

Introduction to the CIEC special issue of Primary Science

Joy Parvin



Joy Parvin, Director of the Centre for Industry Education Collaboration

I am so pleased to share this Centre for Industry Education Centre special edition with you, in the 25th anniversary year of our Children Challenging Industry (CCI) programme.

I joined CIEC in 1992, when CCI was a twinkle in the eye of Tom Swan (1943-2018), who seeded the idea of a peripatetic science teacher visiting schools in the north of England to inspire primary children about science. Tom was the Chair and owner of Thomas Swan & Co., long-term supporter of CIEC and the initiator of the Children Challenging Industry programme. Tom's son, Harry Swan, continues to support CIEC's activities, and his generous donation has made the publication of this special edition possible.

In my first four years at CIEC, before CCI began, my job was to write curriculum resources and deliver CPD to primary teachers. CIEC's ever-expanding range of resources are all now free-to-download PDFs, with industry contexts for practical problem-solving activities at their heart. Our dedicated team of primary science experts ensures that the publications have moved with

the times, in terms of supporting the changing National Curriculum and with particular emphasis on carrying out investigations and developing the skills of working scientifically. I am excited to share the news that our downloadable activities are available on a new area of our website, which will be live by the time that this journal is published (fingers crossed!). Design is in its infancy as I write, but all our 150+ activities will be fully searchable by age range, science topic enquiry type, and by other search terms (e.g. scientific concepts and key vocabulary) – something I have wanted to do for many years, so it is wonderful to see this come to fruition in our special anniversary year.

The CIEC team ensures that our CPD, which has supported thousands of teachers over the years, continues to help teachers to become more confident to deliver the curriculum, to develop children's science capital,

and to increase teachers' knowledge about STEM careers in their locality and beyond. In this special edition, members of the CIEC team have written articles about the various aspects of our work, to provide further guidance and to signpost you to where you can find out more. For an example of our CPD, **Clare Docking's** article provides an insight into our approach to developing children's science capital.

To learn more about how to arrange visits to industry, read **Mackayla Millar's** article; **Jane Winter** shares her tips for working with ambassadors in school; and for an inside view from industry ambassadors, take a look at the article by **Lucy Butler et al.** If an international perspective of CIEC is of interest, please read **Guirong Wang's** thoughts on her year spent away from Beijing travelling around our CCI regions for a year, with the hope of establishing CCI in China in 2022!

The topic of sustainability is close to the hearts of many of us, the children whom we teach, and our industry partners. **Nicky Waller** shares the work that three teachers have carried out following the CPD that she delivered, highlighting their use of CIEC's publication *Sustainable Stories for a Sustainable Planet*. It is gratifying to allay children's growing concerns about the planet that they will inherit, through sharing the stories of scientists and engineers who are working to solve the problems that we face today and will face in the future. Using this resource, you can encourage more children to



The late Tom Swan OBE (1942-2018), Chairman and owner of Thomas Swan & Co. Ltd.

become inspired to join STEM teams in the future, and to continue the good work of today's scientists and engineers.

An important pillar of CIEC's work is the evaluation of the impact of work on children and teachers. It is crucial that the support that we offer schools does meet a real need, and that our programmes are valued by all concerned. **Agata Lambrecht's** piece, *Not another questionnaire!*, explains why those dreaded feedback requests are so important to us in ensuring that high-quality publications, CPD and programmes wend their way to you.



Harry Swan, CEO and owner of Thomas Swan & Co. Ltd. and Chair of CIEC's Advisory Committee

I am delighted to share an article written by **Kate Sutton**, an energetic science subject leader, who teaches on the Yorkshire coast and who is an active member of the primary science community – including the Editorial Board of *Primary Science*! Kate shares her school's experiences of taking part in CCI in summer 2021, when we operated the programme quite differently, but still with amazing support from our industry partners, and with great dedication from all the teachers, engineers and scientists who took part.

That brings me back to CCI, and its beginnings in 1996, when I worked with children and teachers across County Durham, from ex-mining towns such as Easington Colliery to the rural farmlands of Teesdale and Weardale. Whether a child's environment is the sheep-covered hills of rural England, towns with high unemployment and shuttered shops, or the leafy lanes of Durham or Cambridge, raising their awareness of where science can take them is what excites us all at CIEC. Children with whom we have worked have gone on to study science at university, taken up apprenticeships in their locality, or become more aware that science has applications in the 'real world' beyond that which is familiar to them.

I hope that you enjoy reading about CIEC, take many ideas from this edition into your classroom, and join us over the next 25 years to inspire scientists and engineers of the future!

Joy Parvin is Director of the Centre for Industry Education Collaboration, and Guest Editor of this special issue of *Primary Science*.

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CAREER MARK PRIMARY

Career Mark Primary supports and accredits schools wanting to deliver high quality career-related learning (CRL) experiences to their pupils.

CRL brings learning to life by providing context for what pupils learn in their classroom subjects. Evidence clearly demonstrates^{i, ii, iii} the need to start CRL early. From age 7 values can be deeply engrained and difficult to challenge. Primary CRL raises aspirations, breaks down stereotypes and improves transitions. It helps pupils to broaden their horizons and to develop a positive outlook for the future.

Primary Career Mark provides the structure to successfully implement CRL and the opportunity for feedback and development. It enables schools to celebrate to all stakeholders the commitment they have made to each pupil to fulfil their potential.

Career Mark Primary has 5 standards:

- Impact – school and pupil targets for CRL and how it measures achievement;
- Staff – competence of staff delivering and supporting the programme;
- Management – school systems for planning, managing and integrating CRL;

- Curriculum – how it supports the development of pupils' career-related knowledge, skills, understanding and attitudes;
- Pupil Outcomes – evaluates the pupils' learning from the CRL curriculum.

In their own words:

'Career Mark Primary is an excellent means to ensure that we structure opportunities that, in a very real and practical way, broaden and deepen experiences for Primary children.' Executive Head Teacher

'Within a matter of weeks through Career Mark we witnessed a huge increase in the children's aspirations and hopes for their futures.' Year 6 Teacher

For more information about Career Mark Primary please email contact@careermark.co.uk or visit <https://complete-careers.com/career-mark/about-us/>

i TES and Education and Employers 19th January 2018 in its report Drawing the Future
 ii Dr Anthony Mann, Dr Elnaz Kashefpakdel and Steve Iredale, May 2017 Primary Futures: connecting life and learning in UK education
 iii Education Services Australia, 2021, Career education in primary school

