

Book Reviews

Graphics

Bill Nicholl

Cassell, ISBN 0 304 32335 7 £4.99

This is another in the Starting Design and Technology Series (Series Editor: John Cave). It joins already published and successful titles such as Computer Control; Electronics; Energy and Control; Materials; Mechanisms; Microelectronics; Structures. This volume *Graphics* is presented as an introduction to graphics and communication, starting with basic equipment and techniques and moving on to two and three-dimensional drawing.

The book is directed at the upper end of KS3 and KS4 and beyond and will provide a thorough 'confidence-building' grounding for all who seek to improve their graphical range. It deals with virtually all the problem areas so frequently encountered. The book is sensibly prepared with logical sequences of activity and because it makes use of line drawings in black and white comes to market at a reasonable price. It is one of a number of similar graphic books now available but will not be less useful as a consequence. Recommended.

Graphic Techniques

Ian Grimmer

BP Design Fellowship,
ISBN 1 87170 7 60 9 £21.00

With Video (price includes VAT, p+p, available from BP Educational Service, The British Petroleum, plc. box 934, Pool, Dorset, BH17 7BR

Central to this package is a well-made video programme which takes viewers through the stages involved in developing a toy tugboat. Along the way we are introduced to most of the graphic equipment to be found in the properly equipped graphics area of a secondary school. With clear demonstrations and precise verbal instruction a whole range of techniques from straightforward pencil rendering, through use of the pen, coloured crayon to air-brushing are dealt with. It is the type of package which all Design and Technology areas should have available. Some teachers will prefer to show extracts in support of a particular

activity but the whole tape could be viewed comfortably in a single period. Alongside the video there is a booklet with a comprehensive glossary of terms and a lengthy Bibliography. The package is excellent value for money and is carefully pitched at KS4 and 6th form level although it will prove useful to both younger pupils and, indeed, some in Higher Education.

The Resourceful Woodworker, Tools, Techniques and Tricks of the Trade

Robert Wearing

Batsford, ISBN 0 7134 6485 2
(hardcover) £17.99

There is no denying that this book which contains the evidence of a wealth of experience and, no doubt, experiment, will meet a warm welcome. The author shares with us his solutions to the problems which can ensnare all who attempt high quality craftsmanship in wood. Some of the devices and jigs shown will certainly enable greater accuracy in the work undertaken by pupils and students but I am quite sure that many a teacher in the quietness of his or her own workshop will offer up prayers for the assurance that these tips and work-aids will bring. The author covers working with machine tools and in particular offers masses of advice to those who have a router.

The book contains admirable drawings and black and white photographs which show with clarity the principles involved. Well recommended for those who work or aspire to work with ambition in wood.

Art Workshop with Paul Taggart: Watercolour Painting

Paul Taggart

Ebury Press, ISBN 0 09 177016 5
£16.99

Painting with Watercolour represents a very special challenge. The touch of the brush onto thirsty paper imparts a near indelible mark. If you worry about it you are lost. What is required above all else is sublime confidence. There are many books on watercolour painting available but all too frequently they set out to amaze the reader with dextrous photographs showing the various stages in the pursuit of the finished painting.

Now comes a different volume. Paul Taggart has produced a series of diagrams throughout his book which deal with every stage in the progression of a painting. It is an invaluable source of instruction and inspiration with reassuring practical guidance and detailed explanations. It uses an unpretentious approach to make this book an essential for all aspiring painters. The book is lavishly illustrated with masses of colour plates.

Working at Speed

Deanne Stewart

BP, ISBN 0 86165 156 1 £15.00

Price includes VAT, p+p. Available from BP Educational Service, The British Petroleum Company plc. P.O. Box 934, Poole Dorset, BH17 7BR. Reviewed by George Asquith

This well presented ring binder contains 40 task cards, which are intended to provide an aesthetic experience and foster a creative approach to the design activity.

The cards are presented in a friendly way, in that they are double-sided A4 documents in plastic sleeves, and have the appearance of being hand written. The first 18 are a must for all design teachers involved with students of KS3 through to KS4. They deal with topics such as Line and form and Proportion to name but two. The cards do not present a prescribed course and would provide a very good resource to dip in and out of. Although I am sure it is not the intention of the author, many of the cards numbered from 19 to 40 could, with a little care, be used in departments when colleagues are absent. The sheets contain a list of all equipment and materials needed. They would provide meaningful, easily controlled design activities.

An excellent resource and such wonderful value at £15.00.

The World of Economic Awareness

J. R. Aylett

Hodder & Stoughton,

ISBN 0 340 55774 5 £3.99

Reviewed by Christine Thistleton

This book is a slim forty-eight page volume which would enable a wide range of secondary pupils to develop their Economic Awareness. From the

problems of setting up a business or controlling credit and bank accounts, to understanding the reasons for inflation or unemployment, pupils are introduced to many aspects of the financial world. Presentation takes the format of attractive double page spreads concerning each of twenty-two topics.

Attractive illustrations, cartoons, practical examples, differentiating task sheets and an easy-to-read text provide the basis of a very useful book to be used not only in the area of Business Studies but in that of Technology and Cross Curricular Courses.

The World of Work

J. F. Aylett

Hodder & Stoughton,

ISBN 0 340 55775 3 £3.99

Reviewed by Christine Thistleton

The World of Work is similar in format to The World of Economic Awareness. It introduces pupils to many aspects of work through its attractive double page spreads. Different kinds of businesses, shops, industries and jobs; running your own business; communications; contracts of employment; trades unions and health and safety at work are just some of the twenty-two topics explored.

Aiming to encourage pupils to think about the sort of work they wish to do and understand the ways in which work may be organised, including the skills and qualities needed for success, this book, would be a useful resource across a number of curriculum areas.

Let's Celebrate

Project Consultant Tristram Sheppard
Stanley Thornes, ISBN 0 7487 1162 7
£3.99. Together with sample material
from photocopiable Support Packs.

'Let's Celebrate' £22.50 'Design
Technology Matters' £35.00.

Reviewed by Rhona Humphries

'Design and Technology Matters' was devised to cover D&T work for Key Stage 3 pupils from levels 4 and 6 and beyond. The package costs £35 and is fully photocopiable. This very thorough and comprehensive document aims to develop work which clearly reflects the statements of Programmes of Study and Attainment Targets. The topic sheets are very detailed and cover the whole spectrum of D&T plus a section on

Business matters. Workable ideas are already presented so that pupils can work through the sheets seeking guidance from the teacher when necessary. This approach is ideal for the more able pupils who could be stretched and stimulated by the wealth of ideas made available. The less able pupils could use the work sheet to support and increase their confidence and generally assist their general presentation.

Although this document is not a substitute for the role of the teacher in delivering knowledge and skills in D&T, it does however, provide a great deal of support and would develop pupils own design and technological skills, knowledge and understanding. To accompany 'Design and Technology Matters' there are several 'Interaction' documents which look a certain topic in greater depth. 'Lets Celebrate' is an example and this booklet (cost £3.99) would be used in conjunction with the 'Let's Celebrate Support Pack' priced £22.50, a photocopiable document full of ideas for pupils and teachers. The colourful booklet is eye-catching and glossy with good quality photographs and illustrations. The booklet designed to be used for D&T teaching also covered areas of RE and History and could be a useful aid in the development of inter-departmental cross curricular ideas. The different contexts of the National Curriculum are well defined and good examples of realistic work are given. The different aspects of 'Celebrations' were well illustrated and again all areas of D&T could find useful ideas to develop. Although inexpensive at £3.99, I could not justify the purchase of many copies but as a resource for staff and individual pupils it would prove a very useful resource.

The 'Lets Celebrate Support Pack' is another detailed document which contains many ideas of structural tasks to assist both pupils and teachers and like the 'Design and Technology Matters' would be of invaluable support in the development and learning process but I would find it difficult to justify the expenditure on just one theme and its development.

The 'Design and Technology Matters' would take priority. However, if

unlimited funds were available, I would be pleased to purchase the 'whole' package, plus the video at £17.99.

IT Handbook for Teachers Key Stages 3&4.

Ray Bradley

Simon & Schuster Young Books,

ISBN 0 7501 0197 0 £14.99

Reviewed by John Roslington

The *It Handbook for Teachers* provides a guide to Key Stages 3 and 4 of the National Curriculum. It is intended for all teachers concerned with the implementation of IT in their subjects, not just IT specialists or co-ordinators. Little prior knowledge is assumed, but there is plenty of detail for those who need it. The style is friendly and down-to-earth and includes plenty of clear diagrams. An important aspect is that the book is not geared to any particular machine, but, because it is up to date, those machines which are referred to are the latest in use in schools today (PC, Archimedes and Macintosh). The Handbook begins with general guidelines, including an explanation of how the book might be used. *Managing IT in the National Curriculum* is given a detailed treatment, including such matters as organising hardware in the school and possible options for arranging machines in a centralised teaching lab, if that is decided upon. A good general guide into computers in use in schools is given, mentioning PS/2 (IBM), Archimedes (Acorn), Macintosh (Apple) and Nimbus (Research Machines). Mr Bradley, who is himself a teacher, also makes the very good point that some machines are best suited to particular jobs — the Atari for music, the BBC for interfacing in Science and Technology, for example.

In the section on *Management of IT*, a plan is suggested for how to spread the IT experience over a number of years and other matters such as no gender or race bias are mentioned. An impressively detailed section on the National Curriculum follows, which requires careful study, although it could be dipped into by subject teachers for the part which concerns them. Resource management mapping diagrams follow which help to tie in particular application areas with subjects.

Cross-Curricular themes are given detailed coverage and this is followed by a wide range of applications and how they might be used in the classroom. An all-school database is discussed, followed by a discussion on one of the most under-used and yet important pieces of software available — the spreadsheet. Its potential for *Modelling* is shown with some good examples from Mathematics.

Measurement and Control, IT Applications and Effects are included to complete the National Curriculum package and finally a section on Assessment is discussed.

A Glossary and a list of useful names and addresses are given as well as an index.

All in all, this is a very useful guide which follows the National Curriculum in its structure and offers teaching sound, practical help in what is still rather a jungle. This guide would be useful to all teachers using computers in the curriculum, but would be particularly useful for Heads of Department who might be trying to work with the Technology Co-ordinator in planning an IT package for the school. Well recommended.

Enterprising Technology

BP, £34.95

Price includes VAT & p+p. Available from: BP Education & Service. The British Petroleum Co. plc. P.O. Box 934, Poole, Dorset BH17 7BR

Reviewed by Allan Trueman

Enterprising Technology is a loose leaf folder produced as a resource for teachers of Technology in the National Curriculum. It is mainly focused at keystone 4 but would also be of value for students at post-16 and at Keystone 3. The folder started life pre-National Curriculum as 'Problem Solving with Plastics' and has now been modified so that it can better address the curricular needs of 13 to 16 year olds.

The main area where this publication differs from others available is that the emphasis is on plastics in the home and in industry. The knowledge base from which the material descriptions derive is extensive, however much one knows about plastics there will be something new in this folder.

The folder is divided into six sections:

Section 1 contains market sheets which describe various products currently on sale, in different contexts, these are informative and clear.

Section 2 suggests how these sheets might be used with pupils.

Section 3 covers aspects of materials and product testing.

Section 4 contains information sheets about market research, costing with more detailed information about identifying plastics and with working plastics.

Section 5 contains examples of how a business plan can be set up.

Section 6 covers pupil work sheets that might be needed to carry out the ideas covered in the folder.

This folder would be a valuable resource in any Technology Department.

Technology and Plastics: A Topic Approach

BP, ISBN 0 904 214 354 £38.25.

Complete with Floppy Disk. KS 2&3.

Teachers should state if they require the software for BBC 40, BBC 80 or NIMBUS. Price includes VAT, p+p.

Available from: BP Educational Service, P.O. Box 934, Poole, Dorset BH17 7BR.

Reviewed by John Hill

This substantial pack is written for teachers of Key Stage 2 and Key Stage 3 pupils undertaking design and technology activities. It is one of a series of resource packs developed as part of the 'Technology in Context Programme' (SCSST/SATRO). It consists of seven booklets, six full colour 'market sheets', five 'context sheets' and a disc of computer software.

The introductory booklet lists the aims and content of the packs and includes a very useful section showing how it may be used in supporting design and technology activities. The first booklet titled 'Technology in Topics' contains exemplar activities showing how elements of the design process can be introduced across the five curriculum context (home, school, recreation, community, business and industry). The associated 'context sheets' (full colour pictures illustrating a context and

suggested starting points) are intended to be given to the children to raise their awareness of each context and to stimulate their ideas for activities.

The 'market sheets' contain activities based on a set of colour photographs and are particularly useful for ATs 1 and 4. They give examples of the use of plastics in the context of various markets (*caring for people, sports and games, packaging*, the home, food and drink, fibres and fabrics). The second booklet tells teachers 'How to use the plastics market sheets'.

'Making with plastics' the third booklet gives guidance on techniques for working with plastics (AT3), provides ideas for things to make and ideas on how to make them (AT2), includes things to consider sheets (AT1) and also a set of six information sheets for teachers! 'Materials and product testing' provides information and ideas for investigating 15 characteristics of materials (abrasion, porosity, impact resistance, etc). 'Market research and costing' and the associated software help with the design and analysis of market questionnaires and the costing of products. The final booklet gives useful advice on 'Monitoring and Evaluating' pupils activities.

This is a worthwhile resource, particularly for Key Stage 3, containing a lot of information, advice and sensible ideas. Like most D&T resources it focuses more on how to meet the Attainment Targets than on how activities can be developed from the Programme of Study. However I am concerned at the level of safety advice offered. Users are strongly advised to check with their local authority guidelines before carrying out any of the activities suggested and children should be discouraged from heating plastics in any sort of oven.

Personal Effectiveness for Teachers

Val Rowland and Ken Birkett
Simon Schuster Young Books,
ISBN 0 7501 0185 7 £9.99
Reviewed by Gay Staok

Well organised sections. Good Progression of chapters. Sensible straightforward approach using clear English and the minimum of pretentious jargon. Clearly written.

Each situation/development is illustrated by good example situations.

Each situation included some good ideas provoking self evaluation and thought about aims and objectives of many functions that teachers may not analyse very carefully. eg. Parents evenings.

Good coverage of many aspects of the job that are not immediately obvious eg. letter writing.

Involvement in interviews of various kinds and in various roles. ie. outside the classroom. Valuable at all levels of teaching career. A very useful handbook and one which I actually bothered to read all the way through because it kept to the point, held interest and was fairly easy to read.

I would actually recommend this to other teachers which is something I rarely say about such books as in many cases time could be more usefully spent on the nitty gritty of the teaching tasks.

Spreadsheets & Databases

John Muran
ISBN 0 7195 5072 6
Reviewed by Nigel Aston

I like the basic format of the book, spiral binding is an essential requirement for this type of book. Layout of pages also seems quite clear.

I do question the number of tasks for both spreadsheets and databases, they frequently appear to teach the students only a very limited number of skills, but necessitate the student entering a lot of data, which is something that I could foresee a typical RSA student not enjoying.

In both the spreadsheets and databases exercises, terminology tends to suggest a particular piece of software, as the tasks require students doing specific activities which would not be possible on software available in my school. E.g. spreadsheets include a section on entering a long title whilst the databases refers to sorting Imperial units, such as 5ft 4ins. The database exercises also include reference to sorting DOB, this is not possible unless the data is held in a particular format eg. YYMMDD, whilst the exercise use several different formats DD/MM/YY or DD-MM-YY (unit 63). Length of time is held as

hours and minutes which can be an awkward commodity to work with, and time is better expressed in the 24hr clock. I do not feel there is sufficient reference to the coding of data and the value of doing so, (unit 64) would give a perfect opportunity [P...Pass and F...Fail] Commas separate 1000's which will cause problems on many packages. Therein is not enough scope to use spreadsheets for modelling, which is an important use of spreadsheets.

Overall I believe the book may be a useful resource bank for exercise which may satisfy the type of course specified in the book, but I can not see a significant value as a text book within a secondary school involved in delivering the National Curriculum.

GCSE Technology Structure With Materials

Steve Rich
Stanley Thornes, ISBN 0 7487 0151 6
£5.99

Reviewed by Trevor Taylor

It is brief and contains some very useful details on materials and jointing but came through the production system too quickly. Some sections need editing and refining so that their essential contents are clarified by diagrams and explanations rather than clouded. In particular the section on using an op. amp with a Wheatstone bridge to measure strain will cause much frustration!

A teacher who knows the book well could make excellent use of its mixture of problem setting and academic background, but someone who wants it as the main source of lesson material will not get value for money.

The author has done a good job in making the topic fit into his page allocation [it is one of a series of books] The concept is excellent but its value is spoilt by small details that confuse at crucial moments.

Colour & Meaning: Practice and Theory in Renaissance Painting

Marcia Hall

Cambridge, ISBN 0 521 39222 5 £40.00

Reviewed by Geoff Smith

Writers have been describing the lives and works of Renaissance artists since the 16th Century and it is difficult to imagine any book that substantially adds to the existing wealth of information and opinion already available on this subject. Yet this is precisely what this book does. In her search to reveal the true, original state of paintings and, thereby, to throw new light on the meaning of the works, the author, Marcia Hall, Professor of Art History at Temple University, Philadelphia, brings together extant research and recent scientific discoveries regarding materials and techniques used by Renaissance artists during the period covering the 14th to the 17th centuries. In doing this, the author deliberately gives emphasis to the practice of painting supported by theory, rather than the usual converse approach.

As the title suggests, the main focus of the author's research is on the use of colour, its application and meaning. 'When we set out to study colour in Renaissance painting systematically, we are exploring ground that has been only lightly trod.' To do this she avails herself of the most recent technology used in conservation laboratories, enabling us now to see works of such media as fresco, tempera and oil paint in their original appearance. In addition to her interpretation of findings based upon such recent technological investigations, the author gives us a most interesting and informative account of the controversy that has, and still does, relate to the cleaning and restoration of paintings, clearly defining the difference between 'conservation' and 'restoration'.

Although this book may initially appear of interest mainly to the specialist upon reading, this rapidly reveals itself as a misconception as the author is by no means solely concerned with technique and analysis of pigments used during this period, but also with the conventions and traditions affecting Renaissance artists. Twenty major paintings by artists including works by

Giotto, Leonardo da Vinci and Tintoretto are considered in detail, with particular reference to the interpretation of subject. The many illustrations provided give clear meaning to the points in question and the author considers stylistic analysis as an important part of their text. The book, therefore, provides a valuable source of information for anyone studying Renaissance painting, but will be of particular interest for those interested in aspects of restoration and conservation. In the author's own words: 'This book is for those who believe that by the exercise of the informed imagination we can reconstruct in the mind's eye a semblance of the original painting — and that this is worth striving for'.

Copiously illustrated with 48 colour plates and 83 black and white prints, the general quality of this publication is excellent, as befits a work of such importance. Numerous references and a most useful bibliography support the text.

I found this an impressive and scholarly work, yet very lucid in style and therefore very readable and absorbing, despite the abundance and complexity of the information offered. I strongly recommend it for individual purchase or as an addition to the art section of any library.

Design & Technology Teaching

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