Primary Science Advisory Teacher (Based in Hertfordshire)
Centre for Industry Education Collaboration
Department of Chemistry

Closing date: 4 April 2018
Interview date: 30 April 2018
Vacancy reference: 6489
INTRODUCTION

The Centre for Industry Education Collaboration (http://www.ciec.org.uk) is based in the Chemistry Department and is a unique industry-education centre, recognised for its expertise in creating and maintaining a diverse range of initiatives to inspire pupils and their teachers about science and its vital importance to our UK manufacturing base. The Centre has an established reputation for delivery of high quality continuing professional development to enhance science education and improve mutual understanding between industry and schools.

Applicants are invited to join CIEC’s highly experienced and motivated practitioners to be part of an advisory team delivering existing highly commended primary science programmes and to contribute to the development and delivery of future initiatives. We are looking for an experienced and successful primary practitioner to work with teachers in school to introduce industrial contexts into the teaching and learning of highly practical and investigative science. The successful applicant will deliver the highly successful Children Challenging Industry programme in and around Royston, Hertfordshire.

The Department of Chemistry is one of the UK’s leading Chemistry departments and we are renowned internationally for our research. This is combined with a commitment to teaching and outstanding student satisfaction, and we have been recognised consistently for our family-friendly policies and are proud of our Athena SWAN Gold Award: https://www.york.ac.uk/chemistry/ed/

As a Department we strive to provide a working environment which allows all staff and students to contribute fully, to flourish, and to excel. We aim to ensure that there is a supportive and egalitarian culture at all levels and across all staff groups. We promote good practice and a strong culture of equality in higher education. Further information can be found within this brief and on our website: www.york.ac.uk/chemistry/
Main purpose of the role

The successful candidate will be based at the Johnson Matthey and Sartorius Stedim companies in Royston, to continue to develop CIEC’s positive relationship between local schools and the sites, and to:

- provide an advisory science programme (Children Challenging Industry, www.ccciproject.org) for the University of York’s Centre for Industry Education Collaboration, working in primary schools to improve science teaching
- introduce context based learning to primary science teachers
- engage industry to support the work of CIEC, resulting in site visits for children; ambassador visits in to schools; and funding to provide further CPD for teachers.

Key responsibilities

The appointee will be expected to:

- recruit an agreed number of schools to participate in the Children Challenging Industry programme each term
- advise these schools on a whole-school approach to science-industry links
- develop and extend, in collaboration with teachers, their science teaching and learning approaches in the classroom
- provide, where appropriate, professional development to spread good practice within participating schools
- promote planned visits to participating companies
- provide training to industrial personnel involved with these schools
- carry out and monitor DBS checks, as a representative of the University, for all industry volunteers engaged as ambassadors
- monitor the effectiveness of projects
- be active in securing funding for additional clusters of schools to be involved in the projects
- attend 3 meetings a year in York and report twice a year to an advisory committee
- maintain a set of science equipment and resources to use during the classroom sessions
- promote the use of Centre for Industry Education Collaboration resources (hard copy, pdf and websites) in schools
- prepare all electronic (e.g. presentations) and hard copy materials for use during classroom and training sessions
- carry out the programme evaluation processes, liaising with both teachers and researchers to ensure completion of online questionnaires.

The above list of duties is not exhaustive and is subject to change. The advisory teacher may be required to undertake others duties within the scope of the role.
# PERSON SPECIFICATION

## Qualifications
- First degree or PGCE in primary or middle school teaching  
  - Essential
- Degree specialism in a science subject  
  - Desirable

## Knowledge
- Sound knowledge of primary teaching, particularly science  
  - Essential
- Knowledge of the role of the science subject leader  
  - Desirable
- Working knowledge of school-industry links  
  - Desirable

## Skills, abilities and competencies
- Ability to work collaboratively and be self-motivating  
  - Essential
- Ability to communicate effectively with adults and children  
  - Essential
- Ability to organise workload independently  
  - Essential
- Ability to carry out administrative tasks  
  - Essential
- Competent user of information technology  
  - Essential
- Ability to give presentations to various audiences, including adults and children  
  - Essential
- Ability to create new teaching materials for adults and children  
  - Desirable

## Experience
- Minimum of 4 years’ teaching in primary schools  
  - Essential
- Can demonstrate teaching materials developed for own use or for the use of colleagues  
  - Essential
- Science coordinator within a primary school  
  - Desirable
- Delivery of training to primary colleagues, ideally related to science teaching  
  - Desirable
- Proven experience of generating income to support existing projects or new proposals  
  - Desirable

## Personal attributes
- Commitment to continuing professional development  
  - Essential
- Ability to enthuse industrialists and teachers regarding school science-industry links  
  - Essential
The Centre for Industry Education Collaboration (http://www.ciec.org.uk) is a unique industry-education centre, recognised for its expertise in creating and maintaining a diverse range of initiatives to inspire pupils and their teachers about science and its vital importance to our UK manufacturing base. It is a dynamic, constantly innovative and creative organisation that robustly supports schools and companies in striving for excellence in school-industry collaborations.

Established in 1988, CIEC has constantly created resources and continuing professional development (CPD) experiences for use by teachers, pupils and industrial personnel/ambassadors aiming to inspire the next generation of scientists and engineers and to develop an understanding of the importance of science to combat today’s local and global challenges.

Our team of highly experienced and dedicated advisory teachers achieve these aims by working with teachers, industry partners and children in schools, as well as through developing interactive resources that link the UK science curricula with 21st century industrial practices. The team currently comprises two co-directors, four advisory teachers, one administrator and one marketing officer.

This CIEC project Children Challenging Industry (CCI) (http://cciproject.org/) addresses a 1996 Mori Poll report that ‘perception of the chemical industry is at an all-time low’. CCI highlights STEM opportunities by building visible links between science education and its application in industry and related careers. It combines science lessons led by CIEC’s advisory teachers with visits to industry tailored to the science curriculum. It aims to improve teachers’ and children’s perception and knowledge of science-based manufacturing and teachers’ confidence in teaching science, and to stimulate children’s enjoyment of science and engineering.

Over 12,300 teachers and 54,000 children have been involved in CCI and its sister programmes. It has benefitted from the involvement of 1,725 schools and 340 industrial companies, who have hosted site visits and involved their scientists and engineers directly in visits and lessons.

For example, CIEC work with Johnson Matthey (JM), a long-term supporter in the North East, with a CCI project in its site in Royston [see Warren, C (2015) A successful recipe for engaging primary school children with industry, Primary Science, 140, 21-23]. With JM, CIEC has devised classroom experiments which use the context of the industrial manufacture of wash coats containing catalysts for application to car exhaust.
systems. Children carry out experiments in class, involving mixing (soaps, glycerine, colour and essential oils), optimising viscosity, and studying evaporation after grinding, dissolution and filtration [see CIEC resources Kitchen Concoctions, Runny Liquids and A Pinch of Salt (http://www.ciec.org.uk/resources.html)]. Finally the children visit JM, meeting scientists and engineers, making their own wash coat recipe and watching the testing of their product in a range of cars (e.g. a Ferrari).

CCI has regular press coverage, e.g. Education Guardian (26.03.09), Royston Crow (6.8.15).

The Department of Chemistry

The Department of Chemistry: http://www.york.ac.uk/chemistry is one of the largest and most successful academic departments at York. The Department was placed in the top ten UK universities for Research Power by the 2014 Research Excellence Framework exercise (REF). Amongst our academic staff we have five Fellows of the Royal Society and many national and international prize winners, contributing to a dynamic and thriving department. The excellence of Chemistry at York was recognised in the 2018 Guardian League Table Guide, Complete University Guide and Times University League Tables where it achieved an outstanding 2nd and two 4th places, respectively.

The Gold Award from Athena SWAN: https://www.york.ac.uk/chemistry/ed/ for promoting women in science was won by the Department of Chemistry in 2007 and renewed in 2010 and 2015. This was the first Gold award made in this scheme. The Athena SWAN Charter recognises and celebrates good employment practice for women working in science, engineering and technology (SET) in higher education and research.

The case studies on our Equality and Diversity website: https://www.york.ac.uk/chemistry/ed/fam-friendly-work/ illustrate the variety of working arrangements of staff which are supported by the Department.

The Department of Chemistry operates a set of family-friendly practices. Staff working patterns are flexible and a formal Flexitime system is also in operation. The Department has developed a maternity and paternity leave procedure to help provide support for staff and the University has a nursery http://www.york.ac.uk/univ/nrsry/ and a Child Care voucher scheme.

The Department provides support for all categories of staff in their applications for promotion, role reviews, awards, prizes and rewarding excellence nominations. Staff are encouraged to attend training events and take up opportunities for professional development including those offered by the award-winning University Learning and Development Team: http://www.york.ac.uk/admin/hr/training/. The Department strives to address diversity inequalities to ensure that there is a culture that supports equality and encourages better representation throughout the Department. Support for all staff at all stages of their career is recognised as being extremely important; individuals will be allocated a specific mentor to help support them in future career development. Social events are also held regularly for members of staff.

The Department is committed to establishing a culture of environmental good practice and all staff are asked to go about their duties in a resource efficient way and minimise impacts to the environment wherever possible.
THE UNIVERSITY

Founded on principles of excellence, equality and opportunity for all, the University of York opened in 1963 with just 230 students. In 2018 it is the home of more than 17,000 students across more than 30 academic departments and research centres. Since opening over fifty years ago, we have become one of the world’s leading universities and a member of the prestigious Russell Group.

We are consistently recognised as one of the leading Higher Education Institutes and are ranked 16th in the Times & Sunday Times league table (2017). The University of York has won six Times Higher Education (THE) Awards and five Queen’s Anniversary Prizes.

The University is proud of its association with Athena SWAN, holding 12 awards in support of gender equality, representation and success for all, with gold awards for Chemistry and Biology and a University-wide bronze award.

Of 154 universities that took part in the Research Excellence Framework (REF) in 2014, The University of York ranked 14th overall and 10th for the impact of our research. The University is consistently in the top ten UK research universities and attracts over £60m a year of funding from research alone.

Our vision is to make the University of York a world leader in the creation of knowledge through fundamental and applied research, the sharing of knowledge by teaching students from varied backgrounds and the application of knowledge for the health, prosperity and well-being of people and society.
Apply online

- Go to https://jobs.york.ac.uk
- Find this job using reference 6489
- Complete the online application form

You will need to submit your completed application by midnight (local UK time) on 4 April 2018

What will I need?

We will ask you for details of:
- your employment history
- relevant qualifications
- two referees

You need to be ready to show us how you meet the requirements of the job, either in a written statement and / or by answering questions.

Help and assistance

Direct any informal queries to Joy Parvin (ciec@york.ac.uk, +44 1904 322523).

If you have any questions about your application, contact the HR Services team:

recruitment@york.ac.uk
+44 (0)1904 324835