

Let's Go Bananas with Fyffes

Reviewed by Melanie Fasciato, Senior Lecturer, The Manchester Metropolitan University

Another free CD-ROM from Fyffes. This time it is part of an Education pack that includes teachers' notes, a cross-curricular coverage audit, a range of pupils' worksheets, display card captions, and large colour photographs, all on A4 laminated cards.

The CD-ROM did not like my (powerful) CD/DVD player and refused to play the video clip. Otherwise it was simple to install with clear instructions. The CD-ROM itself was fairly easy to navigate, but I found the introductory section with the funny bananas tedious. It is designed for use by children at two text levels and therefore it could be used as a way of teaching basic ICT skills, as well as higher level information retrieval and research skills. This would justify the ponderous nature of the introduction. The easy text is spoken and the main text can be spoken if clicked on. The key words in the main text can be clicked on to provide extra information. There is an explore feature which gives a detailed index. This depends on the level of text chosen. There are four sections dealing with The Story of the Banana, Growing Bananas, Ripening Bananas and Selling Bananas. A glossary covers the main elements of the text of each of these and there are Banana Jokes to click on that are described as giving 'light relief'—you decide! There are exercises in the main text section and some of these are quite subject focused, for example a 'cloze' procedure.

Moving onto the worksheets, these are photocopiable and both support and develop the text. They cover a range of subject areas, but a key is provided in the top left corner, giving guidance about the main subject focus of the worksheet. Some of the computer exercises are included in paper based format. As with the Plastics CD-ROM (Spring 2001), the

material was prepared before the 'new' National Curriculum, so references to attainment targets and programmes of study are out of date.

The display cards and captions are useful. Most of the photographs are of good quality, with the exception of the photograph that shows packing the bananas into bags, which is out of focus.

The language and concept level of the worksheets is generally higher end of Key Stage 2, even when the task appears relatively easy. The CD-ROM would be easily used by the majority of Key Stage 1 and 2 children, given the level of computer literacy that is found in many schools. The content could be confusing, with children skipping between the levels. The main text pages have an illustration and a text box, back to book format. As commented on previously, there was a problem with the video clip, but there is a helpline number to call.

To sum up. This is a useful resource but due to the complexity of the CD-ROM, the use of this component would need to be supervised by a teacher, otherwise children would be tempted to explore the possibilities of the CD-ROM rather than learn about bananas. It offers a wealth of 'exercises' and these can be used out of the context of the rest of the material, for example the fruit and vegetable 'grouping' exercise and the maths problems. As a freebie, this is an excellent product to dip into for useful material.

Let's Go Bananas with Fyffes

Fyffes: Free

Contact: Fyffes, PO Box 45, Prestwick, Manchester M45 8FY

Appropriate content	✓✓✓✓	Generic use	☐
Pupil/student use	✓✓✓✓	One of a series	
Teacher resource	✓✓✓✓✓	Photocopiable	☐
Visuals	✓✓✓✓	Pupil/student activities	☐
Overall style	✓✓✓✓	Cross-curricular	☐

Liquids Mean Life

Reviewed by Jonty Kinsella, Deputy Head of Department, Orleans Park School

This substantial pack is FREE to schools from British Soft Drinks Association at 20-22 Stukeley St, London WC2B 5LR and www.britishsoftdrinks.com. It comes as a series of A4 booklets, and the author has suggested that it is suitable for Key Stage 3.

The nine pupil booklets are printed as four-sided landscape in column format with print in a variety of colours but predominately in light blue. Illustrations are cartoons and they are used liberally in each. An additional booklet suggests some briefs that could be used and shows how the pack fits with the required programmes of study.

The nine teacher booklets are more substantial and are colour coded, portrait A4 sized, some having up to 12 sides. These supply information that I have not seen in such a detailed way anywhere else.

Additionally, there is a copy of the annual report from the British Soft Drinks Association. This explains how such an association works to market and promote the industry. This gives examples of how they have addressed important past issues such as benzene in mineral water and the poor quality of fruit juices. It is in itself a very interesting aid to explain the workings of such a body and could be used effectively at A' Level in the marketing section of syllabuses.

The 2000 Sucralose Soft Drinks Report published by Tate and Lyle as a pocket guide, gives some interesting statistical data. Consumption of all soft drinks is rising and in 1999, 11,260 million litres were consumed. Of this volume, 58% is carbonated (not including unflavoured water) and 15% fruit juice.

As is the case with such packs all aspects of the product are dealt with. The pupils' books cover legislation, packaging, nutrition, simple detail of the production process, marketing, product information etc. Three booklets are devoted to different types of drinks, and together with the corresponding teacher literature, this is a welcome addition to my own product knowledge. Indeed this most important 'food' has for so long been ignored in textbooks and in our syllabuses generally.

Each pupil booklet has suggestions for classroom activities: adding bubbles; extracting juice from both fruits and vegetables; using existing packages in familiar ways to teach graphics, ingredient composition etc.; opportunities for sensory work and some pen and paper exercises. The activities are indeed suitable for most Key Stage 3 pupils.

I welcome such a publication and any of the comments I make below stem from the practical aspects of being a teacher with one-hour lessons in an 11-16 comprehensive school. Again I repeat in this review my concern about the accessibility of the text surrounding the activities, to the average and below average pupil. There are no questions to test comprehension of the information, an exercise which does at least help pupils to focus and which gives us feedback on their understanding.

A substantial number of my pupils would just not be willing to even face the small, close text. The vocabulary is very technical and the sentence structure complex. This means that I would have to retype sections in simpler, larger format, and I would not budget my time in this way. The literacy initiative may help this perennial problem but the Key Stage 1 and 2 pupils are not yet coming through. Also, the coloured type will not photocopy and more than one of the same booklet would be needed.

In truth, I feel the information is mixed in its usefulness for average pupils at this key stage. Some concepts, mainly scientific, are of too high a level of cognitive demand for 'application' and 'analysis' as requested in any brief; e.g. 'chemical inertness', 'biological contamination', 'marketing mix'. However, some information is useful e.g. clear lists of the types of flavours, ingredients in such products, types of packaging materials, statistics for consumption and for distribution

channels, sweetening agents, etc. This does not mean that it cannot be used in part or in later key stages.

I would like to see more help given of an organisational type – spoon feeding if you will. A list of equipment materials and ingredients, suggestions of lessons and their sequencing, and a simple cross-referencing/index of how to find information, and better real and simple photographs of industrial practice would all be welcome.

Liquids Mean Life

Sue Plews

British Soft Drinks Association: Free Orders: 20-22 Stukeley St, London WC2B 5LR or www.britishsoftdrinks.com

Appropriate content	////	Generic use	=
Pupil/student use	////	One of a series	
Teacher resource	////	Photocopiable	
Visuals	///	Pupil/student activities	=
Overall style	////	Cross-curricular	=

Design and Make It! Food Technology for Key Stage 3

Reviewed by Dawn Williams, Key Stage 3 Co-ordinator, Ysgol John Bright, Llandudno

This resource is the *D&T Design and Make It! Pupils' Book and Teacher Resource Pack*. It is intended for use at Key Stage 3 for delivering food technology. The teacher resource is a ring binder file with an assortment of lesson plans, guidance and worksheets.

The pupils' book covers all the requirements of the National Curriculum covering topics such as hazard control systems, quality assurance and testing performance. Each page takes students through the tasks they should complete on their design sheets which match the National Curriculum requirements. I particularly liked the 'hints' given e.g. Remember 'the image of a new food product must match its target group'. These short, sharp sentences help reinforce the salient points of the pages under investigation. The book focuses on industrial situations and manufacturing concepts.

This colourful book can be used for students to deliver whole units (there are six in total – cake production is one of the units covered in detail), or to deliver particular topics set by the teacher. I liked the flexibility of the book and consider the layout to be appealing to pupils in Key Stage 3 – with good use of colour, diagrams and activities to be carried out.

The activities are all intended for use in pupils' projects which enables the teacher to select the pages that are most useful for particular classes and these activities are conducive to working through the design process – the work to be completed on design sheets as would occur in the classroom. In many student textbooks the



activities appear as questions, and as a teacher you have extra work to change this to make it relevant for your design project. I considered this to be a definite strength of this book.

I thought the teacher resource was a useful blend of worksheets, lesson guidance and assessment information – the section where you can target student designing using the sheets given to focus them to the next assessment level that they are aiming for. The pack also includes end-of-unit tests. The sheets are easy to read and clearly laid out. The presentation of the teacher support pack is not as exciting as the pupils' book due to its intended use.

The support worksheets link nicely back to the pupils' book and all the activities form an interesting unit as a whole. The creative teacher will like the flexibility it allows to select sheets and topics to cover within their classroom, but it can be used as a whole.

The language used is age-appropriate and some of the worksheets would be suitable to deliver topics to less-able Key Stage 4 students. It provides a good structure for progression from Key Stage 3 to Key Stage 4.

The pack could be used with any member of the class. However, I would suggest careful selection in Year 7 with the sheets used. The introduction about food technology, project guides and likes and dislikes sheets were quite a good introduction to assess how the students in

Year 7 could cope with the text. Certainly less able lower school groups may like the visual appeal of the book but struggle with its readability. The glossary of terms at the back of the book was well-detailed. I feel I could use the pack best with Years 8 and 9.

This pack is one of a series – *Textiles* and *Product Design* are also available. I shall be requesting a copy of each to assess their suitability for use in Key Stage 3 because I liked the layout and content of this pack. Overall, an adequate pack with some very useful sheets and ideas. The activities are sound and the flexibility of this resource is what makes it a joy compared to other quite rigid packs.

Design and Make it! Food Technology for Key Stage 3

Hazel King and Tristram Shepard
Stanley Thornes: £8.00 (Pupils' Book);
£50.00 (Teacher Support File)
ISBN: 0 7487 4427 4 (Pupils' Book);
0 7487 4428 2
Orders: 01242 267270

Appropriate content	✓✓✓✓	Generic use	⇒
Pupil/student use	✓✓✓✓	One of a series	⇒
Teacher resource	✓✓✓✓	Photocopiable	⇒
Visuals	✓✓✓	Pupil/student activities	⇒
Overall style	✓✓✓✓	Cross-curricular	⇒

Fidget

Reviewed by George Asquith, Head of Technology, Greenhead School, Keighley, West Yorkshire

The Fidget pack comprises of a CD-ROM and a workbook. The workbook focuses on the applications of metals, and provides in depth information on the properties of metal. There are also a number of well laid out worksheets covering the areas of study and project ideas for metals. The workbook is well thought out with each topic leading on well from one to another and nicely divided into sections.

There is guidance on how to choose materials for the project concerned and the properties of metals is outlined in a clear and concise manner. There are useful tables for metals, ferrous and non-ferrous and the properties and applications for each. The worksheets are differentiated so that they cover a mixed group of abilities.

Joints are covered, again in a concise and easy to understand format and there are useful diagrams and sketches to illustrate the points covered in the text. Temporary and permanent joints are covered together with knock down fixings. There is a good selection of different glues and rivets and the most appropriate uses for each. The pages on sheet metal joints are particularly good, showing a simple but detailed account of the processes, clearly illustrated with diagrams. The worksheets are also well presented with illustrations to aid the pupils.

Again, the section on hinges, catches, locks and stays covers most types available and each type is clearly illustrated, accompanied by a short description. Examples are also given for where they might be used.

The section on cleaning and finishing metals covers most processes, including painting, plastic coating, fluidation, electroplating and cleaning copper/brass. The different ways of removing materials



such as sawing, filing and chiselling are described, together with the types of tools used for each process. There is information on the production of aluminium, which runs on for over four pages and I feel this is covered in too much depth.

The semi-fabrication section is excellent, providing a detailed account of casting. It also covers examples of processes, which although may not be possible to be covered in practical sessions within schools, provide the pupils with further insight into the subject.

A problem with the workbook might be wear and tear on the punch holes and sheets may be lost. However, this provides the benefit of being able to photocopy the worksheets.

The links to the National Curriculum were excellent, providing the teacher with a clear understanding of what areas they are covering and where they could expand the content to give a greater in depth knowledge. The workbook provides a solid grounding for pupils at Key Stage 3. This can then be used for Key Stage 4 pupils to build on this knowledge, as the workbook contains in depth information that would be useful at this more advanced stage.

The CD-ROM was not very inspiring. The illustrations and diagrammatical information were not very stimulating and would not retain the pupils' interest.

There are a number of worksheets on the process of metal work, and they cover all sections of the workbook. They are clear and easy to read and give sufficient space on each sheet for the pupils to answer the questions fully. There are two sheets on evaluating the product, which will be useful to the pupils, setting on the criteria on which they should judge the product. There is a diary page so that the project can be managed time effectively.

Health and safety issues are covered in sufficient detail and the pupils are to make a poster on these issues as part of the project. The ideas for products are good and are of appeal and relevance to both boys and girls e.g. sport, jewellery, and holidays.

The quality control section explains why products should be made to certain standards and the pupils are shown how to collect data and record information as the product is designed and how charts can be used to record information.

There is a glossary of terms which is clearly set out and in depth.

To conclude, I found the title of the pack difficult to come to terms with, and the fact that components dealt with are more akin to the use of wood, there is confusion as the majority of the content makes reference to metals. At £98 the document is not good value for money.

Fidget

Fidget UK: £98.00 (plus VAT and p&p)
Orders: 01902 312829

Appropriate content	✓✓✓	Generic use	⇒
Pupil/student use	✓	One of a series	⇒
Teacher resource	✓✓✓	Photocopiable	⇒
Visuals	✓	Pupil/student activities	⇒
Overall style	✓✓	Cross-curricular	

Finding out about Managing Waste

Reviewed by Ann MacGarry, Education Officer at the Centre for Alternative Technology

This is an extremely useful, clear and comprehensive resource for students and teachers on the issues related to waste. It contains a great deal of factual information, clearly presented with attractive design and layout and good illustrations, covering a wide variety of things defined as waste. There are many misconceptions and interrelated issues in waste management and this book deals with the complexities intelligently and in a way that should be comprehensible to students.

There are also Teacher's Notes, separate from the book itself. It makes some very important points and reiterates them effectively to drive points home. For example, it differentiates between litter and waste and gives litter the low priority it deserves. It also stresses the fact that, whatever we do, waste products will not just conveniently disappear and it deals with the interplay of waste issues and energy use.

It contains sections on What is waste?, The history of waste (which is fascinating), What happens to waste?, Designing to reduce waste, Conserving resources, Recycling in practice and What about the future? For a design and technology teacher, the most useful thing about this resource is the information and ideas about products and materials that will help students to get a perspective on evaluating products. It not only gives a lot of useful general information about materials, their recyclability, energy used to produce them and many other factors, but it also raises some perspectives on evaluating products and processes. It therefore gives students the tools to make deductions for themselves. It suggests a

Finding out about Managing Waste

Colin Harris, Jane Bickerstaffe and Maggie Thurgood

CRL Education 2000: £5.99 for 1, £4.25 each for 10

ISBN: 1 873525 07 9

Orders: 01223 507360 or
crl@commres.co.uk

Appropriate content	////	Generic use	==
Pupil/student use	////	One of a series	
Teacher resource	////	Photocopiable	
Visuals	////	Pupil/student activities	
Overall style	////	Cross-curricular	==

About managing waste



couple of graphics projects but it fails to take the opportunity to suggest any activities to design and make in resistant materials. Students could be designing compost bins or devices to make it easy to sort waste within the home to make selective disposal easy* but this book would be an extremely useful back-up resource if you were to do such things.

Factually it is very accurate and thorough, but the authors have obviously not heard about the developments in high fibre composting (adding paper and cardboard to compost heaps) and they therefore underestimate the percentage by which we could all reduce the amount of waste we send off to landfill sites. It also does not make any reference to the biggest disadvantage of building incinerators for rubbish, which is that they require us to keep producing waste to feed them and therefore discourage reduction, and recycling. The 'National Curriculum Matrix' in the Teacher's Notes covers Key Stages 3 and 4 - the only indication of the

target level. The matrix does not mention technology although the cover describes it as a resource for 'technology'. The book could well be used as part of background information for A' Level work. At £5.99 (£4.25 per copy for 10) it is good value.

*CAT is running a design and make competition on this. For further information, telephone: 01654 702400.

Hands on!

Reviewed by Les Porter, Course Director for Industrial Design and Technology at the Design Department of Brunel University

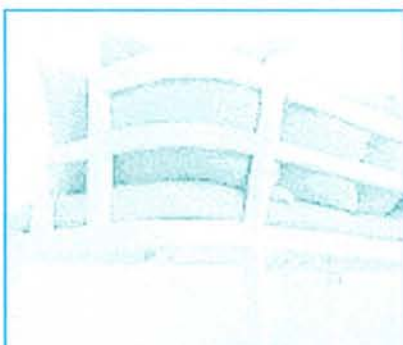
'Hands on' is a video produced by the Nordic Timber Council to provide starting points for future designers. In the video, seven Nordic designers and design students give their views about designing using Nordic Red Pine and Nordic White Spruce for furniture and interior design. The tape starts with a condensed version, which lasts for 14 minutes and is then followed by the full 40-minute version.

The video first focuses on Mats Winsa, an architect who firstly looks at some of the topological aspects of Norway and then provides some case-study material about his work on designing wooden buildings and gives some stunning insights of his work in the context of Norwegian culture. Secondly Hanna Dahlbäck, (Figure 1) who is a fourth year design student describes her work from initial sketches, through a beautiful wooden concept model to the final product prototype of a beautifully designed timber sofa (Figure 2).

Next Thomas Sandell, an architect and designer, explains his philosophy about using pine and looks at some examples of his design.

Fourthly Simo Heikkilä, who is a Finish architect and furniture and interior designer, explains his own special method of using full scale models at the beginning of his design process and then follows his modelling techniques with paper drawings. His work, using the integration of pine and steel, provides some particularly inspiring outcomes. Later in the video we see Simo again. This time he persuades a factory to change its production techniques away from pine to using spruce to realise his furniture designs.

After Simo, Ola Rune who is an interior designer, discusses his work on the redesign of imaging for the McDonald chain of fast-food stores. He uses a new technique for cutting pine using a 'star



configuration' and then he goes on to describe his designs for the food chain.

Following Ola, Dan Borg, who is a mature design student with a family of young children, talks about his work designing and developing furniture for children and their special environment.

The video then visits the Nordiska Museet to look at furniture design from the 12th to the 19th century and makes some interesting comparisons about the timber used for furniture design during different periods along the time line. The video also visits the Alvar Aalto Museum. This section provides particularly strong resource material looking at the classic construction techniques used by Aalto and his laminated functional furniture.

Next a visit is made to Jella Hekstra, a Dutch designer who designs interiors, building renovations and extensions. He gives his views regarding 'why Nordic timbers are becoming important in the current Dutch design movements'.

Finally, the video concludes with a series of thumbnails of furniture designs by a young female Swedish designer. She uses white painted pine for her designs. Her work uses straight lines and her work is simplistic and stunning. It has very clever concepts and her work is futuristic (Figure 3).

In the short version of the video, the narration is undertaken by the Nordic people themselves and is often slowly delivered and sometimes difficult to understand. In the full version, the narration is British sounding, but although easier to follow is often ponderous and does not do justice to the content of the resource.

The video is well filmed, well produced and provides excellent stimulus material in the form of case studies. I believe that to use the whole of the video in a classroom situation in a UK school would be inappropriate. The video is rather slow moving, and although it provides some excellent insights into the work and design thinking of the Nordic designers and students and their work in spruce and pine, the approach and narration is not correct for UK schools. The content of the video would be good for very focused GCSE classes and appropriate for A* or A/S* Level students, but I think that the teacher would need to provide students with a directed worksheet to answer while the video was being watched otherwise they would soon lose interest.

I have shown the video to a group of undergraduate designers. They showed interest in the design approaches and were able to make analytical and critical judgements about the Nordic design process and make evaluations and comparisons to work that we do in this country. The feeling of the group who watched the production was 'this is an informative piece of resource material that would provide a useful resource to have in a library for students to dip in and out of as the need in their study arose'.

To be able to use this video, I believe a teacher would have to provide a booklet for the students with 'running time' prompts so that the student could 'fast-forward' to that point and address the appropriate questions that the teacher has asked regarding that section.

The video may be purchased from the Nordic Timber Council, Drottning Kristinas vag 71, S-114 28 Stockholm Sweden. Tel. +46-8 440 85 60. Fax: +46-8411 26 76. E-mail Nordic@ntc.se, web site: <http://www.nordictimber.org>

Hands on!

Nordic Timber Council
www.nordictimber.org

Appropriate content	✓✓✓	Generic use	☐
Pupil/student use	✓✓✓	One of a series	☐
Teacher resource	✓✓✓✓	Photocopiable	☐
Visuals	✓✓✓✓	Pupil/student activities	☐
Overall style	✓✓✓	Cross-curricular	☐

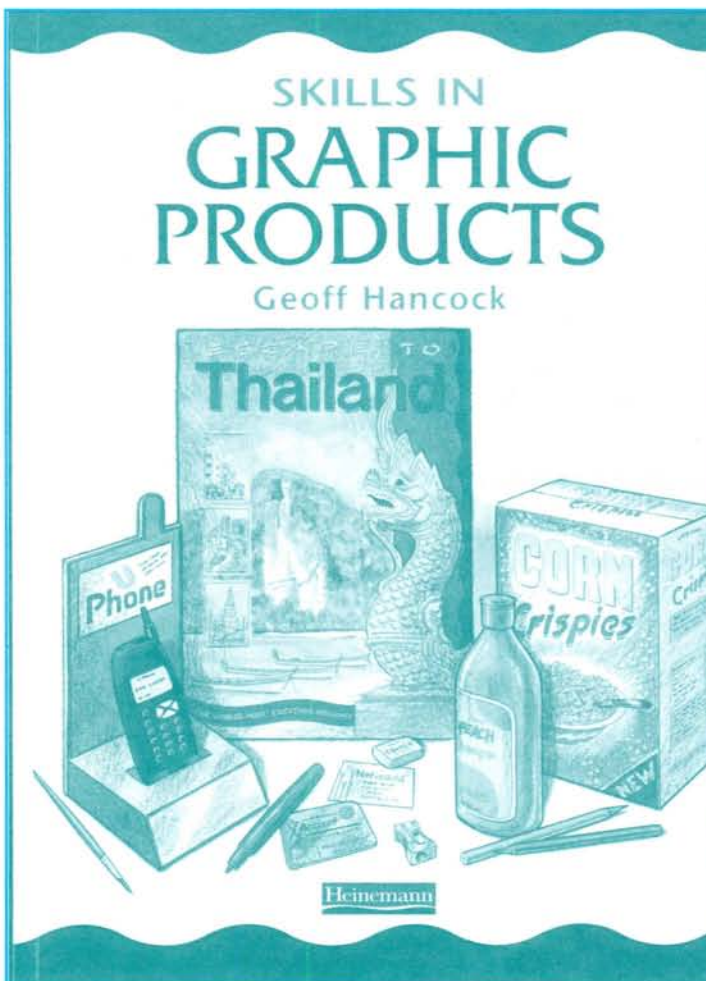
Skills in Graphic Products and Teacher's Resource Pack

Reviewed by Michael Lawrance, Head of Faculty, Art, Design and Technology, Bishop Fox's Community School

The Pupils' Book

The book is aimed at pupils aged 11-14 and is intended to provide 'plenty of information to help pupils acquire knowledge and understanding of the wide variety of graphic products' and 'to practise the graphic techniques they will need' at Key Stage 3 and as a foundation for Key Stage 4. The author makes it clear in the accompanying Teacher's Resource Pack that it has been written for the revised National Curriculum reflecting 'new emphasis on ICT and industrial and commercial applications'. So, among the standard fare of basic graphic skills explained and illustrated and obviously to be expected in a book of this nature, its colourful and busy content also includes a fair amount of photographic documentation of commercial examples of graphic products and other 3D products and their means of production; computer aided design and manufacture.

As a vehicle for foundation skills for the target age group identified, the language and content fulfil the book's aim as an 'easily accessible source of information'. The introductory pages deal briefly with the basic tools and equipment for graphics, and give a flavour of a design process model, and the basics of research. The first third of the volume (approx. 30 pages) covers familiar ground of foundation graphics and designing skills; with topics such as information and presentation graphics, charts, pictograms, consideration of existing products, planning the make, design ideas, development, quality matters, testing and evaluating. All this is supported by colourful and relevant examples in



photographic or diagrammatic form, sometimes with pupils' own work being included and written in a concise style.

The next section (approx. 20 pages) deals with drawing techniques: sketching, 2D and 3D, perspective, isometric, basic orthographic, light and shade, colour awareness and its application, etc. Then, commercial examples of graphics and graphic products support topics in the last half of the book (about 45 pages). Topics amplified include information graphics, logos, ergonomic graphics, grids and layouts, posters and merchandising, packaging and typographic details and considerations. There is some interesting coverage of ICT developments such as digital editing, CAD and CAM and cyber graphics – a thumbnail sketch of a pupil's web site design project. The book concludes a glossary and index, preceded by two sets of double-page spreads on a design case study involving some more pupil work on developing a range of graphic products on the theme of corporate identity.

Most topics appear as a double-page spread and virtually every page includes a short list of activities which pupils can follow to develop their capability in designing or practise certain techniques. This I felt was a particular strength which would certainly assist a teacher or the pupil as an independent learner. Certainly, the scope of the book would satisfy pupils aged 11-14, although other books on the market seem to have more inspiring graphic content. While it is important not to compare the book too closely with the growing range of similar textbooks in the specific subject area of graphic products mostly designed for the older Key Stage 4 pupils preparing for GCSE, I felt less sure that the appeal of the material would be sufficient to sustain use far into Key Stage 4. Published competition is very strong in this respect and publishers are obviously keen to develop two separate markets for two separate key stages. It would be very much a personal decision for a Head of Department, say, to invest in this well-priced book thinking it could satisfy the needs of Key Stage 4 as well as Key Stage 3. On the other hand, a

Skills in Graphic Products

Geoff Hancock

Heinemann: £8.25 (Pupils' Book) £17.25

(Teacher's Resource Pack)

ISBN: 0435 42338 X (Pupils' Book) 0435

42339 8 (Teacher's Resource Pack)

Orders: 01865 888080

Appropriate content	///	Generic use	
Pupil/student use	////	One of a series	⇒
Teacher resource	////	Photocopiable	⇒
Visuals	////	Pupil/student activities	⇒
Overall style	////	Cross-curricular	

trainee or newly-qualified teacher seeking to bolster personal skills in graphics could benefit from a lot of the material contained in these pages, not least the very handy little exercises for pupils to do which would fit comfortably into a lesson plan or 10!

The Teacher's Resource Pack

The Teacher's Resource Pack would be an asset to any teacher of graphic products, either newly-qualified or well-versed. No colour here, all black and white, photocopiable (and so higher priced as the trend goes), punched ready for a ring binder. There is a set of additional fact sheets, useful templates and guides with some stand-alone worksheets for pupils to use. To quantify it, the pack breaks down into nine information sheets, 26 resource sheets, 11 pupil task sheets. Thirteen of the sheets are identified for use as extension or homework exercises and some could serve as activities for when staff may be absent. On a further practical note, A4 to A3 enlargement may be assumed for many sheets, although all can be used in A4 format.

Resource sheets are principally underlays and templates to help pupils improve presentation and quality, or save time, or both. However, many teachers will have seen resources like circle and ellipse guides and perspective grids before. The author has thoughtfully developed a 'Pupil Skills Record Sheet' as a support for self-assessment but also to aid the monitoring by staff of the progress of pupils throughout Key Stage 3. Topics are grouped by the side of headings such as rendering, orthographic type drawings, typography, design process and ICT. A good motivator for pupils and a time-saver for staff. He has also listed 14 useful web sites with a brief synopsis of what they offer pupils and projects and tips for teachers on design and technology in general and graphics in particular.

A set of resources beneficial to staff and pupils alike are the guidelines on 'Specification, Product analysis and Final Evaluation'. Also highly useful is the production schedule, the various drawing and rendering exercises, the point-of-sale display notes and net, the carrier bag design information sheet and accompanying net resource sheet, the logo design resources. I could go on – these are all the kinds of thing that good teachers end up designing for themselves or wishing they had done sooner if only

they had time. Again, a real boon for NQTs and trainees.

The final sheets in the pack are some of the most helpful of all and the topics are clearly and succinctly described, in a style which is concise though detailed where appropriate. Here the reader will find some useful summaries on the main industrial printing methods as well as information on costing graphic products.

Of the two volumes, I rate the Teacher's Resource Pack more highly, since it provides a lot of time-saving and valuable resources for both staff and pupils. The Pupils' Book is competent but rivals from the Key Stage 4 market may outstrip its appeal.

Resistant Materials to GCSE

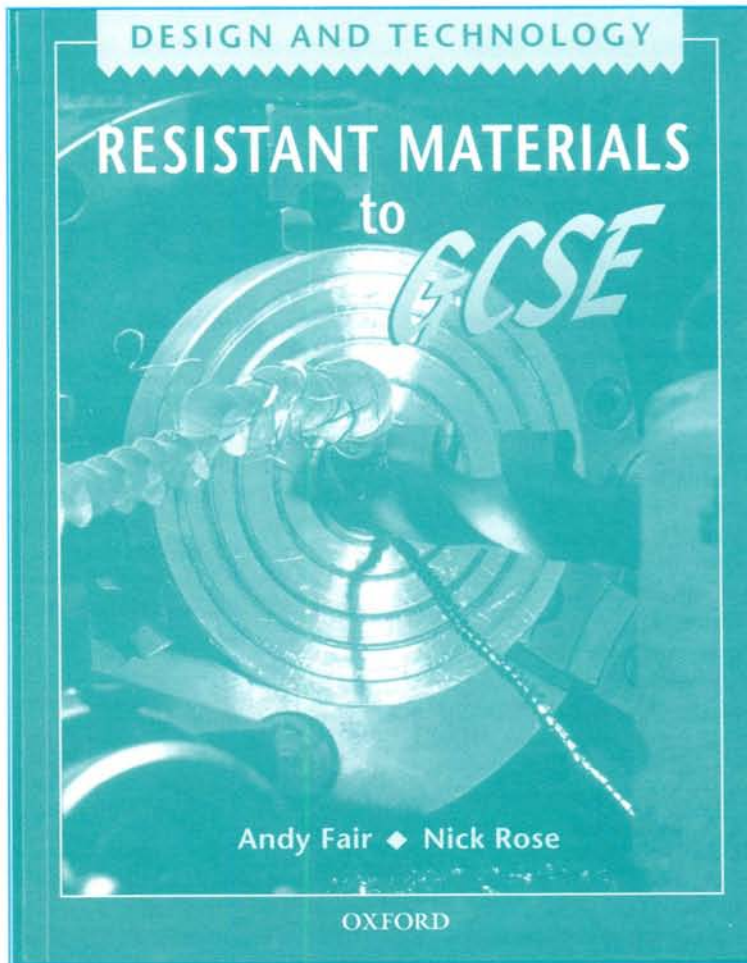
Reviewed by Roman M. Gawel, King's School

Andy Fair's and Nick Rose's version of a GCSE resistant materials textbook has been written with an eye on all the current syllabi and purports to provide a 'comprehensive guide' for the student in some 120 pages. The book is certainly well laid out: its three sections (Designing, Making and Knowledge and Understanding) are subdivided into well focused chapters which make it easy to find your way through the book. The chapters themselves consist of numbers of two-page spreads on particular themes.

The first section on designing takes the student through the customary territory of research, specification, analysis and so on, referring briefly to themes that should be familiar to students, such as presentational techniques. Some emphasis is wisely placed on planning for manufacture and manufacturing in quantity but the teacher would probably wish to supplement the content of the book here. A solitary spread on evaluation (I'd prefer to have two, one for formative and one for summative evaluation: but perhaps I'm nit picking) leads us to a short section on testing. Again, this is very condensed but there is some material here of real value when it come to encouraging students to consider both working properties and how they might be able to test them. Several simple and effective tests are illustrated.

The bulk of the book consists of the 'working with' section. Three chapters cover wood, metal and plastics: selection, tools and processes are all thoroughly covered, albeit briefly in many cases. Usefully, the book illustrates processes that tend to be used less these days, but which students still need to be aware of: casting and forgework are examples. Although a fourth chapter addresses wider issues such as quality control and product analysis, I am disappointed that there is not more emphasis on the issue of environmental impact.

'Knowledge and Understanding' breaks down into numerous spreads on health and



safety and systems. Within the systems section the teacher will find covered linkages, gears, levers *et al*, plus work on CAD/CAM and control systems. The health and safety aspect looks at both product safety and safety at work, although I imagine that the authors expect teachers to provide more examples than are in the book: green safety signs are not illustrated, nor is the Lion mark for toys.

As to content, this book furnishes students with some information on all that they could reasonably be expected to know and thus it forms a very solid basis for additional work. It should be useful to the teacher and gives the impression of being very 'pupil friendly'. The presentation is in full colour throughout and each two-page spread is nicely balanced between text and pictures.

The spreads are well conceived. A single theme is covered in each, with a clear statement of the subject matter given at the head of the page, leaving students in no doubt as to what they should get from the material. The text is clear and broken into convenient sections, with key words and phrases being highlighted. There is also a box of questions with the welcome

innovation of tagging those questions more suitable for higher level candidates. Diagrams are clear and are supported by photographs of relevant artefacts. If I had a criticism, it would be that some of these photographs are too small and not well enough captioned.

An index and glossary are supplemented by a small but invaluable appendix containing the most useful anthropometric data and standard sizes of common products. I can't think why more textbooks don't include this information.

All in all, this is a well-produced book. Although paperback, it has a stitched binding and should prove durable. The content and presentation should stimulate the reader's interest and important facts are presented in an easily assimilated fashion. The sheer amount of information does necessarily mean that the spreads are data rich, so students will need to be told to read carefully and thoroughly. There is a lot here for your money: the authors certainly have succeeded in their aim of producing a book that will effectively 'complement ... studies of resistant materials.'

Resistant Materials to GCSE

Andy Fair and Nick Rose

Oxford University Press: £10.00

ISBN: 0 19 832790 0

Orders: 01536 400552

Appropriate content	////	Generic use
Pupil/student use	////	One of a series
Teacher resource	////	Photocopiable
Visuals	////	Pupil/student activities ==
Overall style	////	Cross-curricular

Inventing the Modern World

Reviewed by David Spendlove, Senior Lecturer, Liverpool John Moores University

The authors of this book have attempted the very difficult task of focusing upon 250 years of technological change with a British perspective within the confines of 220 pages. In doing so they have managed to reflect upon the complex relationship between science, technology and people and artefacts, which ultimately proves to be the strength of this publication.

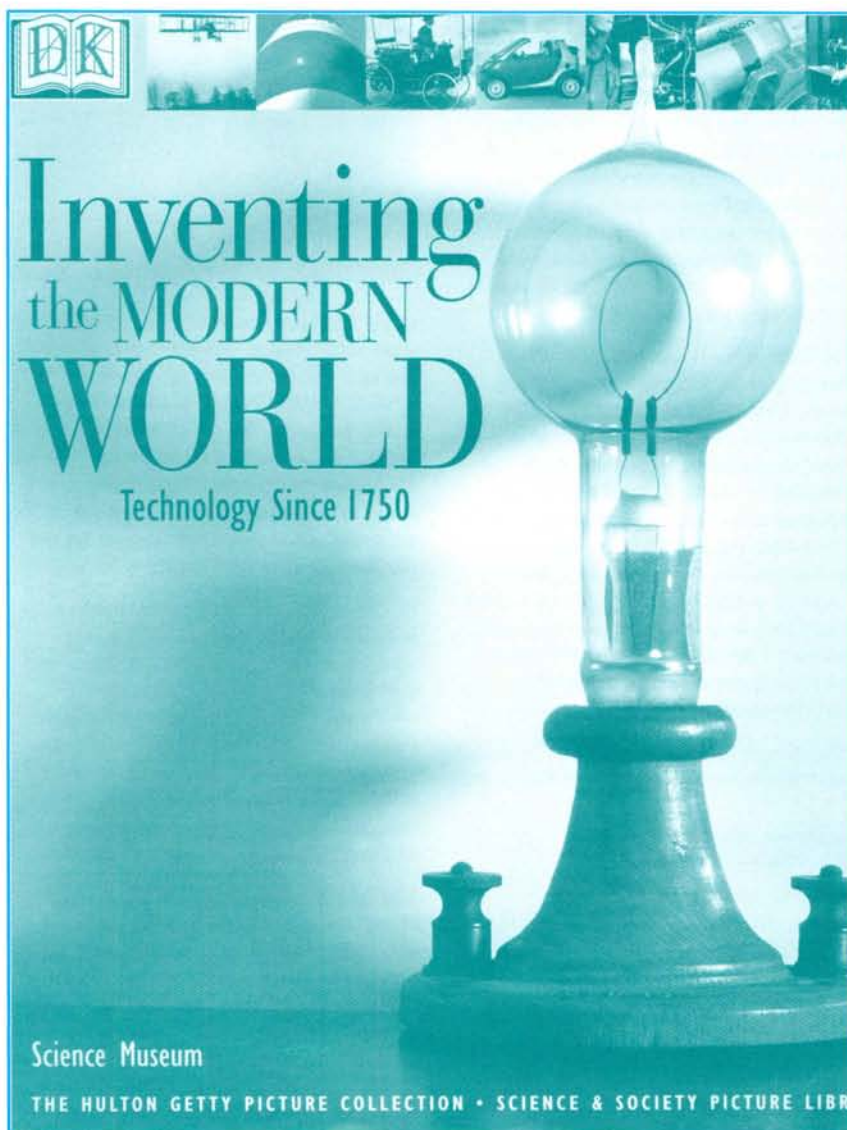
It is, however, difficult to know who would purchase this book (apart from the obvious accompaniment to a science museum trip) as it fails to be sufficiently technical or specific, because it attempts to cover such a broad range of subjects including inventing accuracy, manufacture by machine, the industrial city, the age of the engineer, the second industrial revolution, the age of mass, defiant modernism, the age of the consumer and the age of ambivalence. You could, however, imagine this book as a resource within the school library, being used as a starting point for general browsing. However, within the exciting multi-media world that we live in you get the unfortunate feeling that this type of book is now somewhat dated.

The early sections are reminiscent of the old GCE engineering books with features on Ironbridge, Trevithick, Brunel and Stephenson and although I enjoyed reading the section I wanted to find cross linking to further information, particularly web sites or CD-ROMs (references are provided in the back of the book but tend to be very general).

The photographs are, however, excellent and the sections that I found particularly interesting from a design and technology perspective were the later sections on the age of the consumer, and the age of ambivalence. These sections really only

scratch the surface but the issues covered include environmental threats, medicine, ethical threats and the anxieties about the unintended consequences which have undermined popular trust in the entire concept of progress. These are big issues that we should be exploring through design and technology, however, the information would only provide a starting point for discussion.

Unfortunately, the book ends just when it is beginning to get interesting and original. Ultimately this book would be a useful single copy resource for the design and technology department or the school library. It is particularly useful for lower school pupils who may be interested in browsing around different technological topics. However, further additions and cross-referencing particularly to the earlier sections could have made this a really useful resource.



Inventing the Modern World

Robert Bud, Timothy Boon, Andrew Nahum

Dorling Kindersley: £25.00

ISBN: 0 7513 3004 3

Catalogue available from www.dk.com

Appropriate content	✓✓✓✓	Generic use	☐
Pupil/student use	✓✓✓✓	One of a series	☐
Teacher resource	✓✓✓	Photocopiable	☐
Visuals	✓✓✓✓	Pupil/student activities	☐
Overall style	✓✓✓	Cross-curricular	☐

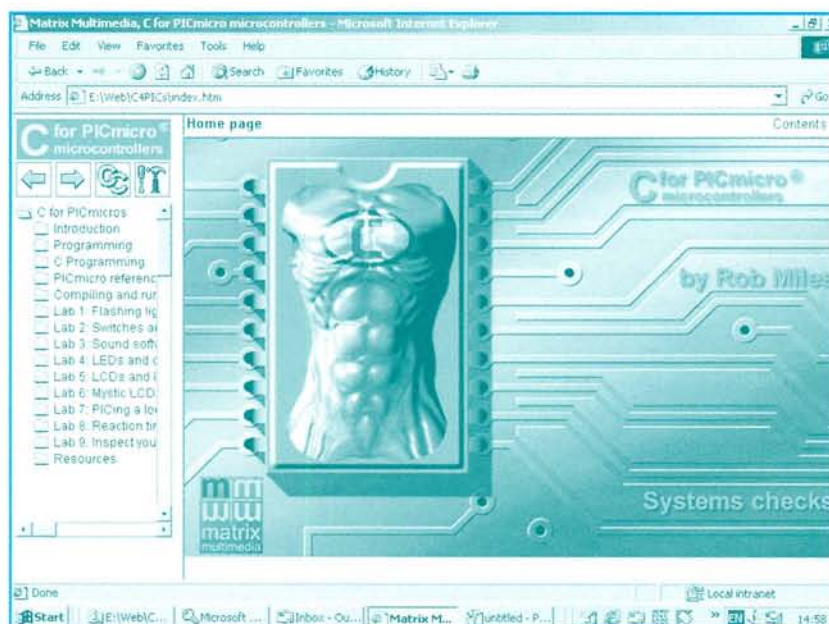
C for PICmicro Microcontrollers

Reviewed by David Foster, Head of Technology Faculty, Tibshelf School, Alfreton

This CD-ROM allows the user to fully explore the world of programming using C language. The beauty of this product is that it encourages the user to follow a simple series of instructions which form a complete course in C programming. This area of control applications can be thought of as a potentially difficult subject to be involved with and certainly an area that could hold some reservation from a teaching point of view. Teaching Year 9 pupils and above who are interested in this area of computer control is so much easier when excellent graphics can support the lesson. Pupils today expect to see and use quality media and this is certainly an excellent product. There is a good range of practical examples included for the student to work through. They can see what is happening at each stage of the program and would certainly feel supported by these examples as they write their own.

It would certainly be of value to purchase the optional development boards which have been developed for student use. These boards are available as a standard or a deluxe version but you should know that only the deluxe version is available to educational institutions and would form part of a package with an institutional license. The deluxe board includes a quad 7 – segment display, a quasi-intelligent dual line character alphanumeric LCD display and a plug top power supply. It is well worth visiting the web site for the company at www.matrixmultimedia.co.uk. The site contains information about this product and the range of similar electronic products made by Matrix Multimedia.

The PICmicro CD-ROM provides the user with all the required information to program the PIC16F84 microcontroller. It enables control and programming of switches into a sequence, for example, or



the use of other input devices. Some projects that would interest students include the use of sound by using an electronic organ example and making an electronic reaction timer for the more competitive element! Throughout the descriptions used by Rob Miles in the supporting text, he has really tried to make the stuff interesting. Of necessity, some of the language used is a bit 'techi', but Rob has a writing style which is almost conversational and one which I feel most readers would enjoy.

From a teaching point of view, I would recommend the purchase of this product as a stand alone application. In this way, a few pupils could work with a tutor and make some real progress. I feel that this would offer greater progression than perhaps running it as a networked version to a larger group. If a school had access to a video projector then the needs of a larger group could be more effectively met and the program would have some real impact. There is a lot of potential in this product and I am sure that the project boards, running from the printer port of a PC would really make the product come alive for the users. All in all, I would heartily endorse this product and have enjoyed my time with it.

C for PICmicro Microcontrollers

Rob Miles

Matrix Multimedia: £99.00 (single user)

Orders: 01274 730808

Appropriate content	////	Generic use	==
Pupil/student use	////	One of a series	
Teacher resource	////	Photocopiable	
Visuals	////	Pupil/student activities	==
Overall style	////	Cross-curricular	

How Things Work Today

Reviewed by Mark Hudson, Director of Technology/Deputy Head, Thomas Telford School

This is the kind of book that you used to get for Christmas from an aged aunt or grandparent. It is a beautifully illustrated book that takes the reader through a range of contexts. These are: The Urban and Domestic Environment, Communications and Leisure, Transportation, Crime and Security, Power and Industry, Medicine and Research and Space. *The Scientific American* is a worthy journal to produce this kind of publication.

A colourful and comprehensive range of annotated illustrations, photographs and text are provided along with a reference, principals, glossary and useful Internet addresses section. The language used is appropriate and will suit secondary level students.

Much of the materials is well known and adds little to the texts currently available covering this 'how it works' genre of books. There are some more current innovations covered, products like the now ubiquitous Dyson cleaner, as well as alternative cars, the Internet and virtual reality. The title though is rather a misnomer, the publication is already rather dated in look and feel, even its contents are more a very accurate reflection of how things have worked for some time.

As a research and reference text in the library it has a place but only covers the broad concepts. I suspect the most useful page will be the web address page. Students of all ages will find the materials accessible and support their general scientific and technological knowledge and understanding. It is readable but lacks the dynamic medium children have become accustomed to through the medium of the CD-ROM. The bottom line here is: would you purchase this book for £25 or spend a little more for a CD-ROM covering these and other materials? My money is on the CD. If, however, you feel that a glossy well illustrated and accessible book would add to the library shelves then this is a worthy publication.

How Things Work Today

Michael Wright and Mukul Patel (Eds)
Marshall Publishing: £25.00
ISBN: 1 84028 256 8

Appropriate content	✓✓✓	Generic use	⇒
Pupil/student use	✓✓✓	One of a series	
Teacher resource	✓✓	Photocopiable	
Visuals	✓✓✓	Pupil/student activities	
Overall style	✓✓	Cross-curricular	⇒

Continual Professional Development in Design and Technology – Summer Courses 2001

The following courses are available for teachers to take individually or, with further study, as part of an MA in Design Studies:

Designing with Computers: 16 - 20 July 2001

Experience a wide variety of Computer Aided Design applications, related to design work in schools. Course topics include an introduction to computer graphics; electronic circuit modelling; accreditation with Pro/DESKTOP 3D CAD modelling software.

Design and Technology: Electronics (Advanced): 23 - 27 July 2001

This course is designed to introduce and develop a range of electronic principles that can be applied in electronic products in Design and Technology at GCSE and 'A' level. It will include 'hands on' experiences and introduce computer aided design.

Computer Aided Modelling and Manufacturing with Pro/DESKTOP: 18 - 20 July 2001

This course is offered as part of the DfEE CAD/CAM in Schools initiative. It includes full training with Pro/DESKTOP 3D CAD modelling software; CNC manufacturing with plotters, routers and millers; an introduction to Rapid Prototyping.

Design: Contexts and Perspectives: 30 July - 3 August 2001

This course aims to recognise and discuss the large issues in design. Design contexts will include some consideration of the economic, cultural, social, educational and political. Design perspectives will include beliefs in progress, women and wider values and values analysis.

For further information about any of these courses please contact:

Mrs Sue Green, Department of Design and Technology,
Loughborough University, LE11 3TU. Tel: 01509 222652
Fax: 01509 223999
E-mail: S.E.Green@lboro.ac.uk
www.lboro.ac.uk/departments/cd



Advancing knowledge through research, learning and teaching

Machi-work: Education for participation

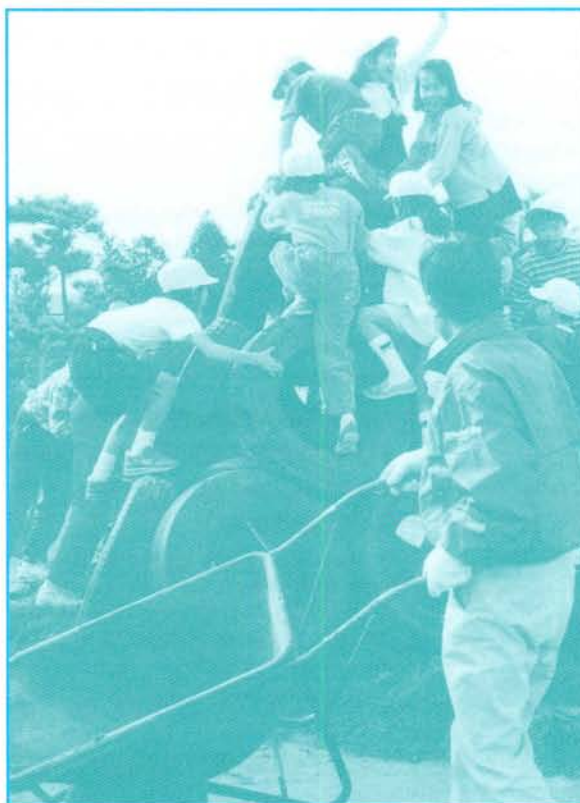
Reviewed by Maggie Rogers, Senior Lecturer, Goldsmiths College

This unusual and interesting book gives the reader insights into collaboration between the MACHI-work group in Japan and colleagues in the UK between 1994 and 1999. In trying to engage young people in the process of design and environmental change, the project teams have included environmental, design and educational professionals. Written in both English and Japanese, the joint publication is described as being written for planners, architects, landscape architects, community workers, youth workers and teachers and addresses a wide ranging view of environmental design across communities and continents. The case studies, largely in primary/elementary schools, illustrate participation by the community and how children's rights and needs can be considered in planning matters so offering a 'framework for thinking and action'.

The book is divided into three main sections. Part 1 offers the context and rationale; Part 2 describes case studies covering school grounds, centres, work in communities, participation policy and special initiatives. Part 3 explores techniques, strategies and working relationships. The changes, which have taken place in the curriculum of both countries in terms of environmental education are outlined, and the guiding principles are jointly presented. Photographs in colour and monochrome bring the projects to life and draw the links between the work in the two countries. Participation in environmental change, using Hart's 'ladder of participation' to illustrate the movement from awareness into action, is the theme for the case studies which follow. These offer unique insights into different cultures and approaches to involving children in working with other members

Machi-Work: Education for participation
(Eds) Eileen Adams and Isami Kinoshita
Trentham Books Ltd: £17.95
ISBN: 1 85856 233 3
Orders: 01782 745567

Appropriate content	////	Generic use
Pupil/student use	///	One of a series
Teacher resource	////	Photocopiable =
Visuals	////	Pupil/student activities =
Overall style	////	Cross-curricular =



of the community on 'live' projects, for example, in designing a new park, or as part of a community design programme.

In the final section, the authors outline a generative model of learning, where children reflect on their experiences and develop their knowledge, skills and understanding to 'rework' their designs and through negotiation, work with professionals to bring about change. Strategies for achieving this are offered and are illustrated with images from projects where children explore their space. A definition for critical thinking is also outlined in this section before the authors describe the process of designing.

Throughout the book, monochrome photographs illustrate the text, with some coloured plates included in the case study projects. What this book achieves is a sense of the common links in needs and learning experiences between communities in the two countries. It is deceptively detailed in the information given and ideas expressed and contributes much to the current environmental concerns, especially in terms of values and attitudes. It also offers excellent examples of the partnerships possible between environmental and design professionals, the local community and young people. Better participation, argue the authors, is achieved when children's

involvement encourages parents and other adults to become involved. They also argue that the experiences encountered through the case study projects have taken the young people out of the classroom to deal with real issues, working with adults to help to bring about 'environmental change and community development'.

The book is aimed at a wide-ranging audience but, nevertheless, offers ideas and strategies for students and teachers working with environmental projects. The format used is unusual in its layout and size, square with text in English on the left hand page, photographs on the right with Japanese text on the following two pages. While individual captions to the photographs would be helpful, on careful reading, the reasons behind the choice of this format becomes more apparent as images from different communities and continents blend into one overall message. At £17.95 the cost of this book may detract teachers from adding it to their reference material and, to those involved in environmental projects, it may seem familiar in its approach. Its strength lies in the description of collaborations between community partners in supporting children to design for change, actively participating in real design issues.

One Good Turn

Reviewed by John Eggleston, University of Warwick

This book isn't what you'd expect it to be. It's a moving, informed and loving tribute to screwdrivers and screws. The author is a passionate enthusiast of hand tools – he once built a house using no power tools.

Knowing his passion, the editor of the *New York Times* asked him to write an essay on the 'best tool of the millennium'. This is it. If like many readers of *The Journal of Design and Technology Education* you are warmly disposed to hand tools, you will love this sensitively written and beautifully bound little book with its steel and woodblock illustrations and its hand cut pages.

The story begins with Archimedes' water screw and helix, Leonardo's carved wood screws and ends with American car design. Rybczynski's search of the classical and medieval literature on craftsmanship is exhaustive yet eloquently presented in a style that most academic researchers would find hard to match. His argument that helical screws, and screwdrivers, have made possible almost every scientific, technical and domestic artefact and so changed the course of civilisation, is irrefutable.

The book will not help teachers to penetrate the mysteries of electronics or ICT; it will not help their students to achieve GCSEs. The reason to add it to your bookshelf is the sheer delight it gives. Buy it!

One Good Turn

Witold Rybczynski

Simon & Schuster: £9.99 (hb)

ISBN: 0 7432 0849 8

Available from bookshops.

Appropriate content	////	Generic use	=
Pupil/student use	////	One of a series	=
Teacher resource	////	Photocopiable	=
Visuals	////	Pupil/student activities	=
Overall style	////	Cross-curricular	=

DEVELOPING SUBJECT KNOWLEDGE IN DESIGN AND TECHNOLOGY

In October 2001 the Open University introduces a new modular programme for initial teacher training for secondary teaching. Four set books will develop and extend the required subject knowledge for the new National Curriculum in Design and Technology. Although intended for initial students many existing teachers will find these up to the minute texts invaluable updates on the statutory requirements of the subject audits. All include practical and theoretical activities for readers to undertake and questions for them to answer.

DEVELOPING SUBJECT KNOWLEDGE IN SYSTEMS AND CONTROL

John Myerson and Gwyneth Owen-Jackson

This book covers aspects of subject knowledge relating to: inputs and outputs in systems; feedback; introduction to circuits; transistors, resistors and capacitors. The main focus is an digital systems, but reference is also made to analogue systems. There is also a focus on electronic and computer-based systems, but reference is also made to pneumatic, hydraulic and mechanical systems.

June 2001, ISBN 1 85856 243 0, 118 pages, 234mm x 156mm, Price £9.95

DEVELOPING SUBJECT KNOWLEDGE IN RESISTANT MATERIALS: STRUCTURES

John Myerson and Gwyneth Owen-Jackson

This book covers aspects of subject knowledge relating to: structures and materials, shell and frame structures, forces and moments, the effects of loads and stress analysis.

June 2001, ISBN 1 85856 246 5, 72 pages, 234mm x 156mm, Price £9.95

DEVELOPING SUBJECT KNOWLEDGE IN GENERATING, DEVELOPING AND COMMUNICATING IDEAS

Gwyneth Owen-Jackson

This book has four sections covering: 1. Starting to design 2. Designing 3. Design for manufacture 4. Evaluating designs. These cover: an introduction to design, design briefs, consumer research, product specification and product design, aesthetic and ergonomics, creativity in design, product development and manufacture and issues to do with 'green' design.

July 2001, ISBN 1 85856 244 9, 120 pages, 234mm x 156mm, Price £9.95

DEVELOPING SUBJECT KNOWLEDGE IN FOOD TECHNOLOGY: FOOD SCIENCE AND NUTRITION

Gwyneth Owen-Jackson

The contents of this book will include influences on food choice, chemical structure of nutrients; digestion; food and nutrition; diet and health.

July 2001, ISBN 1 85856 245 7, 80 pages, 234mm x 156mm, Price £9.95

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