

HUMBER BANK



The Humber Bank Celebration Event

On the 15th November 2006 CATCH hosted an educational event to celebrate the successful partnership between Humber Chemical Focus and the **Chemical Industry Education Centre**.

Through sponsoring this event Humber Chemical Focus were able to highlight the need for industry to engage in educational projects such as **CCI** which will help educate the children of today to become the scientists and engineers of tomorrow.

There were a variety of speakers from both educational and industrial sectors including: Qualifications & Curriculum Authority, COGENT Sector Skills Council, the Royal Society of Chemistry's newly formed RSC Aim Higher Scheme, and Croda Chemicals Europe Limited who provided an industrialist's insight into sustaining educational partnerships.

Tanya Shields, Advisory Teacher for the Humber Bank was delighted, "The **CCI** conference was an invaluable opportunity to promote the awareness of how schools and industry can work together to promote science and engage children in their learning. Engaging the learners of today can only help to shape the leaders of the industry in the future."



Tanya Shields at the event with two helpers from New Holland Church of England/Methodist Primary School - North Lincolnshire

DURHAM, TYNE & WEAR



Mill Lane School visits Teesmouth Field Centre (TFC) at Hartlepool Power Station



Binoculars are useful for looking at the industrial landscape...and seals!

Following their classroom investigations on *A Pinch of Salt* topic, Year 4 children of Mill Lane Primary School from Stockton visited Teesmouth Field Centre and learnt about how salt is extracted by solution mining. Lynne Burns of TFC hosted a tour which showed the

co-existence of industry and wildlife on the North Bank of the Tees Estuary. Pupils used binoculars to view features of industrial landscape. An added bonus was catching sight of seals (on the sands) and some rare migratory birds.

NORTH WEST



Ineos enterprises sets science challenge for local school children

Budding scientists from St Bede's Primary School in Weaverham have risen to the challenge by extracting their own salt! The students were set the challenge by INEOS Enterprises' Salt Business at Runcorn as part of the **Children Challenging Industry (CCI)** initiative.

CCI Advisory Teacher, Sue Andrews, helped them find the best way to extract salt in school followed by a tour of the INEOS salt plant where they compared their salt with the different grades of salt produced at the factory. The final challenge was to see which group could bag 'St Bede's Best Salt' in the fastest time – the Orange team won in 5 minutes 5 seconds!

Ian Bradley, Technical and Engineering Manager at INEOS said: "Supporting local schools is important to us and the **CCI** scheme is fantastic. The children had a real understanding of the science behind salt - their enthusiasm was a breath of fresh air. We enjoyed the experience and hope to work with another school soon."



Children from St Bede's enjoying learning about, and playing with, salt!

PROJECT NEWS



New *PSEP* units

Two new *PSEP* units are now available to order from www.ciec.ac.uk Medicines for Pets is for 7-9 year olds and Cough Syrup is for the 9-11 age group.





Children Challenging Industry Advisory Teacher Wins Major National Teaching Award

Children Challenging Industry Advisory Teacher, Nicky Waller has won the Institute of Physics' National Primary Science Teachers' Award 2007.

The awards are made to teachers who have made an outstanding contribution to the teaching of science, supported colleagues and have inspired their pupils.

Nicky was nominated for the award by Leila Elliott of the North East Process Industries Cluster (NEPIC) and seconded by Miss Turner and Year 6 pupils from William Cassidi Primary School, Stillington, Stockton. The glowing application stated that "Nicky's efforts deserve the highest recognition. Her work in my class has been inspirational and I have learnt a great deal about how to teach science in a fun and meaningful context."

Stan Higgins, CEO of NEPIC was thrilled to hear the news, "Nicky has had a record year for



Nicky was delighted when she heard the news!

interacting with pupils, teachers and industry in the North East, resulting in an impressive 44% project growth in our region alone. She interacts with over 40 companies a year and teaches the excitement of science to over 1500 primary school children. The letters we receive from these children and their teachers are a testament to Nicky's teaching ability and enthusiasm."



PSEP Training at the Springfield Centre in Newcastle

Thirty primary and middle school teachers from Newcastle and North Tyneside recently braved the snowy weather to attend *PSEP* training at the Springfield Centre in Newcastle. The training was led by Anne Davies from Newcastle LA and Lynne Horton from North Tyneside LA.

Joanne Rout, Schools Industry Adviser, arranged for the teachers to visit local pharmaceutical companies in the morning: thanks go to Mark Wood of Sanofi Aventis in Fawdon and Joanne Poelman of Merck Sharpe and Dohme in Cramlington for hosting the tours of pill production facilities. Teachers found processes on site fascinating.

After lunch, the teachers carried out activities from the *Water for Industry*, *Plastics Playtime* and *Generating Electricity* units.



Teachers from St Cuthbert's and St Lawrence's Primary Schools powering a digital clock using a lemon battery

Diary April 2007 - November 2007

Tees Valley

- 19 April - Presentation at AST Conference - NSLC, York
- 19 May - Presentation at ASE Regional Conference - Durham
- 23 May - Puppets Training - Alnwick Gardens
- 6-8 June - Developing Teaching and Learning Approaches to Primary Science - NSLC, York
- 21 June - Presentation - Tyne and Wear Science Conference
- 16 July - Education and Skills Conference - NSLC, York

North West

- w/c 21 May - Industry Enterprise Week at Catalyst Science Discovery Centre - Widnes
- 4-6 June - Leading Assessment for Learning in your school - NSLC, York
- 9 July - *CCI* annual celebration - Catalyst Science Discovery Centre - Widnes
- July - *PSEP* training for primary teachers.

Contact Sue Andrews for details of date and venue.

West Yorkshire

- 18th April - Training Science and Engineering Ambassadors - West Yorkshire
- 13th June - Training *CCI* Ambassadors - McBrides, Bradford
- 23rd-25th April/28-29th June - New Approaches to ICT to enhance learning in science in the primary classroom - NSLC, York
- 11th-15th September - BA Science Festival - York
- 3rd October - An Afternoon of Science - Headfield Junior School
- 17th October - An Evening of Science - Lindley Junior School

Humber

- 27th April - Puppets training, Education Bradford
- 10th May - HCF Annual Dinner
- 22nd May - Discussions in Primary Science CPD3 - Hull
- 23rd May - Primary Science Coordinators Meeting - Hull
- 4th-6th June - Leading Assessment for Learning in your school - NSLC, York
- 21st June - Puppets Training - Walshford North Yorkshire
- 22nd June - Puppets Training - North Lincolnshire

Contacts

If you would like to know more about *Children Challenging Industry* or the *Primary Science Enhancement Programme*, contact:

Joy Parvin or Gayle Pook
Chemical Industry Education Centre,
Department of Chemistry,
University of York, Heslington,
York, YO10 5DD
01904 432523
ciec@york.ac.uk www.ciec.org.uk



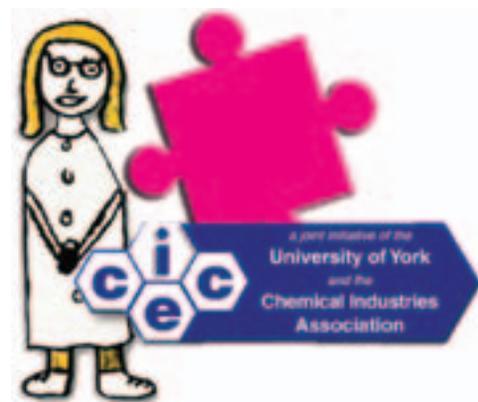
PSEP

Supported by the Gatsby Charitable Foundation

Welcome to the second of our combined CCI/PSEP newsletters. We hope you will again see the similarities in these synergistic projects, and enjoy reading about the achievements of children, teachers and our industrial partners. The array of articles demonstrates the dedication of our advisory teachers and all our partners around the country in carrying out the classroom investigations and ensuring that the visits into industry continue to motivate and inspire our citizens of the future.

One particular achievement we'd like to mention is that of Nicky Waller, our Advisory Teacher for the Tees Valley, who has been awarded National Primary Science Teachers Award for 2007 by the Institute of Physics. Well done, Nicky!

Joy Parvin and Gayle Pook, Primary Project Managers



Summer 2007

The joint newsletter for Children Challenging Industry and the Primary Science Enhancement Programme

HUMBER BANK



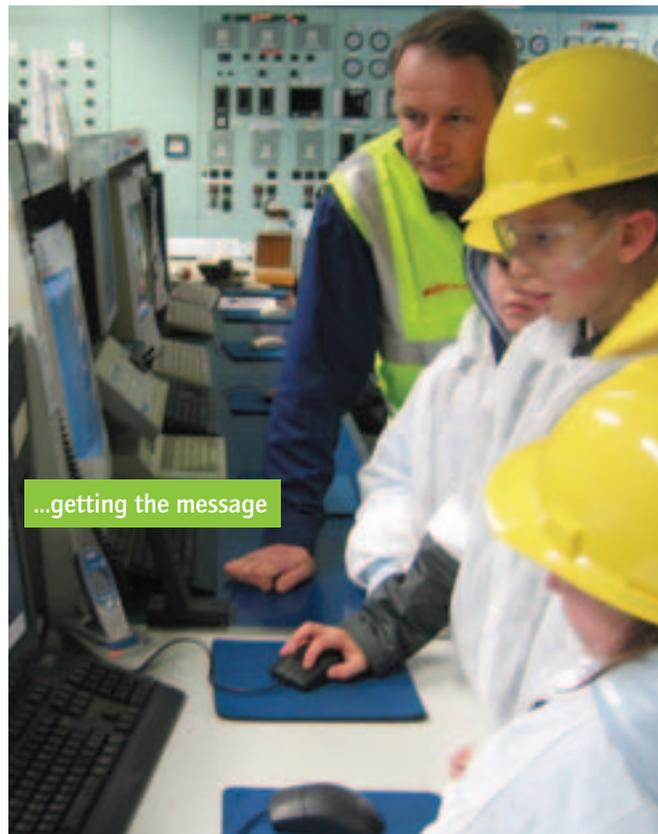
Alpha pump off, on cooling tower - over!

The start of a new term saw BOC Scunthorpe successfully host their first **Children Challenging Industry** site visit. Howard Wilson, Processes & Engineering Manager at the site, greeted children from New Holland Church of England/Methodist Primary School as they made their way into the boardroom.



Walking the site...

Minutes after setting foot inside the gates the class were put to work. Equipped with radios, the children separated into two working parties, one to operate the control room and the second to walk the site. On arrival at the cooling towers the team promptly radioed the control room. Instructions to switch off the alpha pump were received loud and clear and the control team took action. A simple click of the mouse and several metres away the whirring of the alpha pump ceased. Job done!



...getting the message



Yorkshire & Humber Regional Development Agency

The **Chemical Industry Education Centre** is a joint venture between the Chemical Industries Association and the University of York. The aims of the **CIEC** are to enhance effective science teaching, create enthusiasm for science in children and improve understanding between schools and the chemical industry.

Children Challenging Industry



Feel the Force!

Year 6 learners from Higher Folds Primary School 'felt the force' during revision for SATS earlier this year.

Wigan Education Business Partnership, who joined the **PSEP** team of trainers in November 2005, worked with Year 6 on the **PSEP** unit *Feel the Force* (which supports the QCA unit Forces in Action).

Two members of the ASDA distribution team at Makerfield Way, Ince brought an articulated lorry to the school to demonstrate and discuss aerodynamic features, recognise a variety of forces, improve vocabulary and learn about the role of drivers, instructors and the logistics industry.

The pupils were able to use and apply the experiences from the morning's activities in their investigations for a haulage company looking for ways to reduce fuel consumption of their lorries.

By Ann Roughley,
Higher Folds Primary School



Higher Folds Year 6 pupils inspecting an articulated lorry while working on the **PSEP** *Feel the Force* topic



Lindley Junior School benefit from CCI and PSEP



A busy Mum and son at Lindley Junior School enjoying activities from **CCI/PSEP** topics

CCI and **PSEP** have raised the profile of science in our school because they have not only provided us with excellent detailed planning resources but have also given the children an exciting purpose - involving them in the real world of science. Our aim was to enhance the investigative science in school, and to provide the teaching staff with training which would give them a range of industry links. These provide imaginative and interesting contexts which reflect 'real life' problems within the world of work.

We initially received **CCI** input from Michele Smale, who also delivered whole staff training on the extension work offered by the **PSEP** website. The staff training was a thoroughly enjoyable twilight session which provided everyone with an investigation they felt they could use in the classroom. The range and quality of both the **CCI** and **PSEP** resources, advisory teacher knowledge, and **PSEP** website support has further enhanced the confidence of our staff. The **CCI** project targeted our four Year 5 classes. Our pupils have thoroughly enjoyed solving real life scientific problems through class based investigations and using the website to pose questions to the **PSEP** industrialists.

Following our industry visit to Grosvenor Chemicals, in Linthwaite, near Huddersfield, many children expressed the wish to be a scientist when they grew up. During the visit they had a chance to see their class based investigations carried out in the real world. Staff reported that they had been very pleased with the quality and depth of questions and discussion from the children. Their follow up work and comments demonstrated how their perception of the chemical industry had changed from a negative one to a positive one.

By Catherine Jubbs, Lindley Junior School

Questionnaire Prize Draw

Our thanks go to all teachers and trainers who completed our questionnaires – which are so important to us in terms of evaluating and improving both **CCI** and **PSEP**. We do like to hear how all of our schools who win the 'Questionnaire Prize Draw' spend the spoil on science!

Our Lady's Catholic Primary School in Warrington will be spending their money on electricity circuit kits for use with the KS1 children.

Enfield (New Waltham) Primary School in Grimsby have used their prize to purchase a half size human skeleton for 'Learning about Ourselves' in both KS1 and 2. They also plan to buy tuning forks to support the idea of sound being created through vibrations.

Thank you to both schools for sharing this with us.



WEST YORKSHIRE



Michele Smale celebrating the success of CCI in West Yorkshire with representatives of The Colour Museum, Grosvenor Chemicals Ltd., Ciba Specialty Chemicals, Rohm and Haas and A H Marks. The companies were being presented with their CCI certificates in recognition of the enjoyable and effective site visits they have hosted. Joining her are Steve Elliot, CEO of the Chemical Industries Association (far left) and Richard Carter, Head of Chemicals Unit at the DTI (far right).

NORTH WEST



St James' visit to Chemtura, Trafford Park

A number of factors influenced our decision at Chemtura, Trafford Park to participate in the CCI initiative. We were experiencing a shortage of chemical engineers as a result of students not choosing to study chemistry at university, and we felt that the opportunity to 'educate' teachers, some of the major influencers in children's lives, at the same time as educating their pupils, was a great bonus of CCI.

We organised practical and observational activities for the children during their visit to our laboratories and manufacturing plant. Systems and experiments were demonstrated before the children had a chance to have a go for themselves.

The children had lots of unexpected questions and it was wonderful to see the company from a completely different perspective. The whole team thoroughly enjoyed themselves and it felt great to be working as a team on such a novel project.

By Janet Gilboy, Chemtura



Janet Gilboy of Chemtura talking about the CCI project

NORTH WEST



The Chemical Industries Association learns more about CCI

Dr Allan Clements, Director of CIEC and Sue Andrews, CCI Advisory Teacher for the North West, recently gave a presentation to an illustrious gathering of senior industrialists and members of the Council for the Chemical Industries Association.

The presentation, held in the wonderful Alchemy theatre at Catalyst Science Discovery Centre, Widnes, covered the aims of CCI, the results of its impact upon pupils, teachers and industries, and plans for the future development of the project. The delicious buffet that followed provided an excellent opportunity for questions, discussion and networking.

PROJECT NEWS



	Durham, Tyne & Wear ²	Humber Bank	North West	Tees Valley	West Yorkshire
Number of schools	3	21	23	26	22
Number of children	80 ¹	550	644 ¹	778	666
Number of teachers	3 ¹	182	174	261	117
Number of site visits	3	14	20	26	14
Number of site personnel trained	15	4	42 ¹	15	
Additional teachers trained (including any additional adults)	41 ¹	83	37 ¹	382	58

Figures for all CCI regions September 06 - March 07

Notes:

1 These figures are estimates.

2 Project delivery began in Durham, Tyne & Wear schools in January 2007.

3 'Additional' training offered to teachers includes:

Primary Science Enhancement Programme

Puppets

(on behalf of Millgate House Publishing & Consultancy)

Active Assessment

(on behalf of Millgate House Publishing & Consultancy)

Gifted and Talented Master classes (Tees Valley)

National Science Learning Centre courses.



An animated explanation for children visiting the Johnson Matthey plant in the North East

'Real' Science for Primary Age Children

An article, published in the November/December 2006 issue of *Primary Science Review*, by Nicky Waller, **CCI** Advisory Teacher for the North East region describes the **Children Challenging Industry** project in action in the North East. The article manages to convey the lively atmosphere created in **CCI** sessions which in turn leads to impressive learning outcomes for those children involved in the project. It is a useful article to reference for either schools or industries when they are introducing the project to members of staff and parents in schools or colleagues in industry.

The article can be accessed on the ASE website at: <http://www.ase.org.uk/htm/journals/psr/index.php>



PSEP in action in Meadowfield Primary School, Leeds

This time last year I was faced with a new class of a challenging Year 5, teaching science units I had never taught before and wondering how I was going to motivate the students.

Fortunately I had just received some excellent **PSEP** training and with the help of Michele Smale, I embarked on a series of practicals. The children explored gases with the help of the teaching unit Kitchen Concoctions. Michele lent us some great equipment and protective gear. Armed with their job badges (Resource Manager, Data Collector, Administrator etc.), we set about our work using everyday kitchen substances. There was much enjoyment and good scientific method, but we never did perfect the formula for a life-size bubble!

The lasting results and benefits? My own in-service training, heightened interest and engagement with science and the children recognising the work that scientists do and seeing themselves in such roles in later life.

By Elizabeth Lowe, Science Curriculum Team, Meadowfield Primary School, Leeds.



Joanne Rout joins the CCI team in the North East

Joanne is the newest recruit to the **CCI** team, joining the North East region. Joanne is the first member of the team to come from an industrial rather than a teaching background. One of the advantages she has found is the ease with which she is able to liaise with companies and arrange site visits etc.



Since joining **CCI** in January this year she has already reached 80 children and 3 teachers in 3 schools and trained a further 29 teachers through the **PSEP** scheme!