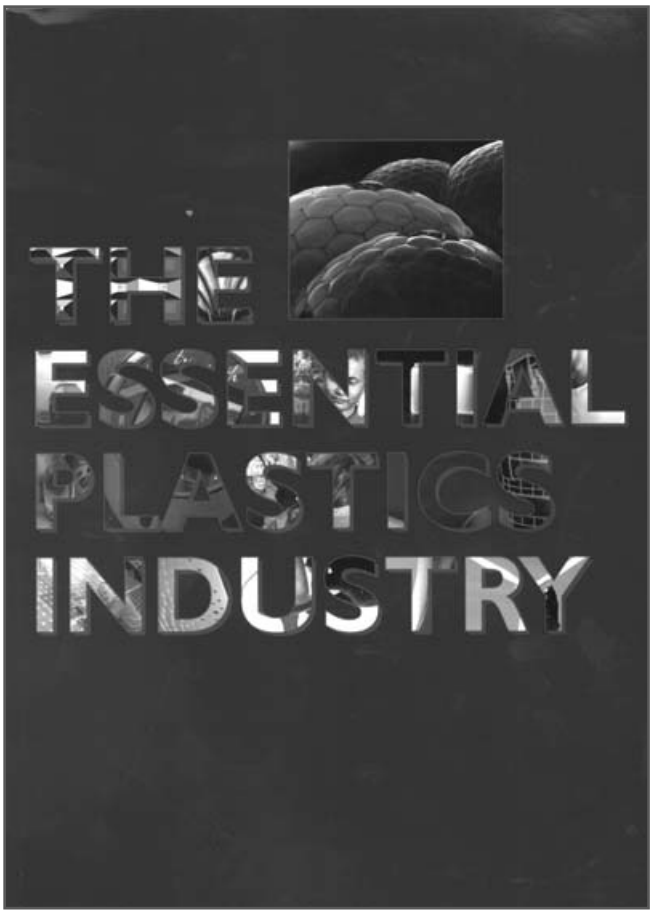
The Essential Plastics Industry
Reviewed by David Foster, Head of Technology Faculty, Tibshelf Community School, Derbyshire



You won't lose this one easily! The bright pink cover ensures that this book is seldom misplaced and is something of a magnet to the pupils I have used it with. Barry Perks Design, in York, are apparently responsible for this and it really works. I also think it is excellent that the book has been sponsored through a link with ATOFINA from the petrochemical industry as this has enabled an effective collaboration between many major brand names such as Adidas, Dyson, The British Council and The Design Council.

There is a fantastic range of photographs which clearly illustrate the examples used in the book. It can be difficult to enthuse much about plastics these days without coming up against the pupil who is keen to point out that 'it's from oil and that can't be a good thing because it's from fossil fuels'. Ah, the greening of the curriculum! Mike Driver and James Pitt take this criticism straight on and devote a whole chapter to the ways in which plastics can be seen as materials for a sustainable future. Plastics obviously have a future in a wide variety of applications and this book seeks to point out a great range. There are excellent examples, including plastics used in the conservation of water and the development of irrigation systems. They also examine the use of plastics as used in the conservation of food. It really brings it home to the reader when we find out that, in developing countries, the wastage of food is about 50%. Recycling is carefully examined and includes the familiar 'voluntary' recycling by those with a conscience out at the waste bank on Saturday morning. This is compared to the far more extensive recycling system in place in Dusseldorf, where waste is divided into glass, paper, recyclable what they call residuary waste. I think this area is covered very well and certainly raises awareness in the reader.

Chapter 2 looks at the growth in the production of plastics compared to that of aluminium and steel from 1970 to the present day, with plastics showing a massive and continued growth. We are introduced to new plastics, including water-soluble plastics, which allow workers in hospital laundries to literally 'boil in the bag' the soiled linen and allow the bag to simply dissolve away, preventing cross-contamination and reducing the spread of disease. We are further introduced to plastics which conduct electricity and materials which can withstand high temperatures sufficient for the aero industry. Biodegradable plastics have been around for some time and obviously helped to cut down on the number of discarded plastic bags blowing about the countryside today. These will now simply crumble away and be dissolved into the earth in a harmless particle form.

It is good to see that the authors have reflected on the history of early plastics development and the way in which plastics replace materials such as ivory and hoof and horn. The examples used, which show the latest developments, include that of cellopore, which was developed only three years ago and is able to filter 99.99% of micro-organisms from available water to produce drinkable safe water. Plastics are further shown at the Eden Project where ETFE was used to produce the glazing material for the domed structure.

The massive range of examples continues as the authors lead us through a never-ending range of applications of plastics materials, from blister packs and inhalers to suitcases and the smart car. Hi-tech goalkeeper gloves have been developed which enable the goalkeeper to have ease of movement and to retain a feel for the ball whilst safe in the knowledge that his fingers cannot be bent back. This is because the fingers of the gloves contain a reinforcement which allows bending forwards only.

The ubiquitous Dyson appears again in the example of how designers use plastics with particular characteristics. We learn also of the uses made by plastics in the manufacture of the Russell Hobbs kettle. Ever wondered what the machine looks like that makes those plastic garden

The Essential Plastics Industry
Mike Driver and James Pitt
Chemical Industry Education Centre, University of York: £15
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Appropriate content	✓✓✓✓✓	Generic use	⇐
Pupil/student use	✓✓✓✓	One of a series	
Teacher resource	✓✓✓✓✓	Photocopiable	
Visuals	✓✓✓✓✓	Pupil/student activities	
Overall style	✓✓✓✓✓	Cross-curricular	⇐

chairs? Well, all is revealed on page 92! And lemonade bottles! There is an excellent step-by-step guide clearly described on pages 94 and 95, which would help all students to understand this process. We are even treated to the birth of a plastic duck! For those of us who really want to go the whole 'anorak' - 'Goretex' of course - we have access to all the chemistry we would ever need to understand the chemistry of polymers. You can really impress your colleagues when you know that POLY (TETRAFLUOROETHENE) is the real name for that stuff that stops your egg sticking to the frying pan! I am just relieved that someone invented the word 'Perspex' instead of 'POLY (METHYL 2-METHYL PROPENOATE)!

I really have been very impressed with this book as it manages to cover so many levels and is appropriate for such a wide audience. The examples I have quoted are a tiny fraction of those contained in this richly illustrated book. The pictures are crystal clear and the diagrams are superbly presented. I really feel that every school ought to have access to this book. For £15 it represents excellent value as a teaching resource and is easily understood by pupils in the target audience and, remember, in this lovely pink colour you shouldn't lose it that easily! A superb book.

Forthcoming from Trentham

A Vision for Today
John Eggleston's writings on education

selected by Gillian Klein and Michael Marland

John Eggleston's influence on education is still felt today. In his radical research project for the Schools Council in the 1970s, he changed the school subject of Craft forever, shaping it into Design and Technology as now taught in the National Curriculum. In the 1980s he led a research team at Keele University that explored aspects of the sociology of education. The Eggleston Report, *Education for Some*, was commissioned by government and reported on areas of racism in education which had not been dealt with by the Swann Report

Till his death in December 2001, John continued to work with energy and vision in the areas of Design and Technology, and towards social and racial justice, as his 21 books and numerous contributions to journals and edited books testify. His thinking remains pertinent today, and this tribute to his life and work brings together some of his most apposite writings.

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Price £15.99
All profits from sales to Cancer Research UK

A Guide to Developing the ICT Curriculum for Early Childhood Education

John and Iram Siraj-Blatchford

This book shows how Information and Communications Technology (ICT), can contribute to children's learning, how it can be integrated into a play based curriculum and how it relates to key areas of learning such as collaboration, communication, exploration and socio-dramatic play. It outlines the ICT requirements in the UK Foundation Stage Curriculum Guidance and examines the international relevance and implications of ICT for young children.

The book provides a critical account of the 'digital divide', suggesting practical strategies for all the individuals and institutions working towards social justice. It offers concrete guidance for the development of centre based practice, on curriculum integration and on the selection of developmentally appropriate educational software. It also explores ergonomic issues, as revealed by research. How should children sit at the computer? or how long? What are the risks?

Two major European research projects that generated rich examples of good practice inspire this book: the curriculum guidance materials developed as part of the European Union funded Developmentally Appropriate Technology in Early Childhood (DATEC) project and the authors' evaluation of the IBM KidSmart initiative. Taking the practice and policy development of one model Early Excellence Centre as an example, the authors map the development of good practice in staff development, children's learning and use of ICT, and in working with parents.

The will be essential to all those working in early years education and to teacher educators and policy and curriculum developers in primary schools.

John Siraj-Blatchford teaches at the Faculty of Education, University of Cambridge. Iram Siraj-Blatchford is Professor in Child Development at the Institute of Education University of London, and the author of *A Curriculum Development Handbook for Early Childhood Educators*

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