

Book Reviews

Higher Grade Technological Studies
Scottish Schools Equipment Research
Centre.

Case Studies £3.00 (81 pages); *Resource*
file £4.50 (109 pages); *Teachers Guide*
£2150 (33 pages).

Reviewed by Paul Wareing

The set of three booklets provide a complete course in microelectronic control technology and is intended to support the introduction of Technological Studies at the higher grades in Scotland. The material contained within the Case Studies and Resource File particularly well structured and organised such that it can be dipped into with ease. They provide ideal support material for the more advanced Design and Technology projects having a strong microelectronic control element.

The Case Study booklet contains case studies of the technology involved in four projects, the Fermenter, Dry Feeder System, Automatic Dishwasher and the Paint Pigmentation Plant. The material covers a wide range of topics including instrumentation of temperature, light, speed, force and vibration; data capture and display using BBC micros and the Vela data logger; chip devices for amplifying/driving, combination logic, pulsing and counting, decoding, software control using a 3 Chip-Plus microprocessor and a BBC micro. The case studies are not passive learning materials. They have clear, well defined outcomes and involve pupils in research and investigation activities using the Resource File and circuit construction/evaluation. The material is extremely well presented in order to maximise successful pupil outcome.

The same clear, structured format is used in the Resource File which comprehensively covers control technology concepts, a range of components and hardware details with practical guidance that beginners would find helpful. A good selection of BBC control programs are included, written in basic, that can be used with the Control It

Interface box. An excellent 108 page resource for Technology departments.

The Teachers' Guide is also well conceived and produced. General advice is given about the use of the material and in particular its aim in supporting active learning. Case Study commentaries list the rationale behind the projects and point up key teaching features. Photographic evidence confirms the practical nature of the material and as one would expect a comprehensive list of components and suppliers is given.

The material is characterised by its NGOYB factor — the ingredient essential in active learning — *Now Get Off Your Bum!*

The material is copyright free in Scotland but English schools and colleges, I understand, would not be granted permission. However, I am assured that significant discounts are available for reasonably sized orders.

A no frills, black and white paperback publication that represent exceptionally good value for money if microelectronic control technology is your thing

Available from: Scottish Schools Equipment Research Centre, 24 Bernard Terrace, Edinburgh, EH8 9NX

Animal Forms & Figures

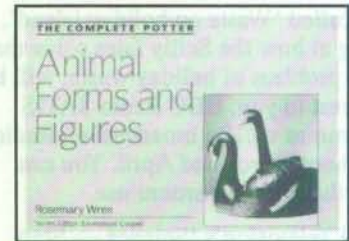
Rosemary Wren

Batsford, Price £12.95,

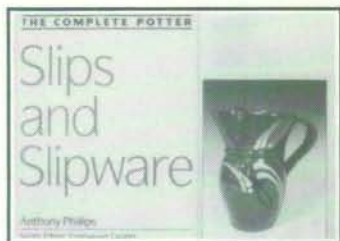
ISBN: 0 7134 6127 6 (Publication date
27.9.91)

Reviewed by Paul Bridgewater

Ever since I bought my daughter a Rosemary Wren ceramic bird some years ago, I have been an admirer of her clay animals, and so I expected this book to offer me and my students the sort of stimulus you might expect from someone who produces such exciting sculptural forms: None of us were disappointed. This book is illuminating, helpful and delightful reading. A potter of Wren's experience could have swamped her readers with information, but instead she gives a lucid account of her making of



animals and people in clay, together with many valuable practical aids. She gives clear advice to the beginner, but there is still plenty to offer the experienced. Of all the books in this new Batsford series, my students were instantly attracted to this one. As a teacher, I found the book's organisation and content, in sympathy with my approach to teaching ceramics. Starting with 'sources and Development of Ideas', the book places a great deal of emphasis upon the importance of drawing, and there are many excellent examples of drawings from Wren's sketchbooks and those of other distinguished potters who have contributed to the later chapters of this book. After briefly, but practically, covering 'Materials and Equipment', Chapter Four is entitled 'Working To A Theme', and the author recalls her own 40 year exploration of a deliberately limited theme — an inspiration to young potters. Rosemary Wren gives short, clear descriptions of the methods which she has evolved, supported by comprehensive line drawings, and it is as if one is in her studio watching the work take shape. This is a lively publication that is highly recommended for 3D design students on both GCSE and A level courses, while younger pupils will find the many superb colour photographs and beautiful drawings of numerous birds and animals a stimulation to begin modelling in clay. The author's ability to enthuse reader's appetites without losing their concentration on unnecessary technicalities or digressing from the theme is refreshing. For those who aspire to work on a theme of Animal Forms and Figures, this book is a treasured guide.



Slips and Slipware

Anthony Phillips

Batsford, Price £12.95,

ISBN: 0 7134 6187 X

Reviewed by Paul Bridgewater

On first opening this book and leafing through the pages I had the feeling of excitement I always get from a profusion of slipwares. Unfortunately, in this case, closer acquaintance led rapidly to disappointment. Anthony Phillips says in his introduction, that insufficient room prevents him from describing some areas of knowledge fully. However, what he fails to do adequately is to illustrate the main methods of slip decoration. Sixteen pages on the History of Slip Decoration, with a Thomas Toft plate noticeably absent, lead into short chapters on Clay, Slip and Colour, to the book's main content. Totally inadequate black and white photo sequences show poorly decorated plates with repetitive star and squiggle designs, while the colour photos of the authors' work are uninspiring. It would have been beneficial to include photographs of finished graffiti, feathered, applique and inlaid techniques. The final chapter is devoted to A Showcase of Potters and while there are some important practitioners represented, how any book on slips and slipware can omit the work of Mary Woodrausch, John Pollex and Suzi Curtis is beyond me. It is a pity that a potter, whose slipware is so repetitive and uninspiring has been allowed by the series editor, Emmanuel Cooper, to present a less than adequate book on such an exciting and stimulating subject. Promoted as being a book that will be a real boon to any serious potter or student, it cannot be recommended to either.

The Craft of the Potter

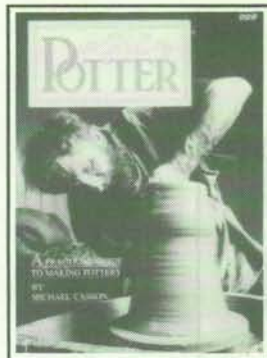
Michael Casson

BBC Books, Price £9.99,

ISBN: 0 563 16127 2 (New Edition 1991)

Reviewed by John Atkinson

A well presented publication which provides the reader with a wide range of



ideas for developing their understanding of the potter's craft.

The book covers all aspects of pottery making from an explanation of the nature of clay, methods of hand building, throwing on the wheel, decorating, glazing and finally a detailed section on building kilns and firing the ware.

Michael Casson's long experience as a master potter and teacher enables him to encourage interest in this craft through enthusiastic text and expertly chosen illustrations. Perhaps the biggest weakness of this book is in not, after fourteen years, being brought up to date by the inclusion of more recent excellent craftsmen together with their methods and experience.

Principles of Pattern Design

Richard M. Proctor

Dover Publications Inc., Price £7.60

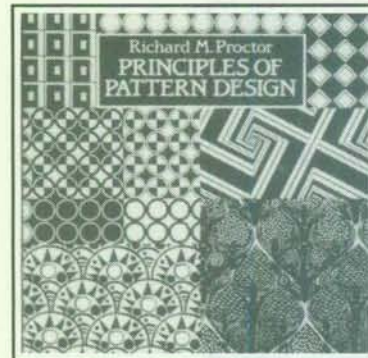
ISBN: 0 486 26349 5

Reviewed by Geoff Smith

The essence of pattern is the repetition of units. Such repetition may take many diverse forms, all however being derived from the same sign motif, such as the square, diamond, triangle, circle, hexagon, etc.

In this amply illustrated book, the author uses simple, clear diagrams and brief non-technical instructions to explain the principles of pattern structures, dealing with a variety of basic networks on which repeat patterns may be constructed. Historical and contemporary examples of patternwork supplement the basic information on structure, the 280 black and white illustrations providing a most valuable source of reference for teachers, students, designers and craftspeople in every field of fine and applied arts. A vocabulary of basic terms and a useful selected biography provide additional information.

Moderately priced for such an abundance of illustrative and informative material, this book is strongly recommended for



purchase by all who seek to apply in their work the principles of pattern design.

Electronic Module

A. Bardill

Design & Technology — Middlesex Polytechnic.

Reviewed by Bob Birkett

The information sheets provide clear notes for revision, and would support the practical teaching of electronics found in many GCSE modules.

The 'hard-pressed' teacher should avoid relying too heavily on using the notes to cover areas of the syllabus that have not been worked through practically or with fuller explanations. Used as intended these 'photocopiable' sheets would be very helpful.

Mechanisms Module

R. Pichard

Design & Technology — Middlesex Polytechnic

Reviewed by Bob Birkett

I would find these sheets very useful to hand-out after a Technology lesson as a means of reinforcing the practical experience and necessary theory.

It is important, however, to make sure the information is not misused and seen as a quick way of teaching.

The sheets present, to pupils, good clear diagrams for easy mental recall and drawing reproduction.

Exploring Machines

Mark Lambert & Alistair Hamilton-Maclaren

Exploring Textiles

Susie O'Reilly

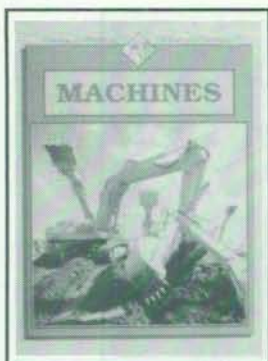
Wayland, Price: £7.95 each

ISBN: 0 7502 0040 5.

ISBN: 0 7502 003491.

Reviewed by Jillian Mellor

The books are well illustrated, clearly written and have a variety of interesting activities for pupils to try out with well directed instructions.



There are eight books in the series: Communications, Flight, Houses and Homes, Land Transport, Machines, Structures, Textiles, Water Transport.

I looked at Machines and Textiles.

The books attempt to give up to date facts about fabric or machines and then includes an activity for pupils to try. The activities give a well detailed list of items you require (including when adult help is necessary), along with clear instructions, and colourful diagrams for you to follow the activity. Such activities include: Designing an advert for nappies, Testing for abrasion, Testing for waterproofing, Tie and dye fabric, Exploring colour, Build a robot arm, Build a remote control gate, Build a water block, Make a steam turbine. The factual information is written in simple language and would be of use to pupils researching for information on these particular topics.

The books would be an asset to the Primary school library but might be of limited use in the secondary school. Some of the activities could be used as short term tasks within an open ended project as part of National Curriculum Technology.

Glass Engraving: Drill Techniques Stuart and Shirley Palmer

Batsford, ISBN: 0 7134 6008, £25.00

Reviewed by Mel Mars

This lavishly illustrated book provides a very good 'how to do it' guide on engraving using a drill.

The introductory chapter provides a general guide to glass and suggestions as to what to look for when purchasing blanks. It would be useful if it included some of the names and addresses of individual glass workers whom it hints at as willing to make pieces to order. I got the feeling that the authors were reluctant to tell readers where to purchase glass. For example at the back of the book under Glass Suppliers not a single supplier is mentioned! 'Contact any



supplier and make enquiries before calling or sending an order'.

As a guide to working safely it is unsatisfactory. The authors mention that the type of mask they use 'will not, however, give much protection against the very fine particles which are the dangerous ones, but it is better than nothing. There are some double thickness masks made for dusts and mists and these may be more satisfactory'. You should be able to find out in a volume of this sort which masks and who supplies them. You can't. You get the feeling that the authors don't really treat health and safety in the workplace seriously and this is not helped by using a photograph of Warwick Hutton working on a window with no safety mask at all!

The book's strengths lie in the chapters on Basic Engraving, lettering and polishing which beginners and advanced/craftspeople will find very useful and informative. This book gives clear guidelines on layout and letter cutting techniques whilst emphasising that good lettering takes time to learn. It has clear working diagrams as well as superb photographs.

Design and Technology in Progress: The Skills Book

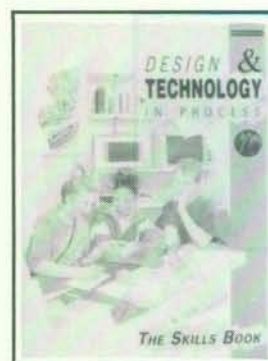
Robin Murray, et al.

Heinemann, ISBN: 0 435 57270 9, £16.95, (Packs of eight theme books £27.95)

Reviewed by David Perry.

Design and Technology in Progress has four titles which come in packs of eight softback books for students or as a Teachers' Resource Pack containing a single students' book with accompanying teachers' notes. Four titles are available and I have looked at number three, *Skills*, the others being *Health and Fitness*, *Entertainment* and *Survival*.

The students' volume (known as a 'theme' book) has 45 pages and is presented in a reasonably lively style with plenty of colour and illustration. The series is aimed accurately at Key Stage 3,



the text is very straightforward and the illustrations and general style draw-in the reader well, being approachable and friendly. Some important key pieces of D&T jargon are introduced in a sensible order by being used in context, and a useful glossary is provided at the end.

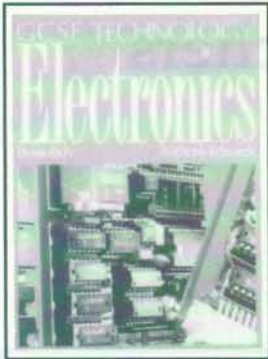
It is curious that the book should start with the question *What is Design and Technology?* when two key stages full of it (or so we must believe) will have preceded it. However, this is just an introductory pair of pages and it has some useful content too, setting the theme for the range of skills that follow.

I welcome a book which legitimates a number of skills beyond those referred to by that hackneyed phrase 'what about the skills?' which when used tends to indicate just the 'making' ones. The top right hand corner of each pair of pages shows the activity they are concerned with. These include such as *Evaluating Against Criteria* and *Conducting Preference Survey* each introduced simply and clearly at an appropriate level, but not balking at the correct terms.

The book is an excellent demonstration of clear thinking in ordering the content and it gives a number of small tasks for the children. These are backed by resources in the Teachers' book (or Resources as it says in at least one place!) of real value, such as recipes, articles for journals and photocopy masters. It represents the influx of enlightened teaching techniques current elsewhere (such as in Primary schools — an influence I detect in the authors) but under-used in CDT especially.

The content of the book follows the national curriculum line a little slavishly and the picture of design activity given is also limited to consumer product design of the orthodox kind which is a little pedestrian but probably just what's needed to get KS3 solidly underway.

There is no doubt that this is a quality approach and that with the accompanying Teachers' Pack it will be of real value. Whether this value is enough to justify



the expenditure of £100 for a teachers' pack plus a set of 24 theme books is your LMS decision.

GCSE Technology Electronics
Steve Rich and Anthony Edwards
Stanley Thornes, ISBN: 0 7487 0153 2,
£4.99

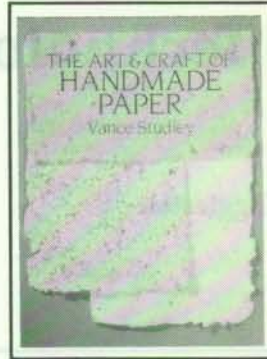
Reviewed by Ian Buchanan.

This publication is one of a series, by the same authors, covering GCSE Technology. The book is well produced with clear, easy to read, instructions and comprehensive parts lists for each project. The project briefs are so constructed that they could be used in other more general courses. Much of the material would be suited to a number of modular short courses offered in the Scottish curriculum, and many of the project ideas could be used at S2 level.

It is refreshing to find authors and designers of course materials moving from ubiquitous modular electronic boards to both the use of discrete components and a variety of construction techniques. There are simple explanations and definitions with clear line drawings and brief notes on safety, (rather too brief it is felt on the notes on PCB etching). The projects appear to have been designed to take account of pupil experiences, are gender free and offer the opportunity for cross-curricular activity.

There are two areas I consider may cause the pupil confusion, if not at this early stage, certainly if they proceed further in electronics. The first concerns the definition of a transducer given on page 6, where energy conversion is discussed, an active transducer. The authors then consider that a thermistor and a LDR are transducers. There may be signal changes but unless the two components are part of a circuit they cannot be considered to convert energy.

We feel it is more correct at this stage of pupil development to consider them sensors.



Secondly the use of a CMOS i.c. to drive LEDs without limiting resistors is a practice we believe should be discouraged. In the example given, the i.c. will successfully drive high intensity LEDs but the signal could be corrupted were standard pattern LEDs to be used.

This may be thought to be pedantic but confusion is one of the easiest seeds to plant in a young mind and one of the swiftest to grow.

As an introductory course on electronics both pupil and teacher will find this book helpful and, more importantly, interesting. To those schools who can finance the purchase of class sets, an excellent student handbook. To those less fortunate a copy should be bought for the resource base library.

The Art and Craft of Handmade Paper
Bruce Studley
Dover, ISBN: 0 4862 6421 1, £5.90
Reviewed by Mel Lloyd-Smdith

This is an attractive versatile book, combining a clear, well-illustrated history of paper with a manual on paper-making and a source of ideas for projects in which paper is used to create ingenious and attractive works of art.

It is a practical manual for paper-making, using a wide range of raw materials that it is likely to have most potential for the secondary design and technology curriculum. The processes involved in producing this indispensable and taken for granted commodity are relatively simple and the necessary equipment, for the most part, readily available (in the newest well-equipped HE classroom).

The process offers ample opportunity for exploring links between science, technology and art and has the additional attraction that its product can be put to practical and profitable use. There is no reason why pupils should not be able to produce good quality watercolour and pastel paper to augment the stocks of

cash-starved art departments. This book explains how. It also contains ideas for the production of paper artifacts which any surviving mini-enterprise would find readily marketable. The instructions are clear and supported by good photographs and diagrams which make this book both accessible and challenging.