E. 'for services to science education' which he firmly believes reflects the outstanding work of TSN over 14 years in addition to his own science outreach activity. Phil first joined TSN in 1999 and has worked with the same partner (Maxine Woods) for almost 10 years and they have received over £5K in school engagement grants from the BBSRC and Royal Society during that time.



TSN provides a real-stepping stone for scientists wanting to share the passion of their research with teachers and schoolchildren by facilitating the partnerships and building upon lessons learnt over the years. His transition from JIC scientist to TSN coordinator would not have been so successful without the pivotal role played by his teacher partner, the TSN Steering Group and founders Frank Chennell (previous coordinator) and Keith Roberts.

Of the 959 awards issued this year, Phil is probably one of the younger recipients of the award, he's passionate about the need for the science community to do more to engage effectively with schools and excited by the future for TSN.

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Members Survey 2008

It is now over 5 years since we carried-out a member's survey. In that time there have been many changes and developments within TSN. We want to know what you think about TSN in its present form and give you the opportunity to influence our future direction. What are the challenges you face as teachers and scientists in fulfilling your TSN roles and how can we help support both of you. How can we improve what we do? Please take this opportunity to tell us, everybody's opinion counts and by way of an incentive two, £10 Castle Mall vouchers will be raffled at this year's Annual Meeting in October (see p.3) for two completed & returned surveys.

The Survey Form for all teachers and scientists is enclosed with this edition of TSN News, *please spend 10 minutes completing it* and return by post to TSN.

Bumper turn-out at Master Class

Over 50 teachers from across Norfolk, Suffolk and Cambridgeshire came together to hear invigorating speakers and cutting-edge science during our recent Stem Cell Master Class held at the Institute of Food Research and University of East Anglia earlier this month.

All our speakers contributed to a stimulating day that was warmly received by all the attendees.



"a wonderful day, its left me thinking complex thoughts, something I haven't done in a while."

A full resume of the day that covered stem cell biology, current developments, therapy potential and ethical issues in the UK and beyond will appear on our website shortly. Grateful thanks for input from Mohammad Hosseini & Jelena Gavrilovic (University of East Anglia), Austin Smith (University of Cambridge), SJ Cedar (South Bank University) & Amanda Dickins (Kings College, London).

Partnership News - Sarah Heaton (IFR) and Clive Cordukes (St. John's Primary School, Hoveton)

I am a PhD student in the Micronutrients group at the Institute of Food Research (IFR). I have been involved with lots of exciting activities since my partnership with St. John's began at the start of this academic year; recently we explored the world of microbes with year 6 children. I brought in agar plates and we took fingerprints from the children, the plates were then taken back to IFR to be incubated to allow any microbes present on dirty fingers to grow until the colonies were visible. A week later I went back to school with photos of the plates for the children. They were fascinated with the results: we identified several different types of fungi and bacteria.

During science week we had a visit from the "Bug Man" who brought a huge range of insects, reptiles and amphibians into school, it was great to be involved and enjoy the children's enthusiasm for the creatures.

I also took years 1 and 2 for a lesson about forces. We used the TSN General Forces kit which has lots of great toys for demonstrating different forces; the children really enjoyed explaining how their favourite toy worked and why!

My experience of TSN has been great although it took a while. Unfortunately my first partnership was wasn't a great success, and keeping in touch with my teacher proved difficult. I think it is important that both members are fully committed and that teachers are enthusiastic and willing to put some time and thought into how the partnership is going to work. Without this it's difficult to have a partnership that both the teacher, scientist and most importantly the children can benefit from.

I always really look forward to my visits to St. John's and hope the children get as much out of it as I do!



Science in School - FREE subscriptions

Science in School is a European journal to promote inspiring science teaching. It covers not only biology, chemistry and physics, but also maths and earth sciences, highlighting the best in teaching and cutting-edge research, and focussing on interdisciplinary work. The contents include teaching materials, recent discoveries in science, education projects, interview with young scientists and inspiring teachers, book reviews, and European events for teachers.

Science in School is freely available. Online articles are published in many European languages and a print version is distributed in English. Go to www.scienceinschool.org/subscriptions to subscribe.



Teachers and scientists may also consider submitting articles for publication, joining the reviewer panel and helping decide which articles to publish, and translating articles into their own language. Trial copies will be available at this year's TSN Annual Meeting.

Primary Science conference, 24/09

For the first time we are delighted to announce a joint venture between ourselves, The East of England Science Learning Centre and Norfolk Children Services with a day long Primary Science Conference geared towards the needs of Primary Science coordinators across the county.

The event will take place at the John Innes Centre, a satellite venue for the SLC on 24th September. By the end of the day it is hoped participants will -

- be confident in promoting effective teaching and learning in science in their school;
- know the range of support and professional development opportunities available to promote primary science in Norfolk schools;
- have explored creative approaches to teaching and learning in science;
- taken part in workshops selected from assessment in science, environmental education, using puppets in science and developing the role of the subject leader in science.

Course fee, £130 per teacher. Bookings and further information from Norfolk Children Services by emailing lisa.poploski@norfolk.gov.uk or book online at <http://www.cpd.norfolk.gov.uk/sdms/>



atworkwithscience.com

In the absence of large pharmaceutical industries in our immediate vicinity, teachers may be interested in a new website from GlaxoSmithKline with information about how science works in the pharmaceutical industry, a virtual tour of a chemistry plant, coursework information for Applied Science courses and much more.

Visit www.atworkwithscience.com

Funding Opps.

Whether you are thinking of a one off event (possibly during National Science and Engineering Week, NSEW 2009) or a more sustained project there are two schemes well worth considering for a funding application in either primary or secondary science. We are more than happy to assist with the application and give some tips for success, just get in touch ...

Partnership Grants from the Royal Society encourage teachers & scientists to work together and so they like the idea of you already being partnered and know all about TSN. They offer £3000 for activities in any area of science for projects that give school students a taste of science and engineering today, and show their relevance for society. More details at <http://royalsociety.org/landing.asp?id=10>



NSEW 2009 will take place between 6th and 15th March, and Research Councils UK administer the NSEW grant scheme on behalf of all the research councils, offering awards of up to £2000 for activities in the life, earth, physical and social sciences during. Public debates, talks, exhibits, hands-on demonstrations, laboratory visits and activities to inspire the next generation of scientists are all examples of suitable activities. The closing date is not yet announced but will fall in Autumn 2008 (October-ish) so worth thinking about it now and looking at the application guidelines on their website. Details of eligibility criteria etc. are given at <http://www.rcuk.ac.uk/sis/funding.htm>



Planning Ahead

NOT to be missed! ... TSN Annual Meeting

Mark your diaries now, the TSN Annual Meeting, an extravaganza of entertaining science, free giveaways and hearty refreshments will take place at the John Innes Centre, Norwich on **Monday 20th October** at 6pm. If it clashes with a staff meeting, bring the staff along or cancel it (you've got enough notice!). THE social event of the TSN year is a great opportunity to ring your partner and suggest a meet-up over a glass of wine. All Welcome, flyers will be sent out in September.



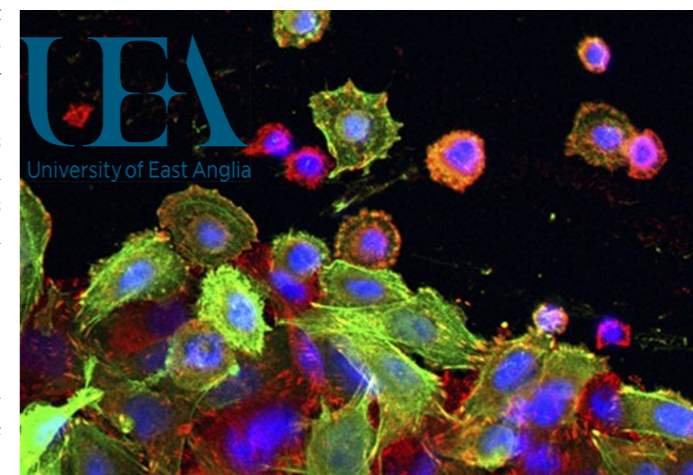
IT'S BACK ... following the popularity of last years competition and appearances on CBBC and Newsround, Jellyvision, IFR's will once again be setting schools the challenge of making the Tallest Jelly. Judging will take place at the Forum on 10th October, in conjunction with the Norwich & Norfolk Food Festival. For full details go to www.ifr.ac.uk/jellyvision

Cells Alive!

- Exploring the Science of life

From the single cell of a bacterium to the millions of cells that make you, life on Earth is quite remarkable, but what is it that makes life so amazing? Become a DNA Detective and break the genetic code to discover just what DNA can do for you. Mother Nature may know a thing or two about science but can we do better? Biotechnology says we can, but how? Discover exciting ways of looking at the world through interactions between science and arts.

Family Science Day, The Forum, Norwich, Saturday 6th September, 10-4, free admission - funded by the Wellcome Trust.



International Polar Year Next Polar Day, Sept. 24



'People at the Poles'

Here is an opportunity to build stronger relationships with our 'neighbours' by connecting Arctic and non-Arctic schools in an exchange of ideas and experiences about where you live, what issues affect your everyday lives and the vision you have for their communities. The idea of the day is to expand our knowledge of life experiences and impacts of polar versus non-polar community life and to encourage a broader concept and understanding of our global community. Why not use a science experiment as a topic for discussion and compare results?

An activity is available through a link on the News & Events page of the TSN website (www.tsn.org.uk), there is a chance to listen to and talk with researchers during a live radio event (web-streamed or live) and the launch of a virtual Balloon on the IPY site to see communities pop-up across the globe (www.ipy.org). With thanks to Lars Poort, Greenland for the image.