Arc

The dawn of a new era

- The way forward on the superhighway
- The inside story of the *new* Acorn
- How are UK schools on the innovation stakes?
- Special solutions
- Curriculum resources for everyone

Plus

- 16 pages of Acorn *Advantages*

Acorn
EDUCATION

CONTENTS

A new year almost always heralds changes for the better – and the advent of 1996 brings a bumper year for UK schools, which will already be experiencing the benefits of recent changes at Acorn.

The formation of Acorn Education and Applied Risc Technologies as two separate operating divisions within the Acorn Computer Group allows Acorn to foster a closer partnership with schools and move forward with its pioneering commitment to RISC technology. In an in-depth interview with Michael O'Riordan, the new director of Acorn Education, we explore the real difference that these changes will make for schools.

The announcement of Acorn's decision to sell directly to schools means fast and easy ordering of hardware, software, peripherals and services, all at the end of a telephone line. Be sure to have a good look at the new *Products and Services Catalogue* that is being posted with this issue of *Arc*. It contains lots of goodies to add to your New Year's wish list.

This issue of *Arc* reports on several unique partnerships with schools and third party developers which open new opportunities for access to the very best in educational IT resources. We take a look at the increased use of Internet, WWW pages and the role of the information superhighway in the future of UK education.

Over the past year Acorn has taken a leading role in raising the profile of special education in the UK. This issue of *Arc* reports some exciting examples of Acorn technology helping all children to reach their full potential.

A round-up of stories on creative uses of the Acorn Pocket Book confirms the versatility and ever-increasing popularity of palmtop computing. It's certainly gratifying to see how much fun children are having with the Pocket Books while obtaining a good education.

Finally, our supplement is dedicated to Acorn Advantage – Acorn's way of adding more value to products through a loyalty scheme that provides help for spreading the load of purchase.

Thank you for your feedback and letters over the past year. Keep them coming in 1996. *Arc* is your magazine!

Martin Newman – Editor

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Acorn's new catalogue

The newest issue of Acorn's *Products and Services Catalogue*, due to be released at BETT 96, supports the company's forward-looking strategy of direct marketing to schools and aggressive preferential prices for education.

The catalogue makes it extremely easy for schools to place an order for any of Acorn's wide range of products and services simply by picking up the telephone and dialling Acorn direct.

Among the items which can be purchased from the new catalogue are nearly 600 software titles (an increase of 130 new titles just since the Christmas catalogue), as well as peripherals and consumables from third party companies, and of course Acorn's wide range of educational hardware products. The catalogue also includes sections on in-service on-site training for staff, Acorn Advantage and Acorn Options, and contact details for Acorn Education Agents and Acorn in Education Centres.

Going from strength to strength – Tesco Computers for Schools '96

Schools across the UK are celebrating the arrival of computers and IT equipment obtained through the Tesco Computers for Schools scheme. In fact, over the past four years more than one-third of all UK schools have benefited from this initiative. In 1995 alone, over 12,000 schools received a staggering £5.5 million worth of computing and educational equipment.

Items claimed from Acorn Education include nearly 5,000 computers, with almost 500 A3010 Early Years Systems, nearly 2,500 A3020 computers, over 600 A4000s and more than 100 Risc PCs. Over 1,000 of Acorn's popular Pocket Book II were also redeemed, making a positive step forward towards Acorn's goal of one-per-child computing in education.

As part of this year's scheme, 21 schools spent a day at their local Tesco store performing in-store projects, using their school's existing IT resources. Completed projects were entered in a competition to win state-of-the-art Acorn equipment. The two prize-winning schools were Millfield Primary School, Ely, receiving an A7000 CD multimedia system and Garforth Community College, Leeds, receiving a Risc PC 700 CD multimedia system.

To make the scheme even more exciting this year, Tesco is allowing schools to carry over their vouchers to the 1996 promotion. This means that smaller schools will have more time to collect vouchers in order to claim bigger and better equipment. Tesco's acquisition of 50 William Low stores also means that schools in Scotland will be able to benefit from the scheme for the first time.

Tesco will be joining Acorn Education on Stand 241 at BETT 96 in order to demonstrate the success of Computers for Schools. Work from schools which gained Acorn systems last year will be on display to illustrate the concrete advantages that this highly successful scheme is providing for UK schools.

HyperStudio

Tag Developments has released *HyperStudio*, one of the most innovative and forward-looking educational multimedia applications which has come out to date. HyperStudio is both powerful and extremely easy for children to use, with a vast library of copyright-free resources, including tutorials and example projects, along with sophisticated effects, pictures, text, sound, animation and video.

HyperStudio allows resources and data to be shared between school departments, different schools, and even between school and home. The software's unique *free player* function means that projects created by a class or teacher can be used by others, even if they don't own a copy of HyperStudio. School site licences include free home use for children and

Quiz Today !

$ax + by = c$

Reports due on Tuesday.
Turn in your disks by 3:30!
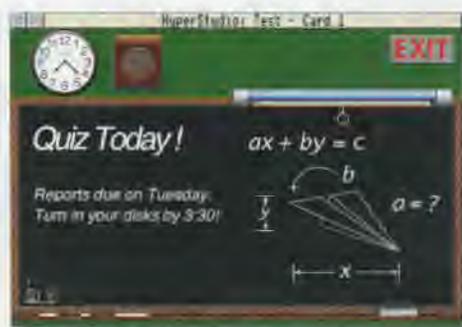
teachers, making IT homework a real possibility!

HyperStudio is available directly from Acorn for £79.95 (excluding VAT). To order call Acorn on 01223 254214.

Acorns around the world

The 1995 national *Pritt Stick Collage Competition* awarded an Acorn computer system as prize for the winning entry. Class 4 at Dunfane Special School, Ballymena received an Acorn A3010 computer and Learning Curve software for their top-notch collage depicting the four seasons.

Dorset Education County Council has embarked on a project to provide an IT resource centre for schools in the Solomon Islands to help them move into the modern world. In an area which has only now acquired electricity, the council's initiative has placed 20 Acorn computers in King George VI School in Honiara.

In the last four months over 100 million TV viewers around the globe watched the top-rated 'Beyond 2000' science programme which featured an Acorn Risc PC running Sibelius 7. Sibelius 7's performance at the 10th London International Composers' Festival captured the attention of world media, and was broadcast on prime-time TV news programmes in many countries, including the USA's NBC and ABC networks. It also appeared in newspapers worldwide, from *The Times* to the front page of the *South China Morning Post*.

The winning entry from Dunfane School's Class 4

Acorn Centres of Technology

Acorn Education is improving customer service levels for its enthusiast community by providing a new tier of dealerships called *Acorn Centres of Technology*. These centres offer an in-depth knowledge of expanded systems for advanced users, stock showrooms demonstrating the latest top-of-the-range products and provide customer advice telephone services.

Although Acorn is looking to include other dealerships which meet the criteria for becoming Centres of Technology, the company has rolled out the initiative by awarding nine outstanding dealerships the new accreditation: AJS Computers, Chelmsford (01245 345263); AISystems, Alton (01420 561111); Atomwide, Orpington (01689 814500); Beebug, St. Albans (01727 840303); CJE Micros, Worthing (01903 213361); Davyn, Wakefield (01924 254800); Desktop Projects, Stockport (0161 4740778); Norwich Computer Services, Norwich (01603 766592) and Uniqueway, Cardiff (01222 644611).

Information on Clan Acorn, the club for Acorn enthusiasts, can be obtained from Chris Cox at Acorn Education (01223 254448).

Acorn Catalogue on CD

A compete version of Acorn's new catalogue in now available on CD and was actually created using HyperStudio. Schools can order the CD by ringing Acorn direct on 0181 364 5220.
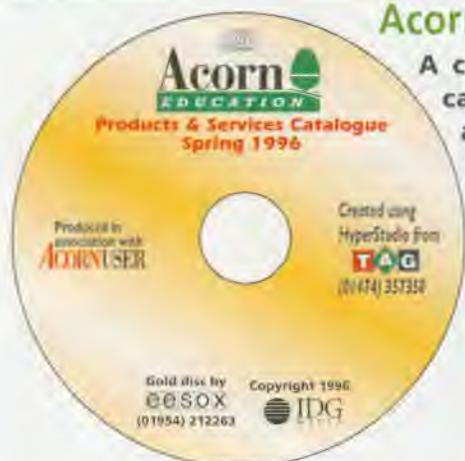
Subscribe to *Arc*

To ensure you continue to recieve your free copy of Arc, complete the order form on page 41 and return it to Arc, Acorn Education, Acorn House, Vision Park, Histon, Cambridge CB4 4AE

Major Educational Software Award for *Aegis*

'The Most Valuable Subject-Specific Package for 1995' has been awarded to *Aegis* by the National Association for Co-ordinators and Teachers of IT. A powerful geographic information package for upper primary and secondary pupils, Aegis has now been further enhanced and launched as *Aegis 2*.

Aegus 2 features a wide range of world maps, including regonalised maps for the UK and Europe, which can be used to display a range of geographical data from population densities and land use to traffic and pedestrian flows along specific routes. The package includes a large database of information on world development, world wilderness, unemployment figures and selected historical topics, with the option for schools to input their own data, draw their own maps or import Raster or LandLine Ordnance Survey maps.

The teachers' pack for *Ageus 2* includes case studies demonstrating how teachers have used the software data for curriculum topics, as well as advice on printing maps and copying them to other word processing or graphics packages. Available from The Advisory Unit: Computers in Education, Tel 0171 273684. Prices start at £100 (excluding VAT).

The New Acorn

On 12 September the Acorn Computer Group formed two new operating divisions – Acorn Education and Applied Risc Technologies (ART). Cheryl Naumann interviews Michael O'Riordan, the director of Acorn Education, to find out how this change will benefit schools

● **Why did Acorn decide to establish Acorn Education and ART as two separate operating divisions within the Acorn Computer Group?**

The Acorn Group has constantly changed and diversified over the years. One of the major reasons for this change is that Acorn had leading edge technology skills and very, very good people. In 1990, we established ARM, which is now one of the leading RISC chip design and licensing companies in the world. In 1994 we created Online Media, the leading supplier of highly integrated hardware, software and services needed to support the global market opportunities that emerge as the information superhighway matures.

Equally, Acorn has always had a strong core skill of expertise in schools, an installed base of customers in education, software in education, and an infrastructure in education. I think we'd reached the point where the two being intermingled – our technology and our educational expertise – were constraining each other. So it was decided that the best way to take advantage of the core strengths was to form two new organisations.

Until now Acorn was only a provider of hardware platforms, with a special emphasis on education. But it was moving to offer a wider range of products and services, and to broaden where it's revenue

base. Now, if Acorn Education wants a product or service, it's free to procure it from ART or from outside of Acorn, so we have much more flexibility and autonomy.

ART is already acquiring a reputation for superb technology. It's good that ART can make hardware for Acorn Education and can do systems integration for Acorn Education, but there's a wider opportunity out there. ART will sell its technological expertise to a range of commercial partners and Acorn Education will benefit from those developments. Acorn Education, ARM, ART and Online Media are linked in a way which will allow us to ensure our primary goal of bringing the best possible IT solutions to UK education.

● **Mike, what's your vision for the future of Acorn Education?**

I see Acorn Education being the supplier of total IT solutions to the UK education market. In Europe we will be the leading UK contributor to educational IT development, the leading supplier of educational IT products and services, and the European partner for those involved in educational IT

"One of the things I enjoy about Acorn is that there's never a dull moment. There's always new technology, new markets, new opportunities."

development and implementation. We will be the leading supplier of the UK educational experience to other European countries.

● **How will UK schools benefit from the creation of Acorn Education?**

Schools will benefit because there's a much clearer goal and focus on what Acorn Education has to do, and we have the ability to respond to the needs of the marketplace. So whatever schools want for delivering learning systems, whether large screens, hand-held computers or going on-line with e-mail and Internet, Acorn Education is now in place to provide it.

Schools will already be aware of the change in our business practice in the first six months of the year. We decided to sell directly to schools rather than through dealers. The benefits of this change were immediate, with the price of our hardware products coming down by 18-25 per cent.

Acorn will also be providing schools with a broader scope of choice. For a long time we've been dedicated to using RISC OS products as far as the curriculum is concerned. We have a wide range of RISC OS products and are looking to a great future with the RISC OS applications and software developments that we are undertaking. It is still our belief that when it comes

to curriculum applications, the RISC OS environment and the wealth of software that we have running on the RISC OS platform is the best solution for our customers. On the other hand, there may be schools which have a requirement, say, for an office administration system, and want a spreadsheet application that's used in industry. It's our intention to provide the school with that hardware platform in those areas.

Schools can look forward to a whole host of options from Acorn in 1996. We're building up Internet and broadband-related services, planning and developing consultancy services and implementing support services. We'll be selling on-line systems, driving the development of a broad base of curriculum bundles which include hardware, software, support and expertise, and will be continually enhancing our portable and connectivity products to ensure that Acorn is at the forefront of total systems integration.

● **What kind of expertise is Acorn Education bringing to the education market?**

Acorn Education itself is not a distributor. It's an organisation with expertise in education. We have a predominance of individuals who have spent some part of their life in education outside of Acorn. In my team there are people who have worked as school teachers and LEA advisers. Some have worked for IT advisory services at all levels. So there's a strong core group of people who have got education in their bones, who are highly rewarded in their own satisfaction of actually seeing their ideas and technology being used in the classroom to educate our children. That

group is able to add value, so that Acorn Education as a whole can add value to the products and services it delivers into schools.

Of course there are also people like myself, who haven't come from an educational background, but have come from a totally commercial background. I think that gives us a balance in that we are a business, and we have to be commercially successful to enable us to do good things in education.

● What role do Acorn Agents play in the new Acorn?

The primary aim of creating agents was to insure that there was a consistency of message being delivered to schools from a sales perspective. It's quite clear that as schools have more and more autonomy and can purchase whatever they want, they have to be aware of what's available. We found that working with dealers was complicated because they had to provide a wide range of products and no matter how hard we tried, they didn't always give the right information to customers.

Acorn Agents have a clear direction, and are trained in how our hardware and software products are used in the classroom. That's been a big investment from our point of view, especially as the training of agents is an ongoing thing. There is also an awful lot of expertise within the Acorn in Education Centres on how our products are used in classrooms. We're encouraging agents to work with AECs, with all of us supporting each other, and that seems to be working well.

Agents also make it possible for us to provide products and services in every part of the UK. With the joint programme between Tesco and Acorn, for example, we've seen over 20,000 computers put into schools, many of them in areas where Acorn products have not traditionally been sold. This is a great opportunity for Acorn Education. There are many people who haven't had the benefit of using our products and our services. With the introduction of agents, tight marketing and focused activity in those areas, we will be able to win new name accounts.

● If a school is interested in purchasing Acorn products or services, where is their first port of call?

In the first instance, a school should call Acorn direct, or their local Acorn Agent, we don't mind which. But if they haven't been introduced to their local agent, we hope they will call Acorn, and we will ask what their requirements are, and if they just want to order products because they know what they want, that's fine.

Alternatively, if they want advice and help, and it couldn't be provided on the telephone, we would contact the agent who would visit the school, listen to their requirements, explain the products and provide the school with a proposal. Then the school would place the order. Every evening we inform agents of orders that have come in from their territory, so they are able to plan for installation and support, and to correlate their own activity with what's happening in the schools.

● How will repairs, network installation and site surveys be handled?

Right now these services are being handled by our agents, and by some of our dealers and AECs. However, next year Acorn Education will be promoting its own range of products, taking advantage of our partnerships with third parties to provide the products. However, we won't be creating our own organisation of field service engineers, for example, but will be using others who have the right expertise.

● How is Acorn informing schools about the products and services it can offer to education?

One of the biggest challenges that anybody has in promoting their products into schools is actually communicating with over 30,000 schools. We've made an enormous investment in a new *Products and Services Catalogue* which will be sent to every school in the UK. The catalogue reflects Acorn's goal to provide the best possible IT solutions for education, including a wide range of products from Acorn and our third party developers.

Sometimes companies are too small to afford the marketing investment to offer their products into schools. Through our new marketing approach, Acorn Education is able to invest much more in promoting third party products. We're offering schools more information, more choice, easy ordering and an increased opportunity for feedback to Acorn. By moving closer to our customers, we can provide the appropriate products and services, and the support they need.

CROSSING PLATFORMS

Pyjamas and bears

CHILDREN love birthday parties and they absolutely adore the character of P.B. Bear. This lovable bear smiles, winks and laughs as he leads the children through his birthday adventures. At the same time, he's encouraging them to learn to read.

Words in the story are highlighted as they are read by either the trumpet or animal storytellers, helping children to link the spoken and written words. Several words on each page have been replaced with pictures. Whenever the narration comes to a picture, the computer pauses and the picture animates, giving children a chance to guess at the missing word. One click of the mouse reveals the missing word. Through this simple process children can learn basic vocabulary while following the text.

Fifteen games, activities and special interactive screens help children to recognise colours, shapes, numbers and sizes, and to become familiar with the concept of telling time. There are also several *stop-action* movies with sound effects. All in all, a comfortable environment for young children to develop and practise basic computer skills.

A good move for UK education

"The popularity of Acorn computers within UK schools has often meant that CD-ROM versions of our books have been unavailable to a vast number of children," explains Phil Donoghue, Schools Manager at Dorling Kindersley Family Library. "This has been a frustrating situation for teachers, parents, children and, of course, ourselves. The release of P.B. Bear's Birthday Party and the planned release of other titles for the Acorn platform means that many more children will be able to take advantage of Dorling

P.B. Bear's Birthday Party – Dorling Kindersley's best-selling CD-ROM – is now being used on Acorn computers in playschools, nurseries and primary schools across the UK ▬

Kindersley's educational CD-ROMs."

Schools can thank Innovative Media Solutions (IMS) for carrying out the technology that allows P.B. Bear to run on the Acorn platform. "I was pleased to have the opportunity to develop the PC to Acorn Reader Disc," comments Nigel Brown from IMS. "It brings all of the high-quality PC software onto the Acorn platform without the necessary expenditure of writing a whole new CD-ROM. We've just taken Dorling Kindersley's hard work and made it available to the Acorn RISC OS platform."

More titles to come

Alan Bennett, Preschool and Primary Sector Manager at Acorn Education, comments: "Acorn knows how much Dorling Kindersley's books and CD-ROMs are enjoyed by children at home and in schools. P.B. Bear's Birthday Party successfully recreates the superb quality of the printed version. We expect that it is only the first in a long line of CD-ROM versions of Dorling Kindersley titles for the Acorn platform."

As *Arc* was going to print, Dorling Kindersley confirmed that The Way Things

Work will be ready for the Acorn platform by the time of the BETT exhibition in January. Three more titles will follow in the early part of 1996: My First Incredible Amazing Dictionary; The Ultimate Human Body; and The Eyewitness Encyclopedia of Nature.

What you need

ACORN purchasers of P.B. Bear's Birthday Party will receive a PC CD-ROM and a floppy disc containing the data needed to run it on an Acorn RISC OS computer. Together these can be used with any Acorn A series computer or Risc PC with a CD-ROM drive, 4Mb RAM, RISC OS 3.1 (or later), a multi-sync monitor, and an ARM 3 or faster processor.

● *The P.B. Bear's Birthday Party CD-ROM and Acorn Reader disc pack is priced at £39 including VAT. It's available from Dorling Kindersley Family Library on 01403 833200.*

The Library

MEDIA coverage of the World Wide Web (WWW) suggests that it is an impossibly complex toy for the technical élite. In fact, WWW is a very simple but powerful tool; easy enough for a work placement student like myself to pick up in only a few days.

I came to the World Wide Web and Acorn as a novice. On my first day I was presented with a brand new Risc PC, a link into the Internet via Acorn House's network and software for *browsing the Web*. I started by looking at Acorn's Web site, as my job was to help maintain it.

Spinning through the Web

After typing in the address of Acorn's site (or Uniform Resource Location abbreviated to URL), I was presented with text and graphics. I found that by clicking on anything highlighted I was transported to another related page or another site somewhere else in the WWW.

While WWW felt almost like using one large machine, it was really a collection of connected computers – called servers. With no top or bottom level to the Internet, I mistakenly thought that there was no way to find the location of information on a specific topic. However, I discovered that cyberspace has directories of useful places, which are on-line and constantly updated.

So I was able to search the world for the topic of my choice. The directory sent me a page of related sites to choose from and I found a set of Web pages for every subject imaginable, from varicose veins to Van Gogh. Some pages not only provided text and graphics, but sound, short clips of moving images or even complete programs.

Creating your own Web pages

As constructing WWW pages is quite simple, the Web has become the world's largest free information resource. Free, not only because

Acorn House

most information is supplied and maintained at no cost to the user, but also because any individual or school can create their own in-house Web site on a network or contribute to the WWW.

Once I had hunted around the Web for a while, I decided to see how our pages were constructed. I was told that when I typed in an URL address, I was sending a request to somebody's server. Their server dutifully replied by sending back some graphics and some computer code called HTML (Hypertext Mark-up Language). My WWW browsing program understood the HTML and put together a page according to its instructions.

The wonder of HTML is that any computer can understand it as long as the computer

The Newspaper

The Airport

The Store

The School

The University

The Town Square

has a browser, and students can learn it very quickly.

Benefits of school Web sites

WWW expands the school's resource boundaries from hard copy books in the library to a worldwide electronic library. The scope for downloading materials to support the National Curriculum is really endless.

When a school decides to create its own Web pages, it gives pupils a chance to exhibit their finished project work in the school and beyond. The WWW also provides opportunities for schools to integrate with each other for joint curriculum projects, and serves as an economical advertising tool, both through the display of pupils' creative work and through information pages about the school.

● *The InterTalk Web Browser is part of Acorn's InterTalk Suite and will be available direct from Acorn in February*

● *Acorn's Web site: http://www.acorn.co.uk/*

World Wide Web: Tomorrow's toy or today's tool?

James Harris shares his experience behind the scenes at Acorn's WWW site

LAUNCHED on 8 September, BT CampusWorld already has over 3,000 customers and expects to have 6,000 more by the end of March. At Shaftsbury School in Dorset, Acorn hardware, ANT software and BT CampusWorld provide an integrated solution for Internet connectivity.

Shaftsbury School has been using the Internet for two years, but with one modem and long-distance dial-up to London, problems of cost, time and class management led to patchy and ineffective use in the context of cross-curricular access. However, it did provide the opportunity for a group of enthusiastic students to gain experience and develop their on-line skills.

"We chose BT CampusWorld because we intend to use World Wide Web extensively across the whole curriculum and needed a safe, controlled environment"

With the advent of an ISDN connection to the school's Acorn AUN computer network, the possibilities for Internet access across the curriculum were transformed. Shaftsbury School became a trial site for BT CampusWorld and has now applied for a full Class C IP address for up to 255 computers.

A safe environment

"Shaftsbury School is a state secondary school on a large site with two separate buildings," explains Malcolm Stuart, Co-ordinator of Information Technology. "Our network is currently served jointly by Acorn Access+ and a Level 4 AUN server. We also have a CD-ROM server that distributes educational RISC OS CD-ROMS across the network and all of our Acorn machines have been upgraded to 4MB to cope with this.

"We chose BT CampusWorld because we intend to use World Wide Web extensively across the whole curriculum and needed a safe, controlled environment with no access to unsavoury materials. Our aim is to provide *all* students will the opportunity of using CampusWorld on a regular basis and through *all* subject areas of the curriculum.

"Our boys and girls have quickly adapted to designing their own WWW home pages in HTML, using everyday Acorn tools such as Edit, Impression, ChangeFSI, Creator, PhotoDesk and PhotoCD. The students already had a high level of competence and expertise using the Acorn platform, so the transition to on-line working was absolutely natural and intuitive."

Shaftsbury is undertaking a considerable INSET staff training programme to bring *all* teaching staff up to a high level of awareness, to give them the necessary IT skills to utilise CampusWorld and to focus on the benefits of integrating this technology into the classroom environment. During this academic year the school is focusing on *Raising Achievement* and *Student Motivation*, and the integration of CampusWorld into the classroom is seen by staff as a very positive strategy in supporting these objectives. "Certainly the reaction of students to CampusWorld has been one of overwhelming enthusiasm and excitement," remarks Stuart. "Learning has never been so fun!"

Links with EU schools

One of the exciting spin-offs to Shaftsbury's use of BT CampusWorld is that the school has been invited to participate in an EU Web Core Project involving schools from all 15 member countries. These schools will work together to develop collaborative projects and learning resources over the Internet. A team of five teachers from Shaftsbury will soon be on their way to Brussels for training and planning meetings with teachers from the other participating countries.

Links with community

In Dorset, the school is working closely with the local business community in setting up an Internet training centre on the school site that would provide training courses for local business people in the evenings and at weekends. There is even talk of a Saturday morning cyber cafe at the school, offering Internet access and training for the local community.

Stuart comments: "BT CampusWorld offers a wide range of curriculum materials and project ideas that we can tap into straight away, from n'ews updates in English, French and Spanish to weather satellite images from around the world, from student on-line magazines to conferences. Topics cover every area of the curriculum and provide opportunities for students of all abilities and ages to

It's a small world — after all

What do BT Campus World, ANT and Shaftsbury School have in common? Arc went to find the answer

share and contribute. And for teachers there is a wealth of project material, guidelines and printable worksheets.

"Another benefit of BT CampusWorld is that they are putting a lot of resources and back-up into supporting the Acorn platform. They are releasing a specially commissioned version of the ANT Internet Suite software and early indications are that this software is stunning. We've received a superb level of technical support and help from CampusWorld, and Acorn has provided invaluable expertise in helping us to set up."

The most important issue

Stuart continues: "I feel that the most important issue that we are dealing with here is the future economic prosperity and competitiveness of this country. We *must* stay at the forefront of information technology and the education of today's youngsters in the use of this technology is absolutely vital. Certainly when I visited Brussels to participate in the launch of the EU Web Core Project, it was very evident that the EU is giving this the highest priority. In fact, the Bangeman Report commissioned by the EU identified the growth of the global *information society* as being *the* key economic factor in maintaining future prosperity within the EU. "Last Easter a group of teachers from

Shaftsbury School visited Canada on a Commonwealth Teachers' Exchange and we were amazed to find that *every* school we visited was using the Internet. Even primary schools and most secondary schools had local area networks connected to the Internet via a router, allowing whole classes to work one to a machine. Of course those schools were all on cable and enjoyed free local phone connection."

Stuart concludes: "Shaftsbury school has been at the forefront of educational initiatives such as resource-based learning, flexible learning and supported self-study programmes. Students are now fully familiar with independent study and research using books, video, CD-ROM multimedia and computer software. With the advent of on-line systems such as CampusWorld, the range of materials available to them is drastically increased and the possibilities for collaborative work or information retrieval are staggering. I eagerly await a government initiative to make this technology a high priority in British schools!"

- *Information of BT CampusWorld can be obtained by ringing their Campus Helpline on 0345 626253.*

I T SUPPORT

THOUGH they have diverse characteristics and are located in different parts of the UK, independent schools for the Acorn Partnership Programme are chosen for their common commitment to the use of IT in education and their willingness to help neighbouring independent schools through good example, advice and training.

Partnership schools receive publicity and special support from Acorn for events hosted at the schools. They may also serve as field trial sites for new products. Each partner school nominates a key contact to contribute educational ideas to the Acorn Independent Schools Steering Group.

In an effort to provide increased IT support for independent schools, Acorn created the Partnership Programme for Independent Schools in November. Arc takes a look at five schools chosen to launch the initiative

Acorn for

Dulwich College Preparatory School, Cranbrook

A primary and middle prep school, Dulwich College in Cranbrook has one Acorn computer in each classroom for those aged 3-12, and a main computer room accessible to the 13-year-olds during every lunch hour.

Andrew Flowerdew, IT Administrator for the school, was instrumental in setting up the Schools Information Technology Association, a training organisation for Acorn schools, which led to the school's involvement in Acorn's own Partnership Programme.

"We made a conscious decision to be an Acorn only school because of the ease of use for pupils, for teachers and for me," comments Flowerdew. "Our computers are all networked with an Acorn Ethernet SchoolServer and we now have over ten CD-ROM titles running across the network to support science, English, art and cross-curriculum work in all of the different age ranges. In fact, one of the reasons that we networked was so that we can send the *Exploring Nature CD-ROM* down to our three-and four-year-olds."

The school already offers training and has open days for parents and teachers to come in and chat. Parents can

Partnership Independent Schools

ask for experience with a specific task, such as e-mail, or to be shown how software is currently being used in the classroom. Future plans include IT residence courses for other area independent schools, as the college can provide sleeping accommodation for up to 60 teachers.

Dulwich College Preparatory School, London

Dulwich College in London is a prep school for boys aged 3-13. The college has just opened a brand new building which houses the IT department and has 22 Acorn computers in the IT room, two in the staff room, several in various classrooms and labs in the upper school, and one in each form room in the lower school.

The school's IT suite is designed to hold two classes at a time, having access to different software via the network. The facility is open from 8am to 5pm each school day and parents are encouraged to drop in out of school hours.

Last November Ann Revell, Head of IT at the College, ran an IT surgery for parents, answering questions, demonstrating the software pupils use in the classroom and giving advice on what will run on their computers at home.

Revell's next big project will be a spring seminar for teachers at local independent schools, being planned according to feedback from those schools. Possible topics include sessions on databases and spreadsheets, how to develop a cross-curriculum IT policy and delivering IT across the National Curriculum.

The Hawthorns School, Bletchingley

The Hawthorns is a co-educational pre-prep and prep school with pupils aged

2-13. The school has a seven-year rolling plan designed to build on existing strengths, with an integral part of curriculum development revolving around IT. Touch-typing skills are introduced to pupils at an early age to enhance their computer literacy skills, and the possibility of using laptops in the classroom and at home.

The school will be holding an *IT in the Humanities* afternoon in March, inviting local teachers of geography, history and religious studies to share ideas and view packages from a number of software houses. A school-based helpline service is also being planned for the future.

"This initiative from Acorn will give us the opportunity to take concrete steps towards our dream for future IT in an exciting partnership context," comments Simon Fraser, Head of IT. "In an environment where many are pressing for so-called *industry standard* platforms, I would press teachers to think carefully about this. Acorn computers are still the best educational solution, with a superb range of educational software. Their easier maintenance and longer lifetimes are merely an added bonus. IT is fast-moving, so it is important, whatever your decision, to have a clear vision for your school."

Oakham School, Rutland

Oakham School comprises both a lower and upper school spanning ages 10-18. The campus is furnished with equal numbers of Acorn, Apple and RM machines, all networked together on Acorn's new multi-platform network server.

"We recently had 25 parents come along to see what their children do with IT in school," comments IT Co-ordinator Pat Nichols. "Most of them use Macs or PCs at

work and are used to the normal spreadsheet and word-processing packages. When they saw what can be done on the Acorn machines with graphics and video, and how interactive the software applications were, their eyes were on stalks."

Oakham plans to ask Acorn to hold in-service training at the school during holiday breaks. But the school will also be inviting teachers to visit for an afternoon during term time, in order to talk to pupils and see how the computers, software and networks are actually used by them in the school.

"I'm looking forward to this partnership with Acorn," adds Nichols. "When Acorn establishes a direct link with schools it means we can work much closer together and our teachers will have an input straight into the manufacturer as to what we feel is needed in schools."

Winchester College

Winchester College is for boys aged 13-18, with 90 per cent of them boarding at the College. The school boasts two Acorn computer rooms, one in the main school block and one in the science school, as well as computing facilities in all of the boarding houses.

The school recently hosted a mini Acorn World for its students, staff and other local independent schools. The event included two days of exhibitions and back-to-back seminars from a dozen software companies currently creating packages for Acorn computers. Winchester boys wearing Risc PC sweat-shirts were on hand to provide help to the exhibition visitors.

"The most useful thing about communication with schools is the sharing of ideas for teaching," comments Paul McMasters, Head of Computing. "For example, we use DataPower to run a Fantasy Football competition at the beginning of each year. We have about 270 entries from the boys and it's a fun introduction to setting up and managing a database."

Winchester has nearly finished creating its own *Resource Centre*, a curriculum information hub situated in a classroom next to the main block computer room. "This is an important development for us," explains McMasters. "We're going to put everything together. Offices for the computing masters, library, workshop, CD-ROM library, e-mail and our Internet link. We're moving toward a dedicated Internet line. We feel that Internet is going to be enormously important to the school in the future."

> *"The most useful thing about communication with schools is the sharing of ideas for teaching"*

Facing the Superh

THE answer is simple. The Superhighway is coming to UK schools. Some educators believe they will reach retirement before the superhighway arrives in their school. Maybe they will. But in a relatively short time the majority of *Arc* readers will be accessing a vast array of educational resources and communicating via the superhighway.

So please don't turn to the next article. Lower your fear quotient and stay with us to face some issues with potentially exciting solutions!

What is the superhighway?

Most people understand the concept of electronic mail (e-mail). The ability to sit at your computer, type a message and then send it to someone else's computer through a modem connected to a telephone line.

When friends talk about e-mail, they may also mention Internet and the World Wide Web, the collective sum of all of the world's computer networks and sub-networks, servers and infrastructures, which have the potential to share information, data and graphics with each other.

Linking computers on e-mail or the Internet with the use of ordinary telephone lines is referred to as *narrowband* communications. Recent advances in digitising information and the ability to compress digital information mean that narrowband networks are carrying an increasing range of functions, including the transfer of still and moving images.

However, the term *information superhighway* usually indicates a *broadband* computer network utilising fibre-optic cable, radio spectrum or satellites. Broadband networks are very much faster than narrowband – 100 or even 1,000 times faster than current Internet speeds – and are capable of two-way transfer of

Why is Arc devoting three pages to the education superhighway?

ighway

larger amounts of information in the form of video, still images, audio and text, all to multi-channel television standards. This broadband superhighway is increasingly viewed as the choice medium for providing the range of services that Britain's educational community will need in the long term to fully benefit from interactive IT applications.

On the political agenda

Recent speeches by various party ministers have made frequent reference to the development of educational IT for the future. In April of 1995 the DfE published *Superhighways for Education*, a consultation paper on broadband communications, which also marked the launch of a DfE presence on the Internet. The DfE explained that the UK is well placed to enter the era of the information superhighway and challenged the telecommunications, cable, broadcasting, IT and multimedia industries to work with the education community to develop, through a programme of industry-funded pilot projects, commonly accessible national, and ultimately international, educational superhighways.

The results

The DfE received a total of 431 responses to *Superhighways for Education*, and the newly named DfEE announced the consultation findings and pilot projects at the 13 November conference on **Superhighways Serving Education.**

According to Education Secretary Gillian Shepherd, "The paper which we are publishing today, *Superhighways for Education – The Way Forward*, offers important pointers about the development of applications and services for education, about the local infrastructure in schools and colleges, about the standards for which the education service and suppliers should be aiming, and

about the pricing of services.

"Real achievement in this area will not come about as a result of hasty measures designed to provide instant solutions. We need dialogue and understanding between the education services and those industries developing superhighways and their services so that the needs of education can be identified and fully taken into account."

£10 million investment

The conference also heard Deputy Prime Minister and First Secretary of State, Michael Heseltine says, "Today's young people must develop the skills and attitudes they need to feel comfortable with IT if they are to secure the benefits it brings.

"Today's IT literate children will be tomorrow's business leaders. For them, the superhighways – the fully-fledged Information Society – will be integral to everyday life, as familiar as the telephone or television.

"Today we are issuing *Superhighways for Education – The Way Forward*. The programme and projects we are launching give us the opportunity to convert good ideas into practice. With the support and advice we are getting from private and other partners, the overall value of this programme will be £10 million. This is a big investment of time, expertise and money on the part of the project partners."

Other party concern

It's not only the government which is bringing the importance of IT in education to the fore. In a recent speech, Tony Blair, leader of the Labour Party, said: "Education is the best economic policy there is. And it is in the marriage of educa-

tion and technology that the future lies... It means bringing together the private sector, government, universities, research centres and science labs to put together an advanced system of further education for the electronic age... It will be called the University for Industry. And it will transform education and skills in Britain, and make lifelong learning a reality...

"The cable companies are playing their part, using the new technology to good effect. But we should aim for free and fair competition and end the restrictions that have prevented BT, Mercury and others from playing their part in wiring up Britain... We have been in these past weeks in discussion with BT. In return for access to the market, I can announce they have agreed, as they build their network, to connect up every school, every college, every hospital and every library in Britain. For free... Eventually we want every home to be wired up in the new Britain."

Acorn pilot projects chosen

It won't surprise *Arc* readers to know that Acorn took a big interest in the government consultation paper and had plenty of ideas to submit for consideration. Acorn's response to the DfEE can be obtained from the company's WWW site if you are already using Internet: http://www.acorn.co.uk/.

Two of the projects chosen by the DfEE for evaluation are being co-sponsored by Acorn. The Knowledge Superhighway Project involves six secondary schools in Birmingham and will cover all National Curriculum subjects, in-service training, home learning and the provision of minority features. The technology will include ISDN2, cable networking providing a minimum speed of 2 Mbit/s and Integrated Learning System software.

Acorn is also sponsoring a second project entitled Acorn Home-School Links Project. Part of this pilot is based in eight schools and a number of homes in the Cambridge area, which are connected to the Cambridge Interactive TV Trial, led by Online Media, a division of Acorn Computers. It includes the use of on-

"It is in the marriage of education and technology that the future lies... it will transform education and skills."

Superhighways for Education (the consultation paper), Superhighways for Education – The Way Forward and the speech delivered by First Secretary of State, Michael Heseltine, at the Superhighways Serving Education conference, can be accessed through the DfEE Internet home pages:http://www.open.gov.uk/dfee/dfee-home.htm. Printed copies of these documents are available to schools from the DfEE, but will not be sent unless requested.

demand educational programming and distance learning for homework and revision. The project will also explore the attitude, pedagogic and management implications for teachers of the superhighway.

The Home-School Links Project also covers a number of current activities using Acorn Pocket Books for home-school linkage, exploring the sort of use of IT which will become much more widely possible when homes as well as schools get connected to the super-highway.

The way forward

Superhighways for Education – The Way Forward highlights five priorities in ensuring the successful take-up of super-highway developments in UK education:

● Raising the general level of IT capability in schools, FE colleges and teacher training
● Developing network literacy in preparation for broadband superhighways
● Developing high-quality on-line educational applications and services
● Providing advice, support and training for teaching staff
● Developing the infrastructure of equipment and connectivity.

Government promises

Mr Heseltine also enumerated six points of commitment from the government:

● To support and encourage the piloting of new communications technologies in education
● To make available resources to enable continuing provision of equipment and training in the delivery of IT capability
● To look to the SCAA and other national bodies to take account of the developing importance of network literacy
● To liaise with industry to promote the development of additional educational on-line applications and services
● To look to the TTA and other bodies to review arrangements for teacher training to ensure that they keep pace with technological developments
● To work with the HEFCs to review progress on the SuperJANET project and disseminate outcomes of the project as widely as possible, so that the implications for other education sectors and for product and service development by industry can be considered.

Funding the superhighway

Though independent of the government, OFTEL was also at the **Superhighways Serving Education** conference to make some announcements of its own. Don Cruickshank, Director General of Telecommunications, explained that a broad consensus on a universal service to all UK schools at an affordable price would legitimise OFTEL in offering a means for funding and delivering that service.

Don Cruickshank said: "There's been a lot of talk lately about free connections to the information superhighway in schools. But I suspect schools may need rather more than that. Eventually I would expect students to need a package something like: affordable connections, eg basic rate ISDN; low, predictable usage tariffs; and some internal networking and end user kit. And I recognise that training and user support is required.

"If it turned out that the agreed level of service, at an affordable price, fell below the price at which operators could recover their long run avoidable costs net of any benefits to them of providing schools with such a service, then the package would be eligible for universal service funding."

Don Cruickshank also discussed the question of who should provide this service. He commented: "The important thing is that schools should be able to choose who they want to provide them with this service. At present BT is everywhere; radio-based telecoms should be virtually everywhere; 80 per cent of all schools should in due course be able to get cable; and some of the other 100 or so licensed operators would be interested in providing attractive deals for schools."

OFTEL has now announced they are about to enter a round of consultation about how to define and fund super-highway services for schools, stating: "We will be issuing firm proposals on how schools can be linked up to – and teachers make full use of – advanced telecoms services. We will define what we mean by advanced services, and suggest how to make them real for schools and how to pay for them."

Tool for success

Acorn is convinced that education must be a key user of the superhighway. "We believe the economic success of the UK is critically dependent on how we use new technologies to enable education and learning, and how we use them to enable teachers to manage learning," comments Roger Broadie, Strategic Marketing Manager for Acorn Education. "To make this happen we need a clear and united vision, led by government, and the right

"Economic success is critically dependent on how we use new technologies to enable education"

regulatory, commercial and education funding framework. We must free companies, individuals and institutions to develop, create and promote education services of all kinds."

The vision thing

Acorn's vision is that UK education services on the superhighway will:

● enable all children to develop the new literacies necessary for life in a superhighway world
● support home-school links and lifelong learning for work and pleasure
● enable schools to develop services to serve their own local community
● enable the best teachers to publish experiences and teaching materials for use by others
● evolve as a partnership between education, business and government, while clarifying where responsibilities for educating and learning lie with pupils, parents, schools, teachers, lecturers, Heads, the media, industry and government all understanding what their roles must become
● be universally accessible across the UK in homes, schools, colleges, universities and libraries.

Roger Broadie comments: "Acorn Group's experience of developing technology for the superhighway mass market and for education, and our growing understanding of the full range of services possible on the superhighway, convinces us that the UK education superhighway will be a reality sooner rather than later."

Though many schools may find the prospect of planning for this kind of future somewhat daunting, at least those schools with Acorn computers will find that even the Archimedes machines bought in the late '80s and early '90s will support many aspects of super-highway services, and Risc PC and A7000 computers will be ideal to connect to the education super-highway.

Acorn is now developing, through Applied Risc Technologies (ART) and Online Media (OM), many of the additional products that will be needed for super-highway systems, such as ATM networking and MPEG cards for Risc PCs and A7000s.

We will use future issues of *Arc* to bring you more information on these exciting developments.

advantage

Portfolio
1996

In partnership with

FINA

Ladybird

PAPER♥MATE

✦ PARKER

HELIX

icd
MARKETING SERVICES

BOOKS
FOR STUDENTS

Acorn
EDUCATION
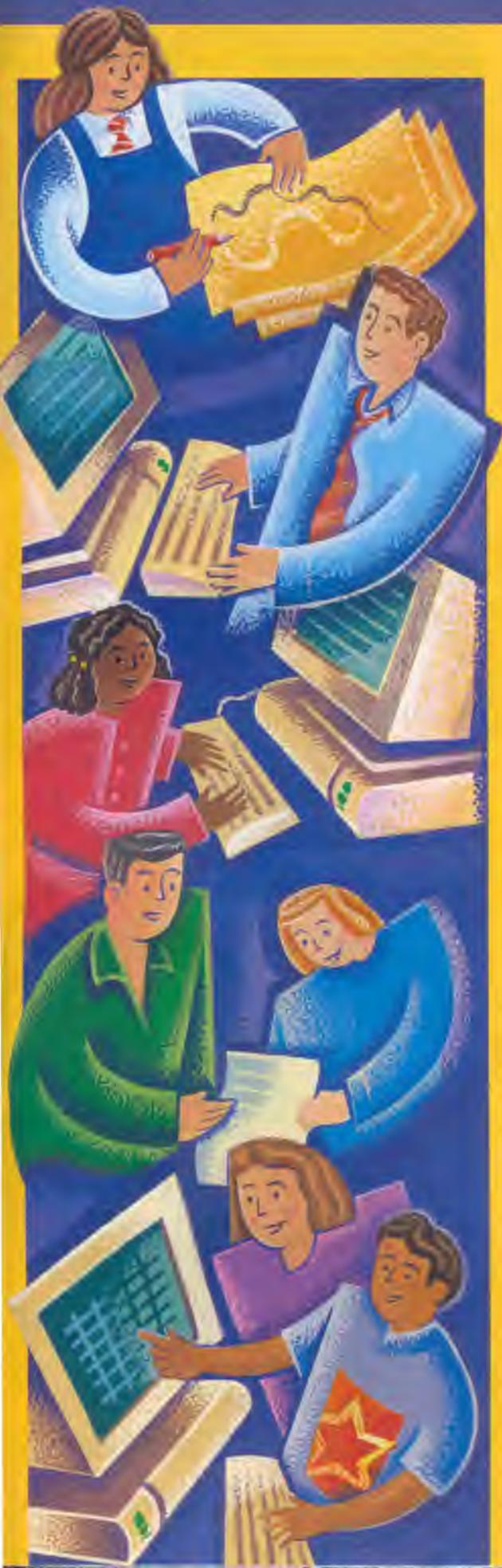
The Internet

The Internet offers a world of educational resources to complement and enhance curriculum teaching by bringing interactivity with students and information from around the globe. We have selected a range of products and access service providers with particular expertise in education.

1

2

3

● Enter *CampusWorld* (subscribers)
● *CampusWorld* open area
● Help

4

1 SPORTSTER 28.800 FAX/INTERNET MODEM

From US Robotics, the world's largest manufacturer and UK market leader, the Sportster 28.800 is an economic, high-speed modem, compatible with Acorn InterTalk.

19,900 Advantage Points

2 ACORN INTERTALK

Allows access to electronic mail, locally and via the Internet, to send mail and RISC OS files to colleagues or classmates on the same site, or across the world. Joining and navigating around the superhighway is easy through the ability to select specified hardware and Internet providers.

Site Licence AES71 - **1,800 Advantage Points**
Single User AES70 - **1,000 Advantage Points**

3 CAMPUSWORLD

CampusWorld is an on-line education network which offers easy and cost-effective access to a wide range of high-quality resources specifically designed or selected to enrich teaching and learning. The service provides materials and communication tools for all phases of education and for most curriculum areas. In addition, CampusWorld identifies useful areas on the wider Internet and provides guidance on how they might be used to benefit the learning experience.

School Service (includes access via PSTN to CampusWorld, restricted access to the Internet, one electronic mailbox) - One year subscription - **15,000 Advantage Points**

School Service + Full Internet - One-year subscription
25,000 Advantage Points

Starter Pack, including Acorn Access software
2,900 Advantage Points
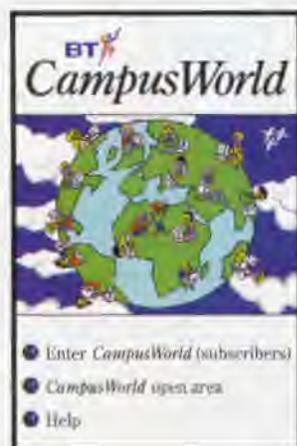
4 ZYNET

Zynet is unique as an Internet provider, possessing over ten years of Acorn hardware and software experience gained through its sister company, Minerva Software. It has used its expertise in the education market to develop the special educational bundles listed below and is willing to provide any customisation that a particular school requires.

Zy-School (includes registration, registration news, Acorn start-up software and user notes, 5MB resource space for project work, Internet hotline support, e-mail, 64 PoPs) - One-year subscription
14,500 Advantage Points (Quote 4S)

Zy-SchoolServe (all services above PLUS multiple e-mail addresses, 10MB resource space, full service forwarding for up to 20 computers, Internet hotline support)
53,500 Advantage Points (Quote 4SS)

Educational Resources

5 MUSIC STORAGE TROLLEY
A versatile mobile storage trolley, consisting of a steel-framed, rigid unit with castors, and plastic-covered wire containers which are interchangeable. The frame is delivered packed flat for safe transportation, but is easily erected with screws and key supplied.
9,800 Advantage Points

6 PAPER STORAGE TROLLEY
This transportable trolley offers neat storage for up to 12 rolls of paper, up to 700mm long. The paper can be cut straight from the unit or easily lifted off and onto a desktop. Fitted with four sturdy lockable castors. Size: 82 x 40 x 40cm.
6,300 Advantage Points

7 HUMAN SKELETON 1:3 SCALE
Easy-to-assemble kit in textured plastic. Moving joints push together, no glue required. Complete with stand and educational guide.
4,100 Advantage Points

8 COMPLETE ANATOMY 1:3 SCALE
An accurate skeleton which can be filled with models of the body's internal organs. The completed body can be held in the transparent 'body shell' for easy viewing. Complete with stand and comprehensive guide.
6,900 Advantage Points

9 B&H 400 SERIES VIOLIN OUTFIT
Carved from spruce and maple with ebony fittings. Supplied complete with moulded chin rest, bow and rosin, in a case with cover.
16,000 Advantage Points

10 BUFFET 861E FLUTE OUTFIT
Plateau model; offset G; E mechanism. Silver-plated tubing and keywork.
28,000 Advantage Points

11 BUFFET B12 BB CLARINET OUTFIT
A good-quality student instrument. Body made from durable Luration. 17 keys, 6 rings. Nickel-plated keywork.
28,000 Advantage Points

Educational Resources

12 **3 SHELF MULTIPURPOSE TROLLEY**

A multipurpose trolley with height adjustable shelves. Ideal for transporting equipment, files, paper and books around school.
18,000 Advantage Points

13 **A&D PERSONAL BALANCE**

A compact and accurate balance with a 3000 x 0.1g capacity. Completely portable with rechargeable battery pack. Features include 1/3000 resolution, sealed keyboard and large clear display.
29,500 Advantage Points

14 **BENCH CENTRIFUGE**

A bench centrifuge accommodating 2/4100 x 16mm tubes. Stove enamelled exterior and double safety opening catch. Maximum RPM: 2900.
30,000 Advantage Points

15 **SAFETY STORAGE CABINET**

Zinc-coated steel cabinet developed to provide safe storage of flammable liquids and hazardous substances. Fitted with locks, two shelves and tray to retain any spillage.
Dimensions: 610 x 610 x 306mm.
18,000 Advantage Points

16 **ELECTRONIC SYSTEMS TRAINER (EST)**

- Designed for experiments in design and operation of electronic and logic systems.
- Suitable both as demonstration kit and for individual student use.
- Fully self-contained transportable teaching unit.
- Supplied with leads, connectors and comprehensive instruction manual with experiment details.

Specification: 220V/240V, 50Hz, 2A antisurge fuse; fuse plug fitted.
17,500 Advantage Points

17 **SIMAIR ABO5M 'AIRBOX' COMPRESSOR**

A single airbrush air compressor, fitted with air reservoir, pressure gauge and regulator. Low noise level, virtually maintenance free and produces a maximum of 40psi.
12,000 Advantage Points

Educational Resources

18 MATHS SAFARI

Maths Safari is suited to a wide range of mathematical activities. It can be used as a self-correcting tutor or two pupils can play competitively. Mains adaptor included. Supplied with sets of cards, covering a range of mathematical activities, in wire-bound book form as 20 double-sided cards, offering 40 lessons each.

Additions and Subtractions (For ages 6-9)

Multiplications (For ages 7-11)

Divisions (For ages 7-11)

9,000 Advantage Points

19 GEO SAFARI

Learn Geography facts while you play! Geo Safari is an electronic quiz game that is a self-correcting tutor for one person, or a stimulating game of knowledge for a small group. Supplied with cards. Mains adaptor included. For age 9 to adult.

6,700 Advantage Points

20 TODAY'S WEATHER BOARD

An excellent stimulus for weather studies. Features comprise the day and date, wind strength and direction, cloud type, temperature and general weather. Plastic, 405 x 385mm.

2,200 Advantage Points

21 AST/ACCUSPLIT STOPWATCH

Ten-hour timing range and accurate to 1/100th of a second. Water-resistant with three-year guarantee. Battery supplied.

2,200 Advantage Points

22 WITTNER METRONOME

A top-quality clockwork metronome with tempo names and settings from 40-208. Supplied complete with instruction leaflet.

2,800 Advantage Points

23 DOCUBIND BINDING MACHINE

Professional plastic comb punch and binding unit, also incorporating a heavy duty 4-hole punch. Scratch-resistant casing outside, steel construction inside. Non-skid base for stable operation.

13,300 Advantage Points

Educational Resources

24 WEATHER STATION

Easy to use, allows children to accurately measure and record all aspects of weather.

4,200 Advantage Points

25 SCHOOL MICROSCOPE

A monocular microscope using standard RMS objectives and eyepiece giving a range of magnifications from 80x to 400x. Packed in a strong storage case.

7,200 Advantage Points

26 THE ELEMENTARY SPELLMASTER

Specifically designed to correct the typical misspelling patterns of children. Simply punch in a word and the correct spelling is quickly displayed. Other features include word games and drills, input of up to 50 new words, listing of words containing a certain letter sequence. Four batteries, Oxford Illustrated Children's Dictionary and Teacher's Notes included.

4,500 Advantage Points

27 PORTABLE LOCKING FILE

With spacious foolscap capacity for 8 files, drop front, stationery drawer, carrying handle and 2 keys.

3,200 Advantage Points

28 CASIO SA35 KEYBOARD

A compact and lightweight, yet hard-wearing electronic keyboard. Features include: 32 mini keys, 4-note polyphonic, 24 rhythm patterns, 10 song bank tunes, lesson function, 100 sound variations. Uses 5 x AA size batteries or a 7.5V power adaptor (not included). Keyboard size: 619 x 178 x 57mm.

4,700 Advantage Points

29 HEAD TENNIS RACKET

Carbon frame, range of sizes, case.

5,400 Advantage Points

30 HEAD SQUASH RACKET

Carbon frame, lightweight, range of sizes, case.

4,300 Advantage Points

Kaleidoscope

The flexible reading resource for primary schools.

Kaleidoscope Reading Sets are colour-coded, boxed sets of books organised into Cliff Moon's Individualised Reading Stages for gradual progression throughout the whole primary school. Individualised Reading grades books into 13 levels of difficulty, ranging from 'Stage 0' for wordless books to 'Stage 12' for books that can be read fluently by an 11-year-old.

- *Favourites* are titles published prior to 1994
- *New Titles* are titles published within the last 12 months
- Please name colour code and Favourites or New Titles when ordering

BOOKS FOR STUDENTS

31 YELLOW

A selection of books for young children who are just beginning to read.

National Curriculum:	Working towards Level 1 and Level 1
Scottish Guidelines:	Level A
Individualised Reading:	Stages 0 to 6

Yellow Favourites - **11,000 Advantage Points**
Yellow New Titles - **11,000 Advantage Points**

32 RED

A selection of books for young children who have made a start with reading.

National Curriculum:	Working within Level 1 and Level 2
Scottish Guidelines:	Level A
Individualised Reading:	Stages 7 and 8

Red Favourites - **11,000 Advantage Points**
Red New Titles - **11,000 Advantage Points**

33 BLUE/SILVER

Blue: A selection of books for children who are developing reading fluency.
Silver: A selection of books for children who are late starters.

National Curriculum:	Level 2 and working within Level 2
Scottish Guidelines:	Level B
Individualised Reading:	Stages 9 and 10

Blue Favourites - **11,000 Advantage Points**
Blue New Titles - **11,000 Advantage Points**
Silver Favourites - **11,000 Advantage Points**
Silver New Titles - **11,000 Advantage Points**

34 ORANGE/GREEN

Orange: A selection of books for young children who are fluent readers.
Green: A selection of books for older children who are fluent readers.

National Curriculum:	Level 3 and working within Level 3
Scottish Guidelines:	Level C
Individualised Reading:	Stages 11 and 12

Orange Favourites - **11,000 Advantage Points**
Orange New Titles - **11,000 Advantage Points**
Green Favourites - **11,000 Advantage Points**
Green New Titles - **11,000 Advantage Points**

35 PURPLE/BROWN

Purple: A selection of books for young children who are completely independent readers.
Brown: A selection of books for older children who are completely independent readers.

National Curriculum:	Level 4 and working within Level 4
Scottish Guidelines:	Level D
Individualised Reading:	Beyond Stage 12

Purple Favourites - **11,000 Advantage Points**
Purple New Titles - **11,000 Advantage Points**
Brown Favourites - **11,000 Advantage Points**
Brown New Titles - **11,000 Advantage Points**

Ladybird Books

For children and parents throughout the world,
Ladybird books are an intrinsic part of growing up.
They have an emphasis on fun, educational integrity
and high-quality production. We have specially
selected the following packs for use in schools.

36 DISCOVERY SERIES

Each clear, concise book contains exquisitely detailed
illustrations, including a unique 8-page foldout panoramic frieze.
An extremely useful resource for topic work, the books span a
number of subject areas and provide factual information while
stimulating the imagination.

● Set titles: Dinosaurs, Skeletons, Sharks, Rainforest Animals,
Food, Volcanoes and Earthquakes.

2,000 Advantage Points

37 PICTURE LADYBIRDS

Beautifully illustrated, original fiction stories which introduce
children to the pleasures of reading.

● Set titles: Telephone Ted, The Star that Fell, Wishing Moon,
Benedict goes to the beach, Jasper's Jungle Journey, Don't
Worry William.

2,000 Advantage Points

38 HISTORY OF BRITAIN

This widely acclaimed series provides an invaluable resource for
classroom research. Each book traces social development against a
background of major historical events and highlights the legacy of
the particular period for the present day.

● Set titles: The Romans, The Saxons and Normans, The Middle
Ages, The Tudors, The Stuarts, The Georgians, The
Victorians, Britain 1901-1945, Kings and Queens 1, Kings and
Queens 2.

3,500 Advantage Points

Helix School Resources

39 12" (30cm) WHITE PLASTIC RULES
Shatter resistant. Pack of 100.
1,400 Advantage Points

40 12" (30cm) CONVERSION RULES
Shatter resistant. Pack of 100.
4,500 Advantage Points

41 METAL SCHOOL COMPASS
Pack of 25.
2,500 Advantage Points

42 NEW STYLE, SELF-CENTERING COMPASS
Pack of 25.
4,400 Advantage Points

43 ACHIEVER MATHS SET
Containing: 12" (30cm) folding rule, compass and pencil,
45/60° set-squares, angle measure, two shape templates, pie chart
template, pencil sharpener, eraser, all in plastic box. Pack of 6.
5,400 Advantage Points

44 OXFORD MATHS SET
Containing: compass and pencil, pencil eraser, pencil sharpener,
6" (15cm) rule, 45/60° set squares, 10mm lettering stencil,
timetable fact sheet, all in metal pencil tin. Pack of 5.
2,000 Advantage Points

45 SHAPE TEMPLATE PACK
Contains four templates: hexagons, squares, triangles and
pentagons. Pack of 10.
3,800 Advantage Points

46 HELIX LOCKABLE TROLLEY
Adjustable to take large printout and foolscap suspension.
Lockable lid, base shelf, locking castors.
13,300 Advantage Points

47 BETACOM ANSWERPHONE
Call screening, variable outgoing message, remote interrogation, memo message facility.
6,400 Advantage Points

48 SAMSUNG 14" COLOUR TV
Remote control, portable.
18,800 Advantage Points

49 SAMSUNG SF505 FAX MACHINE
BT approved, copy facility, auto switching.
35,000 Advantage Points

50 PHILIPS PERSONAL CD PLAYER
Portable CD player with headphones, random and skip functions.
11,700 Advantage Points

51 PHILIPS RADIO CASSETTE PLAYER
Twin cassette with random and skip functions, speed recording tape to tape, am/fm radio.
5,500 Advantage Points

52 SAMSUNG VHS VCR
Remote control, on-screen programming, extra quick start VHS.
22,900 Advantage Points

53 STANDARD A4 OVERHEAD PROJECTOR
High-quality overhead projector for normal classroom use, fitted with a lamp change mechanism, two lamps and a standard lens.
15,800 Advantage Points

54 CUMANA OSCAR CD-ROM DRIVE

The Cumana Oscar CD-ROM Drive is designed to withstand both home and school use, and includes the ability to connect to a hi-fi system. The drive has the following functionality:

● Plugs into an Acorn computer without need for an additional interface.
● Includes everything you need to get you going.
● Cumana Photo Album CD disc.

18,800 Advantage Points

55 CUMANA BRAVO CD-ROM DRIVE

The Bravo is similar to Oscar, with the addition of audio mixer, so no cable swapping mid-lesson.

21,700 Advantage Points

56 STEREO COMPUTER SPEAKERS

3" dynamic speakers with 4-watt output.

2,900 Advantage Points

3.5" speakers with 6-watt output

3,700 Advantage Points (Quote 56A)

57 SAMSUNG 8mm CAMCORDER

8mm format, 8x zoom, auto focus, remote control and detachable light carry case.

50,250 Advantage Points

58 ACORN MULTIMEDIA EXPANSION UNIT

The Acorn Multimedia Expansion Unit (MEU) is housed in a case co-ordinated with, and designed to stack upon, the A4000 and A5000 range of computers. It contains a fast (double-speed) CD-ROM drive and an audio pre-amplifier to allow mixing of audio from CD-ROM and the computer. It connects to the computer via a SCSI interface. The case has provision for additional third-party upgrades (not marketed by Acorn), such as additional hard disc drives. There is space for other devices, such as a second CD-ROM drive or a magneto optical drive, but these will require dealer fitting, since the MEU has to be customised for the needs of specific devices.

● 12-month on-site and hot line support included with these products.

Multimedia Expansion Unit with SCSI Card for A4000/A3020.

40,400 Advantage Points

Multimedia Expansion Unit with SCSI Card for A5000

40,400 Advantage Points (Quote 58A)

59 SAMSUNG RADIO CASSETTE CD

Twin-cassette CD with random and skip functions, speed recording tape to tape, am/fm radio.

15,000 Advantage Points

60 RICOH RZ900 ZOOM CAMERA

A fully automatic 35mm, auto focus lens shutter camera. Case included. Features:

● Multibeam AF5 point focusing.   ● 38-80m zoom lens.
● Automatic fill-in flash.   ● Automatic load, wind/rewind.
● Red eye reduction mode and auto intelligent flash.
● Super macro system - focus fixed at 30cm.

16,500 Advantage Points

Computer Products

61 ACORN ADVANCE

Advance is an integrated software suite which incorporates word processor, spreadsheet, database and graphing - all within a single package. On their own, each of the individual elements performs all the usual productivity functions. Each element within the suite integrates seamlessly with the others. The real benefit of Advance is the ease with which each individual element can be viewed simultaneously and integrated within another element.

Single User - **1,500 Advantage Points**

Primary Licence - **2,500 Advantage Points** (Quote 61A)

Secondary Licence - **4,000 Advantage Points** (Quote 61B)

62 CUMANA CD-NET CLIENT/SERVER SOFTWARE

CD-Net provides schools with a high-performance filing system, allowing CD-ROMs to be accessed across an Acorn Universal Network (AUN). Access or SJ Nexus network at speeds often in excess of those achieved on stand alone systems.

15,000 Advantage Points

63 ACORN SVGA MULTISCAN MONITOR - AKF50

A high-resolution SVGA multiscan monitor with a 14" screen and 0.28mm dot pitch anti-glare anti-static screen. It is designed for users who need to spend many hours in front of the computer. It has a tilt-and-swivel base and comes fitted with a 1m mains cable which connects directly with your A4000 or A5000 computer. An additional mains cable with a 13-amp plug is required for the A3020. This can be purchased from your local Acorn dealer. All current Acorn screen modes are supported, as well as the VGA and SVGA VESA standards.

● 12-month on-site and hot line support included with this product (UK only).

17,000 Advantage Points

64 ACORN POCKET BOOK II

Pocket Book II features include:

● built-in applications: Schedule (a diary and scheduling application), word processor, spell checker, scientific calculator, spreadsheet, database and Plotter (a graph plotter which removes the need for a separate graphical calculator)

● switch between applications with a single key press for ease of use, long battery life - on average 80 hours use from two AA batteries

● 256k RAM as standard which can be extended via a solid state disc drive to provide up to 4MB of data storage

● 12-month hotline support included with this product

● a screen which is twice the area of the Pocket Book's

256k Version - **13,000 Advantage Points**

1MB Version - **14,500 Advantage Points** (Quote 64A)

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*Please quote full
reference when ordering
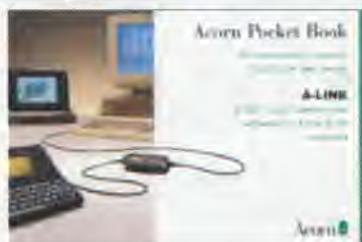
65 ACORN POCKET BOOK A-LINK

Serial link cable and support software that provide an easy means
to transfer your text and data files between Acorn 32-bit
computers and the Acorn Pocket Book.

A-Link - **3,000 Advantage Points**
PC-Link - **4,000 Advantage Points**
Mac-Link - **5,000 Advantage Points**

● The A-Link will only work with Acorn Archimedes computers
running RISC OS 3.1 (or later).

66 SAPONA SCREEN CLEANING WIPES

Pack of 1 drum x 100 wipes - **800 Advantage Points**

67 SAPONA SCREEN & KEYBOARD CLEANING KIT

Pack of one mini briefcase - **1.650 Advantage Points**

68 3.5" HIGH DENSITY FLOPPY DISCS

Pack of 25 - **1,300 Advantage Points**

69 ACORN PROTECTIVE DUST COVERS*

Manufactured from grey nylon material, fully bound and sewn,
with a two-year guarantee.

Ref	CIS	Model	Item	Points
69R1	2	Risc PC (1 Slice)	VDU DD, KB	1,200
69R2	2	Risc PC (2 Slice)	VDU DD, KB	1,200
69R3	2	Risc PC (3 Slice)	VDU DD, KB	1,200
690A	1	A3010/A3020	COMP	550
6901	2	A300/A400 Series	VDU DD, KB	1,200
6902A	2	A4000/A5000 + AKF17/18/30/40	VDU DD, KB	1,200
6902B	2	A4000/A5000 + 17" Aries	VDU DD, KB	1,300
6923	1	AKF18/30/40	VDU	850
6925	1	AKF12	VDU	850
6926	1	AKF17	VDU	850

CIS: Number of dust covers in set   VDU: Visual Display Unit/Monitor/Screen
KB: Computer Keyboard   VDU DD: VDU positioned on top of D/Drive

70 ACORN MOUSE MAT

Heavy duty, fabric-faced mouse mat, comes with a two-year
normal wear and tear guarantee against delamination.
400 Advantage Points

71 ACORN 3.5" DISC-CARRYING WALLETS

Manufactured from strong waterproof nylon material, fully sewn
and bound, they come with a one-year no quibble guarantee.
Hold up to 4 discs - **300 Advantage Points**
Holds up to 12 discs - **1,000 Advantage Points**

72 ACORN POCKET BOOK CARRYING CASE

Manufactured from strong waterproof nylon padded material, fully
bound and sewn. Comes with belt loop and a one-year guarantee.
1,100 Advantage Points

PAPER♡MATE®

Paper:Mate products are designed and formulated using the latest advancements in technology. This selection is especially chosen for suitability of use in school.

73 NON-STOP PENCIL
Economical HB, non-sharpening pencil, twist action lead advancement. Carton of 12 pencils.
500 Advantage Points

MULTI MARKERS
Multipurpose markers for writing on most surfaces, water-based ink, solvent-resistant, non-fade vivid colours. Fine Bullet, Bullet or Chisel Tip. Ink colours Red, Blue, Green, Black.

74 CHISEL TIP
Carton of 12 markers - **1,400 Advantage Points**

75 BULLET TIP
Carton of 12 markers - **1,400 Advantage Points**

76 FINE BULLET TIP
Carton of 12 markers - **1,400 Advantage Points**

FLEXIGRIP BALLPENS
Quality ballpens with rubberised barrel and gripping area for easy handling. Push cap ink colour coded. Available Medium or Fine, Blue or Black ink.

77 FLEXIGRIP BALLPEN
Carton of 12 ballpens - **1,100 Advantage Points**

78 FLEXIGRIP BALLPEN (RETRACTABLE)
Carton of 12 ballpens - **1,200 Advantage Points**

WHITEBOARD MARKERS
Vivid colour, low odour alcohol-based pigment ink marker, specially designed for use on whiteboards. Dry wipe system ink, removed with a dry cloth. Red, Blue, Green, Black.

79 WHITEBOARD MARKER MEDIUM
Carton of 12 markers - **1,450 Advantage Points**

80 WHITEBOARD MARKER FINE
Carton of 12 markers - **1,350 Advantage Points**

81 2000 STICK
Economy ballpen ideal for school, office or home. Available in Medium or Fine. Red, Blue, Green* or Black ink. Box of 12.
* Fine not available
350 Advantage Points

82 2000 ULTRAFINE
Economy ultra fine fibre tip. Ideal for graphs, figure work and detailed writing. Available in Red, Blue, Green and Black ink. Box of 12.
550 Advantage Points

☥ PARKER

For more than a century Parker has been producing writing instruments of quality and style. From the extensive range we have selected some particularly suitable for the school environment.

83 PARKER 15 SPECIAL
A distinctive, reliable fountain pen, available in Black, Red or Blue barrel colour. Single unit.
700 Advantage Points

PARKER VECTOR STANDARD
A practical, functional and versatile range. All available in Black, Red or Blue barrel colour.

84 FOUNTAIN PEN
Single unit - **650 Advantage Points**

85 ROLLER BALL
Single unit - **600 Advantage Points**

86 BALLPEN
Single unit - **550 Advantage Points**

87 PENCIL
Single unit - **550 Advantage Points**
● The above supplied with Blue ink only, refills available in Blue, Black, Green or Red.

REFILLS & INK

88 FOUNTAIN PEN CARTRIDGES
1 card of 5 refills - **200 Advantage Points**

89 ROLLER BALL
Medium or fine. Box of 12 refills - **2,500 Advantage Points**

90 BALLPEN
Box of 12 refills - **2,500 Advantage Points**

Please quote barrel and/or ink colour and point style when ordering

Books

NEW WAY – The phonics-based scheme for all reading needs. New Way offers an enormous range of stories of real quality to appeal to today's children. The extent and the quality of resources within this major scheme ensure that the teaching of both reading and language development are catered for comprehensively. New Way provides not just a graded reading scheme, but a whole language programme.

CORE BOOKS

PINK LEVEL
91 MEET THE FRIENDS

150 Advantage Points

RED LEVEL
92 FAT PIG'S BIRTHDAY AND OTHER STORIES

150 Advantage Points

GREEN LEVEL
93 BAD COW AND OTHER STORIES

150 Advantage Points

BLUE LEVEL
94 DRESSING UP AND OTHER STORIES

200 Advantage Points

YELLOW LEVEL
95 TERRIBLE TIGER AND OTHER STORIES

200 Advantage Points

VIOLET LEVEL
96 THE KIND PRINCE AND OTHER STORIES

200 Advantage Points

ORANGE LEVEL
97 THE BANK ROBBERY AND OTHER STORIES

200 Advantage Points

STORY CHEST – A treasure chest of carefully graded and varied books. Story Chest is a comprehensive reading programme in which the emphasis throughout is on enjoyment, success and high motivation. Story Chest provides a collection of stories, poems, rhymes, plays, information books and audio cassettes - all of which will fire children with a love of books and reading. Many of the Story Chest titles appear on the Reading Recovery Booklist.

SMALL READ TOGETHER BOOKS
98 THREE LITTLE DUCKS

100 Advantage Points

99 THE BIG TOE

100 Advantage Points

100 IN A DARK WOOD

100 Advantage Points

101 POOR OLD POLLY

100 Advantage Points

102 BOO-HOO

100 Advantage Points

103 ONE COLD WET NIGHT

100 Advantage Points

104 WOOSH

100 Advantage Points

105 OBADIAH

100 Advantage Points

STAGE 2
106 HELP ME Main Story

200 Advantage Points

107 THE PIRATES Story Book

100 Advantage Points

108 WET GRASS Story Book

100 Advantage Points

109 KICK-A-LOT SHOES Story Book

150 Advantage Points

STAGE 3
110 LET ME IN Main Story

200 Advantage Points

111 HUNGRY MONSTER Story Book

150 Advantage Points

112 YUM AND YUK Story Book

100 Advantage Points

113 JACK IN THE BOX Story Book

100 Advantage Points

STAGE 4
114 JUST LIKE ME Main Story

200 Advantage Points

115 A BARREL OF GOLD Story Book

150 Advantage Points

116 CLEVER ME BROWN Story Book

150 Advantage Points

117 WHERE IS MY SPIDER Story Book

100 Advantage Points

STAGE 5
118 WELL I NEVER Main Story

200 Advantage Points

119 THE SUNFLOWER THAT WENT FLOP Story Book

150 Advantage Points

120 CAT ON THE ROOF Story Book

100 Advantage Points

121 A DAY IN TOWN Story Book

100 Advantage Points

STAGE 6
122 FIDDLE-DEE-DEE Main Story

200 Advantage Points

123 GRANDMA'S STICK Story Book

100 Advantage Points

124 TELL TALE Story Book

100 Advantage Points

125 THE GHOST AND THE SAUSAGE Story Book

50 Advantage Points

STAGE 7
126 MORE!MORE!MORE! Main Story

200 Advantage Points

127 LITTLE BROTHER'S HAIRCUT Story Book

150 Advantage Points

128 THE BIG TEASE Story Book

100 Advantage Points

129 HATUPATU & THE BIRDWOMAN Story Book

150 Advantage Points

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2. Applications for membership or points claims from other organisations or individuals will not be accepted.

3. There is no limit to the number of items which may be ordered assuming members have sufficient points.

4. Points may only be exchanged for items shown in the Advantage Portfolio, subject to availability.

5. Acorn Computers Limited can accept no responsibility for lost, stolen or defaced orders.

6. Orders will be accepted only from educational establishments on the official order form on the reverse of the Points Statement form. Forms must be completed in accordance with the instructions.

7. Advantage Points will be issued to educational establishments via a statement to individuals or establishments who make a claim using the correct claims form, supported by the required proof of purchase.

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9. The nominal cash value per point is 0.1p.

10. The Advantage Points offer applies to nominated items purchased from accredited Acorn dealers or direct from Acorn Computers until 31 December 1996.

11. Advantage Points may be redeemed up to 31 March 1997.

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Acorn
EDUCATION

POCKET BOOKS

SCHOOLS report that children enjoy using Pocket Books for homework, in the classroom and on field trips to collect and record data. Teachers are also commending the Pocket Book as an ideal tool to record pupil progress and achievement, plan lessons and timetables, draft curriculum materials and take notes in meetings.

Palmtop p

As a world leader in educational palmtop technology, Acorn has sold over 18,000 Pocket Books worldwide, with most of them in UK education. Are we moving toward 'one computer per child' and 'one computer per teacher'?

Equipping entire year groups

Our Lady's Grammar School for girls in Newry, Northern Ireland, has a total of 300 Pocket Books which are issued to every pupil in the first two year groups. "We feel strongly that girls should be introduced to IT as early as possible and become comfortable with it as quickly as possible," says Ann Gillespie, Head of Computing.

The school's first experience with Pocket Books was in September 1994 when 150 were purchased to equip the first year group. "We had to purchase more because of the enthusiasm of the children," explains Gillespie. "The year one pupils didn't want to give them up and some were quite distraught. They were delighted to get them back again this year.

"We provide padded envelopes for the students to carry the computers around in their school bags. They have the freedom to use Pocket Books instead of pencil and paper in any subject – even in their Irish language or French lessons since the palmtops cope easily with French accents.

"Our attitude toward the Pocket Books is that they are another educational tool rather than a novelty. I'd like the girls to take them for granted as part of normal school life, just like their pen or calculator, rather than feeling that they're something special."

Supporting GNVQ Science

Sixteen to nineteen year old GNVQ Science students at South East Essex VI Form College use the school's Pocket Books extensively for writing up assignments and collecting data from experiments. Course work for A-level Human Biology is supported by

Compute-a-Diet software from Comcard, which allows pupils to record and analyse detailed food and drink intake.

"We use Acorn Pocket Books for several reasons," comments Reg Summers, Head of Biology. "There was a desire to increase the use of IT in lessons and students can use them at home or in the classroom without having to go to a special IT room. I also felt that this was a direction in which the use of computers would increase in the future. We chose Acorn over Psion because of its educational specification and the availability of class packs."

'Rich aunt' spreadsheet

The Willink School in Reading owns a class set of 30 Pocket Books within the mathematics department, where Year 8 classes confront an intriguing problem. Pupils are presented with four possible schemes for their 'rich aunt' to give them money for subsequent years after her 70th birthday. They use the Pocket Book spreadsheet and graphing facilities to help them decide which scheme would be the most rewarding. For each scheme, pupils need to translate rules to input relevant formulae into the spreadsheet and obtain the full sequence of amounts of money over

the years until the aunt is 100. The pupils have to obtain running totals and to interpret graphs.

"The Pocket Books help us deliver the IT parts of the Maths National Curriculum as well as parts of the Algebra and Handling Data Attainment Targets," remarks mathematics teacher Anna Clayton. "We find the 'rich aunt' project very useful in forcing pupils to follow instructions and to be patient! Several pupils have realised that the Pocket Book has applications beyond this problem and that it can be employed as a tool for helping them in

ossibilities

other mathematical areas.

"In general, pupils think having one Pocket Book to themselves is great and they really appreciate the feeling of ownership as the computer is reserved for their use only until they've completed the project. Though this project involves much time and effort, it's definitely worth it and I am keen to see how we can further develop our use of the Pocket Books."

Environmental studies

Holt Hall is run by Norfolk LEA as a field study centre offering courses in ecology, geography and general environmental studies to all youngsters from seven to 18 years. The majority of the teaching is field-based around the environmental components of the National Curriculum. Pocket Books are a regular feature of Holt Hall courses, being used on a variety of data recording activities.

Word processing has been used for recording erosion along the north Norfolk coast, creative writing expressing thoughts and feelings at remote locations, recording dispersal of fungi and seeds, bird-watching, traffic problems and a bypass enquiry.

The Abacus has proved its usefulness in recording numerical data on such diverse topics as pitfall trapping, river flow rate and cross-sectional data, traffic census and plant distribution information, as well as in recording information for simple maps, types of seed dispersal, pebble sizes on beaches and the content of owl pellets.

Students also use the Pocket Book database to record information about buildings in their town, with different groups surveying different streets and combining all records on an Acorn A4 in a single class database. Schools involved in the field studies are able to take the data away with them on disc and continue to work on it back at school.

"Pocket Books have enhanced the experience gained by students when visiting Holt Hall," comments Warden George Carrick. "I am a firm believer in the principle of the student being fully involved in the design and execution of a particular task. Using Pocket Books allows total involvement in the design of the information recording process.

"Our aims have been to integrate IT into fieldwork and encourage students to see IT as a useful tool in the process of collecting and analysing data. Pocket Books are being used in a practical setting and hopefully being related to a real-life problem."

Teaching can be fun!

The teachers comprising the IT Management Group at Castle School in Thornbury, Avon, are running a pilot project with a difference! Twelve members of staff – with an even distribution of age, gender, experience and expectation – have been given a Pocket Book II as an aid to their administration, organisation, teaching and personal enjoyment.

"We asked those taking part in the pilot to identify two areas where they could use the Pocket Book within their own sphere of operations and to report back to the group. We hold two meetings per half term for reporting back and have planned two one-hour periods of INSET for each person," explains Jamie Wells, Creative Faculty Co-ordinator for GNVQ.

"One of the teachers who didn't use IT a great deal before this project has requested access to a laptop," reports Garry Norman, Head of Castle School's Maths Faculty. "Staff are putting themselves on a waiting list for Pocket Books. The workload hasn't been reduced, but there are signs of greater enthusiasm for the use of IT and greater enjoyment by the staff selected. We're really only just beginning to evaluate responses to the project, but there are signs that the objectives are being met."

Arc looks forward to hearing more from Castle School when their pilot scheme has been fully evaluated.

> "We feel strongly that girls should be introduced to IT as early as possible and become comfortable with it as quickly as possible"

What's it all about?

Pocket Book II incorporates a word processor, spreadsheet, database, calculator, spellchecker and thesaurus, sound and voice recorder, personal diary, clock and alarm, mathematical equation plotter and World which shows international time zones, dialling codes and maps.

The newest model provides increased flexibility by allowing users to store more information internally without the need for memory, upgrades and to keep larger files and applications open and running simultaneously. For more information and current pricing ring Acorn direct on 01223 254222.

Arc looks at the London Borough of Newham – where the Stratford City Challenge Project is placing 213 Acorn Multimedia Workstations into ten East London schools

Stratford City challenge

FROM the time the RISC Computer was launched eight years ago, it has been repeatedly chosen by LEAs as the best solution for helping schools obtain the number of computers they need to deliver greater IT access to pupils.

The Stratford Standard Primary Schools Project is a case in point. As part of the five-year Stratford City Challenge Project, this initiative aims to provide equality of access for all primary school pupils to IT equipment within the project schools in order to enhance the delivery of the National Curriculum, and in particular the development of pupils' language skills, while involving parents in the process.

By February, Stratford's seven primary schools, two nursery schools and one special school will all have two computers with CD-ROM in each classroom and another eight in a designated IT room. Though the initiative is managed by the Newham Education Business Partnership, funding for the computers has been provided by the Stratford City Challenge Partnership, with support funding from both the LEA and the schools.

An Acorn borough

"The multimedia workstations are a natural choice, since all Newham schools have Acorn computers," explains Pauline Collier, Co-ordinator for the Stratford Standard Primary Schools Project. "We want to ensure continuity and progress for the pupils within the project schools. Again, Acorn was chosen as the most appropriate technology, giving pupils access to a faster operating system and a large hard disc for storage. Acorns run in a RISC OS environment which is a friendly and intuitive operating system in which children can explore and learn.

"It was important for CD-ROMs to be included in the hardware provision as it gives access to the multimedia revolution. CD-ROM provides subject-specific

materials to cover aspects of all National Curriculum core and foundation subjects. This resource enables pupils to have access to communication in a variety of forms – text, sound, moving pictures – much of which can be incorporated into their own project work."

Educational objectives

"We want to support primary schools in four ways," comments Nairn Norman, Director of Newham Education Business Partnership. "First, to enable children to have equal access to IT equipment and to develop their IT skills as part of the National Curriculum entitlement. Second, to enable schools to meet their targets for raising the reading and literacy achievement levels of their pupils. Third, to build on existing links with the local community, to train parents and pupils to assist with specific tasks in the classroom. And fourth, to help schools develop the skills required to communicate with outside agencies and businesses to gain support for both delivery of the National Curriculum and the growth of the school."

Computer-assisted reading

TalkWrite, a talking word processor from Resource, is to be used as the principal software for increasing literacy skills through a computer-assisted reading scheme, which will be implemented at Key Stage 1 in each of the primary schools. Parents will be recruited to assist with the scheme and will receive training from school staff, organised by Newham Education Business Partnership.

Teachers will also receive one day of INSET from the Local Education Authority ITAT Team, as well as a four-day INSET with consultants from Talking Systems. "The fact that all our schools have Acorn computers means that the LEA can provide a coherent programme of support," adds Nairn Norman. "In fact, it's created a support system between schools as well."

> *"The Acorn multimedia workstations are a natural choice, since all Newham schools have Acorn computers"*

- TalkWrite is available directly from Acorn on 01223 254214
- Information on the Acorn range is available direct from Acorn (01223 254222)

THE Millimetre-Wave and Terahertz Technology Group at St Andrews University has been using Acorn computers from the days of the BBC B. At present we have over a dozen Acorn machines, including two Risc PC600s and a Risc PC700.

The group specialises in making novel systems which use electromagnetic signals in the frequency range above microwaves and below the infra-red. We design and build all our own experimental equipment. Our systems have twice won National Metrology Prizes (metrology is the science of measurement) from the National Physical Laboratory for their outstanding design and quality.

We have written all our own software in BBC Basic. The only real exception to this is *TechWriter* (Icon Technology), which is widely used by group members to produce everything from professional books and PhD theses to letters and memos.

Ready for anything

Dr James Lesurf – lecturer in Physics and Electronics in the School of Physics and Astronomy at the University of St Andrews – describes how the Risc PC plays an important role for one of the university's top research groups

Preference for RISC OS technology

At present the research group has eight members, comprising one academic staff (me), three post-doctoral researchers and four postgraduate students. Our general experience is that students who join us take to the Acorn computers like ducks to water. They prefer RISC OS to any other operating system available at the university.

There are two main reasons why we use and prefer Acorn machines, despite the fact that the university is awash with other types of computers. First, we find that the open electronic interface makes them ideal for controlling equipment and collecting data. Second, the ease with which they can be programmed makes them ideal for crunching data. We also find the Acorn community outstandingly helpful and friendly.

During the last year we have begun work on a new system to perform three-port spatial interferometry. This uses methods which are very similar to our existing mm-wave systems, but

works on sound waves. The purpose of this system is to measure the imaging properties of loudspeakers.

One of the most important properties of a hi-fi system is its ability to recreate a clear stereo image or *picture*. To do this, you need a pair of almost identical speakers. You also need each speaker to act as a *stable* source – it must appear to radiate all the frequencies and signals fed to it from the same place.

We place three microphones a little way in front of a loudspeaker and record the signals they pick up when the speaker is playing. By comparing the times of arrival of signals at the speakers, we are able to measure the shape of the sound wavefront radiated

from the speaker. This lets us determine the apparent position of the sound source, both in direction and distance.

In control

The Risc PC is used to control the whole system, analyse the data and display the results. It generates the signal pattern to be radiated by the speaker and, simultaneously, records the output from the microphones. We are working with Andy Ray of Intelligent Interfaces to develop new electronics to take advantage of the enhanced abilities of the Risc PC. For this project we have switched over to Acorn C for processing speed. The new memory capabilities of the Risc PC make this project possible.

The system will eventually become available to hi-fi manufacturers and, using many microphones in a spatial array, it will ultimately give us the ability to make 3D *sound holograms* of the sounds in a room. Hence it should be of benefit to engineers, musicians and music lovers all over the world.

SPECIAL EDUCATION

Leading th

THE first set of activities was a series of three forums, which were held in Northampton, Leeds and Maidstone, aimed at stimulating debate and discussion of current issues in special education. The forums provided an opportunity for local teachers, parents and carers to both contribute to the discussion and put questions to a panel of special education experts. These sessions proved to be a useful source of information for Acorn, assisting the company in focusing on how it can channel help in a field which is changing so rapidly, not least in terms of legislation and the availability of technology.

Addressing timely issues

The flexible forum format produced a broad level of discussion on a variety of topics in special education:
● The Code of Practice and its impact on schools
● Dyslexia and literacy development
● The value of word processing
● The gifted child
● The importance of early identification and profiling of children with special educational needs
● Parent power and the influence of parents in special education
● Access to computers and National Curriculum resources
● Teacher training.

Each of the forums was recorded and the transcripts edited to form a summary report, *Building Partnerships for Communication and Learning: A report on special education*, which is now available free from Acorn by ringing 01223 254222.

National Special Education Conference

As a follow-up to the forums, Acorn hosted a Special Education Conference on the first day of Acorn World 1995. Six presentations were prepared by renowned special education experts to address pressing questions raised by parents and educators at the local forums:
● How can I give my child the best start?
● What resources are available to parents and teachers to help children access IT and the National Curriculum?
● How do we make the most of our existing resources?

● How do we recognise and assess children with special educational needs?
● What can multimedia offer children with special educational needs?
● How do we cope with the administrative burden created by the new Code of Practice?

Just as the regional forums provided an arena to discuss issues facing special education and to find ways in which IT can assist, the national Special Education Conference drew together the findings of the forums and provided delegates with practical solutions for the development of special education in this country.

An enabling tool

Children with sensory or physical disabilities often need special tools to access computers, which in turn will give them access to IT resources across the National Curriculum. *Arc* has found two examples of how Acorn special education
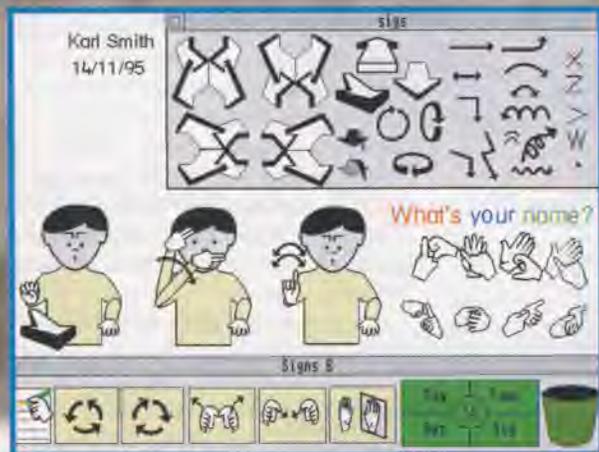
he way

Over the past 12 months Acorn has been carrying out new initiatives to raise the profile of special education in the UK – we examine the results

technologies are benefiting schools.

First is *MiniKeys*, a piece of software which allows the Acorn Pocket Book to turn into a mini-keyboard for any desktop computer with a serial link outlet for an A-Link. That means pupils can make use of the Pocket Book on its own for note-taking, homework, and so on – and later carry on working at a full-sized machine with the same Pocket Book keyboard – with full access to all software on the larger computer.

At Fountaindale School in Mansfield, MiniKeys is being used by six students between the ages of 8 and 18, five of them with muscular dystrophy and one

with cerebral palsy. They use MiniKeys to access word-processing packages such as Full Phase and will soon be downloading assignments from desktop computers onto their Pocket Books to edit and complete.

Darrell Bedford, a volunteer member of staff who also suffers from muscular dystrophy comments: "People with MD experience difficulty using a normal-sized keyboard because of their disability. The Acorn Pocket Book enables them to word process easily without physical discomfort.

"Special needs schools may seem to be the main candidates for using the Pocket Book with MiniKeys in order to access larger computers," explains Phil Gamble, Head of IT at Fountaindale. "However, in many areas of the country children with special educational needs are in mainstream classrooms. Staff in these schools need help and support to give these children computer access right along with their classmates, so information on MiniKeys should be available to all schools."

Support for blind pupils

Blind in Business, established in 1992 to maximise education and employment opportunities for the visually impaired, recently organised a substantial donation of computer hardware and software to Linden Lodge School in Wimbledon. The group attracted companies like Macdonalds, Bass, Thames Water and Esso to assist in acquiring the IT equipment, which included seven Acorn A4000s fitted with an Acorn Special

> *"The major difference that the Risc PC will make to our deaf children is that they will be able to use it for sign graphics"*

Needs system, Oak Recorder, concept keyboard and Touch Windows.

"Children in schools for the blind need to have access to the right IT equipment at the right time during their education, and right on into employment," explains Caroline Wilkinson, secretary for Blind in Business. "The charity's founders, two blind solicitors and one partially sighted business manager, believe that through the use of IT, visually impaired individuals can learn to help themselves."

The staff at Lindon Lodge agree. "Visual stimulation and touch programs on computers can make all the difference to visually impaired children," comments Kathleen Gaster, the school librarian. "Coupled with the Oak Recorder, it opens up a whole new world of education for the children. We've seen an exciting development in one nine-year-old boy already. Not only is he now motivated by the Brilliant Computing programs to much more interactive speech, he can choose his own programs. He also picked up the mouse and mastered it himself.

"Different overlays for the keyboards allow the children to type with the aid of large print or Braille," Gaster explains. "When they hear what they've typed spoken back to them, it's a very rewarding experience. The touch windows work with a monitor overlay which promotes a reaction by simply touching the screen. Having access to such a variety of equipment allows visually impaired children to make the gradual transition from touch windows to concept keyboard to the standard keyboard and mouse – a very positive progression which fosters our goal of helping them to learn how to help themselves."

- *MiniKeys is available from SEMERC (0161 627 4469).*
- *Information on Acorn special education computer systems is available direct from Acorn (01223 254222)*

IT tools for hearing-impaired children

Education Extra was created in 1992 by Lord Young of Dartington, founder of the Open University and the Consumer Association. The charity's mission is to stimulate, promote and support the development of after-school activities, aiming to ensure that these activities become the entitlement of every child and within the norm of expectation of every parent.

Annual National Awards from Education Extra recognise and celebrate

Tapping a wealth of information

SENCOs are invited to join the Acorn Special Education Network in order to keep abreast of IT news and initiatives as they develop. Simply ring 01223 254213 and ask for the Database Administrator.

what schools do out of normal school hours. These awards take the form of certificates, specialist instruction, company vouchers or equipment donated by supporting companies like Acorn Computers.

This year 181 different UK schools received awards worth a total of £72,230. In three cases, Acorn was pleased to provide valuable IT equipment for the winning schools, one of which is using their prize primarily to enhance the communication skills of hearing-impaired children.

Teresa Selvey, Special Needs Manager for Acorn, presented Park Road School in Batley, West Yorkshire, with a new Risc PC for their community house after-school club. Park Road is a small primary school with some unique characteristics. Recently refurbished by the LEA, the school serves a racially mixed community, with 65 per cent of the pupils from a British white background and 35 per cent from a British Muslim background.

Twenty-three of the children attending Park Road are either severely or profoundly deaf. These children are integrated into the mainstream school for most of their curriculum work, but have withdrawal time for speech therapy. Five signing classroom assistants, one signing nursery nurse and three teachers of the deaf support the children and class teachers. Many of the school's hearing children are also able to sign, having picked it up by observation or from attending one of the weekly voluntary signing classes.

"Within school we are very proud of the integration achieved between hearing and hearing-impaired children and children from different ethnic and cultural backgrounds," comments Headteacher Barbara Harris. "Our after-school Kids' Club continues this integration and places a high priority on continued communication for the hearing-impaired pupils, who may come from backgrounds with severely limited communication and play opportunities."

Risc PC to enhance communication

"The major difference that the Risc PC will make to our deaf children is that they will be able to use it for sign graphics," explains Janine Loines, Co-ordinator for the Kids' Club.

"Sign language is a visual language, relying in the main on movement of hands and facial gesture. Sign graphics allows graphic representation of the sign language. So children, for whom British sign language is their first language, are able to communicate in the same way that you and I read or write English. Instead of having to use their hands, these children can give or receive communication with symbols on screen or printed out on paper."

Until now the school's use of signed graphics programs has been restricted due to the need for large amounts of memory to run the software. Acorn's powerful Risc PC will provide the solution to this limitation. On a campus network, the Risc PC will allow all children, whether in school during the day or at club after school, to have access to the My World Two: Sign Graphics Program on a regular and structured basis.

Benefit to families

The community house IT facilities are also used for adult education courses and a support group for the families of deaf children. Those parents for whom English is not a first language will particularly benefit from using the new Risc PC, which will provide them with a visual reference for learning British sign language to enhance communication with their own children.

● Schools wanting more information on Education Extra may ring 0181 983 1061.

● Details on My World Two: Sign Graphics are available from SEMERC (0161 627 4469).

An on-going commitment

As part of Acorn's on-going commitment to special education, it has established a network of Special Education Dealers, specially trained to provide schools with advice and support for children with special educational needs.

Acorn Special Education Dealers

Avon: C.J. Computing: 01179 624533
Cambridgeshire: Newton & Brewer Technology: 01353 666011
Cheshire: 3SL Limited: 01270 761516
Cumbria: Cumbria Software Systems: 01697 73779
Derbyshire: The Resource Centre: 01509 672222
Dorset: Landsdowne UK: 01202 743336
Devon: Minerva Computers: 01392 437756
Essex: Le Computer: 10245 362225
Greater Manchester: Computer Systems: 01204 794063
Hertfordshire: Cannon Computing: 01279 730800
London: Simnett Computers: 0181 680 3830
Merseyside: Data Exchange: 0151 644 7770
Northamptonshire: Kettering Computer Centre: 01536 410070
Oxfordshire: Top Class Computers UK: 01865 241081
Scotland: Abacus Plus: 0131 555 0400
Suffolk: Lindis UK: 01986 85476
Sussex: CJE Microcomputers: 01903 213361
Tyne and Wear: HCCS Associates: 0191 487 0760
West Midlands: Daco Software: 0121 706 8933
West Yorkshire: Eltec Computers: 01274 309999/Resource Facilities '92: 01422 365935

Arc

A termly magazine for anyone interested in information technology

- Do you want to know about the latest developments in educational technology before they happen?

- Do you want to know how schools, colleges and universities are approaching the thorny issues surrounding computers and education?

- Do you want to know how you can make the most out of your computers?
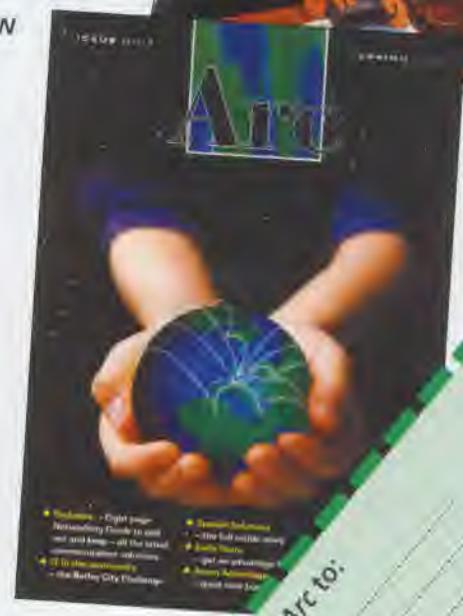
Arc magazine will give you advance information on products, initiatives and technology, as well as featuring real-life examples of the technology at work. If you want to continue on the inside track, confirm your FREE subscription to *Arc* TODAY. Fill in the form or e-mail arc@acorn.co.uk.

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CD-ROMS are becoming an increasingly popular resource in both curriculum-specific and cross-curricular activities. They're not only attractive and fun to use, but also good value for money since they hold as much information, sound and graphics as 150-200 floppy discs.

Acorn is dedicated to the use of CD-ROMs in schools, with the Risc PC and A7000 series offering an integral CD-ROM drive option, while the other Acorn models offer plug-and-play capabilities.

The following titles provide substantial support for delivering the National Curriculum to our children.

Art & graphics
Art Store: Looking at Animals
ArtWorks
Clip Art CD1 & Clip Art CD2
ProArtisan 2CD
ProArtisan 24

Design & technology
Mechanisms
My World 2: Technology and Design

DTP
Graphics Loaders

English
Guardians of the Greenwood
Sherston Naughty Stories

Geography
Counties of the British Isles
Countries of the World
Langdale
The World's Weather

History
Aspects of Religion
Britain Since 1930
Castles
Medieval Realms
On the Home Front
Vikings
World War II: Global Conflict

Maths
Breakaway Maths

Modern Languages
Conjuguez!

Science
Garden Wildlife
Night Sky
Seashore Life
Understanding Energy
Understanding the Human Body
Woodland Birds

● *These CD-ROM titles can be ordered from Acorn's new Products and Services Catalogue.*

Getting the most from your compu

Speech recognition for schools – it's almost here!

Sherston Software and the Defence Research Agency (DRA) have announced a prototype speech recognition system especially developed for young children. The system integrates with Sherston's range of Talking Books and virtually turns them into *talking and listening* books.

The Speech Research Unit at the DRA has been developing an automatic speech recognition system called AURIX for about five years. Combined with Sherston's Talking Books, the prototype

allows the children not only to hear the story read by the computer, but also to read the story out loud to the computer.

The computer will compare what the child says with an *idealised* computer model of the text of the story and will identify correct or incorrect words.

AURIX also keeps a record of the child's reading results for the teacher and can be programmed to automatically go back and review

Welsh access
The Welsh operating system produced by MEU Cymru and Acorn Computers has sparked an increased interest in the production of IT solutions for Welsh learners. Arc is pleased to recommend products from two small companies that are providing quality Welsh educational resources.

Wyddfa Software
Talking Pictures is a colouring book that talks using digitally recorded speech. The aim of the program is to encourage language development in pupils under five. Using the mouse, children select colours and objects, and colour in five different outline pictures. The colours and objects are named by the computer as the child selects them.

The Spoken Word is a KS1 language program which aims to encourage an understanding of the spoken word and to stimulate interest in reading. Colours and objects are chosen by selecting their written names, after which the chosen object is coloured in with the chosen

colour, while the computer speaks the colour and object together. The program comes with 19 different outline pictures, and is also available in French and German.

Talking Stories is a series of four electronic story books. Each of the eight pages in a book is divided into three parts: a picture, a words column and a sentence below the picture. Each individual word and sentence can be spoken by the computer. One word is missing from each written sentence and is to be filled in by the child from a choice of words in the words column. This encourages the child to look at the sentence as well as listening to it. Each story emphasises different types of words and comes with

Whether your need is for good-quality CD-ROMs or programs available in Welsh – Arc has rounded up the best

uter

words that a child found to be difficult.

Unlike other speech recognition systems, AURIX does not need to be trained to recognise a child's voice. The idealised computer model of the texts is based on acoustic representations of phonemes. These basic building blocks of speech have been taken from a large number of speech recordings of five-to seven-year-old children. As a result,

AURIX can recognise speech from a wide variety of accents.

Though AURIX is still a prototype, Sherston and the DRA are working towards a budget-priced speech recognition kit for use with Acorn computers. This promises to bring speech recognition, along with the Talking and Listening Books, within the budget of an average primary school.

Peripherals to remember

Overlay keyboards are used for a variety of applications in our society, from public transport to the cash till at our

favourite fast food restaurant. But overlay keyboards have also proven to be an invaluable aid for young children, serving as an alternative data input device for the normal computer keyboard. Several options are available which allow teachers to easily tailor the configuration of keys and utilise software to create the desired overlay for pupils.

Children who are using the computer keyboard in playschools, at nurseries or in under-five units may not yet be familiar with upper case letters. Key Cap stickers are self-adhesive small case letters that can be attached and easily removed from the computer keyboard.

Dust covers

Whether your school acquired its Acorn equipment through the Tesco scheme, though a gift from the PTA or through a school budget purchase – take a little time to protect your investment. Make sure your school computers are secure and adequately protected with dust covers.
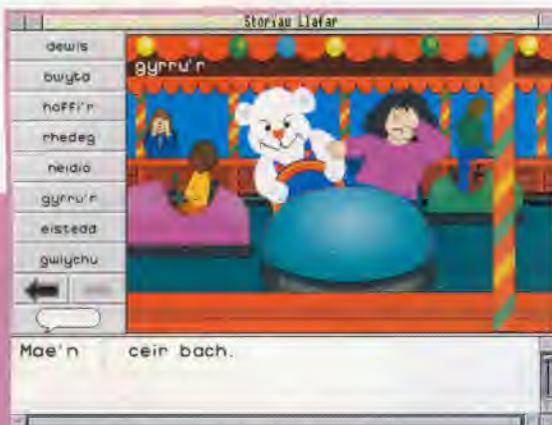
a printed story book.

Talking Calculator uses sampled sound to teach basic numbers and number skills. Using the mouse, children select numbers and operations to do their own sums. The computer speaks the number or the operation or the whole sum. Numbers are also displayed pictorially as apples or coloured pencils. The picture display is on the left of the screen, and the numbers and operations are on the right, arranged in the style of a simple calculator. Teachers can choose from four ranges of numbers and can vary the size and difficulty of the sums.

● *All of the software from Wyddfa is available in both Welsh and English and can be ordered from Wyddfa Software, 3 Preswylfa, Llanberis,*
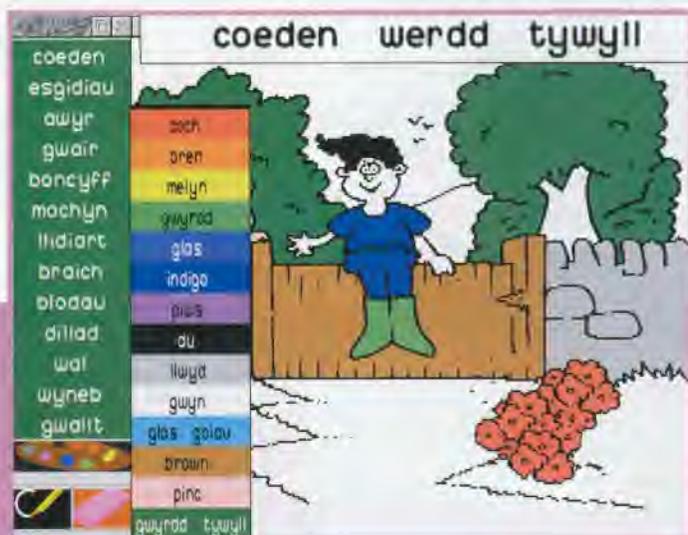
Gwynedd LL55 4LF or fax: 01286 871722.

Religious Education Software

Chris the Bat: The Hunt for Real Treasure is the first CD-ROM in any curriculum subject in the Welsh language, and it's only available on the Acorn platform! Children visit Christian places of worship and help Chris the Bat search for real treasure. The program is an interactive simulation which approaches different aspects of Christianity as a living religion, while aiming to inspire religious questions in pupils.

Advent and Christmas helps children to understand differences and similarities within the broad range of Christian tradition. Sie different

Christian denominations celebrate Advent, the church season designated to prepare for the coming Saviour, and Christmas, the day that Christians celebrate the birth of Jesus.

There are a further four titles due for imminent release: The Electronic Parables of Jesus, An Overview of Islam, An Overview of Judaism and An Overview of Buddhism.

● *The Chris the Bat and Advent and Christmas CD-ROMs include both Welsh and English copies of the software. A comprehensive teachers resource pack comes with each package. Order from Religious Education Software, Computers and RE Project, University of Wales, Lampeter, Dyfed SA48 7ED or fax: 01570 423641.*

Write to reply

Arc readers have their say

Across the world

In *Arc* 7 you mentioned finding a primary school which had a worthwhile e-mail link with another school. Our school was linked to Maungatautari, New Zealand for three years and this involved:

- letters, at a rate of four a week
- the exchange of videos
- the visits of four ex-Hailey pupils to Maungatautari
- the visits of assorted aunts, grandmas and villagers and of a colleague headteacher from New Zealand
- *insults* about world cup rugby and cricket
- a Maori concert by the children
- one fax to start infant pictorial communication
- termly telephone calls including a carol service
- a 14-month April fool around which a great deal of curriculum material was built.

All done on an Archimedes computer. It was a wonderful experience still talked about by the children and past pupils. In it we came up with some important points which take the e-mail link beyond the penpal *My name is...* scenario.

**Geoff Crompton, Headteacher,
Hailey Church of England
Primary School, Whitney**

The vision thing

The following document describes our school's *vision*, which may be of interest to *Arc* readers. Our mission statement, "It takes a whole village to raise a child", is fundamental to both our philosophy and our practice. Being a community primary school situated in the middle of the Fens means that we must take a positive attitude in overcoming the wide range of rural deprivation that exists. We regard our village as being global and use it as a network of skills, talents and resources to support our children's learning. We access the network in many ways, but the use of IT has been exciting in recent years.

Our long-term vision is the establishment of a *World Classroom* resource centre for use by the whole school community. By the year 2000 we hope to have a purpose-built building with a wide range of IT. We are moving towards our vision slowly. Our three A3000 computers are based in classrooms, and our A4000 and colour printer, on loan as part of Cambridgeshire's GEST project on Data Collection, and linked to our fax and e-mail line, is based in the school library. We see this as a piecemeal approach, but one we can build upon.

We realise that we need to update hardware, that we need a CD-ROM facility, and that we need to be able to link into Internet, so that the resources of the global village can be accessed at whatever level. As I write, pupils Ross and Sam are copying a large school map of Europe by hand – quite a challenge for two nine-year-olds! It would be truly wonderful if they could find their map on a CD-ROM, and then extract and print the information they require.

With this kind of classroom activity in mind, we realise we have to update the skills of our teachers, other staff and volunteers. As we are committed to the development of IT, we have spent over 90 per cent of our INSET budget this year on developing the skill level of our teachers. In 1995 we are running a course for our learning support assistants and volunteers, totally geared to the children's use of IT – word processing, data collection and communications.

**Steven Hales, Headteacher,
Beauport Community
Primary School, Wisbech**

Language work

I was very interested in your Softfocus feature in *Arc* 8. As a modern languages teacher, I should like to recommend for inclusion in future listings three French Clip Art discs produced by R.J.H. Enterprises.

I have found these discs to be an inexpensive yet invaluable aid to our departmental work. The staff regularly use these graphics for the production of examination papers, worksheets, flashcards and OHP transparencies, while pupil are able to use the clip art from the school's network to illustrate their own word-processed work in French.

**B. Chown, Head of Modern
Languages, Holy Trinity Church of
England Senior School, Halifax**

Software for English

I was interested in the list of software titles that appeared in *Arc 8*, but disappointed that there was nothing listed for EFL/ESL/ESP. The following is a list of software titles that are relevant to this field. CALL is a rapidly developing area in EFL, and it is hard to remain totally up to date. I hope, however, that you will find this list suitable for publication in a future issue of *Arc*:

- MicroConcord – A concordancing program designed for the study of language usage and meaning.

Catching your data

I have been doing quite a few demonstrations lately by taking a Risc PC into schools — mostly science departments. I have been using *Insight* to capture some data by data logging, dropping the CSV file into a spreadsheet, converting the data to a graph, and dropping the graph as a drawfile into a DTP frame.

I emphasise the fact that, because the Risc PC allows real multitasking, it intuitively supports the research process *collect information, process it, present it.* Drag and drop also makes the process delightfully easy. You can't do this neatly on a PC – but people don't know this. The teachers are consistently impressed but each time say they are under pressure to get PCs because these are *industry standard.* I say that if industry standards were important, we would all be driving to work in a JCB. I then say, "All right, if you insist", and bring up Windows in a window, saying that if you buy a Risc PC with a PC card, you don't have to make a choice.

Michael Bostock, Brentwood, Essex

- Corpus Collection A and B – Collections from newspaper texts, both one million words long, to be used with MicroConcord.
- Adam and Eve – A program which analyses the vocabulary of texts using a word frequency database.
- The Locked Room, The Eyes of Montezuma, Lifelines, Space Affair – Programmes from the Streamline Graded Readers series, with books. Available separately or as a library pack. (Oxford University Press)
- Grammar Games Software Pack – Four games on one disc.
- Cambridge First Certificate Exam Practice Packs A and B – Pack A is exploratory, with immediate feedback to the student. Pack B is in examination mode. The feedback is given only after the pupil has completed an exercise. (Cambridge University Press)
- Quartext – Four text-based games/programs, based on material taken from Longman graded readers.
- Quartext Plus Six – Slightly more advanced programs, with an emphasis on syntax and meaning.
- Quartext Textloader – Teachers' word-processing program that allows the creation of a file of material to be used with the above Quartext programs.
- Screentest Elementary – 20 grammar tests with an authoring facility for teachers.
- Screentest Intermediate – Useful for Cambridge PET or Oxford Preliminary Test students.
- Screentest for First Certificate – Aimed primarily at the use of English and reading comprehension papers of CFC.
- Screentest for Proficiency – Designed for the Cambridge Proficiency Exam.
- Decision Taker – A program designed for students of business English. Mainly graphics and numbers, it can be used at a variety of levels.
- Desktop English – A multimedia package for adult EFL students which includes a CD-ROM.
- English Works 1 and 2 – Multimedia courses including books, audio cassettes and CD-ROMs. On-screen help is available in French, German, Spanish and Italian. (Longman Logotron).

N. McBeath, Senior English Education Officer, Force Ordnance Service School, Royal Air Force of Oman

Where are they?

Congratulations on another excellent issue of *Arc* (issue 8). I particularly enjoyed the feature called Soft Focus. I am interested in contacting Vision Software but cannot find any reference to them in my school catalogues. I wonder if you can help.

Fred Grieve (Principal Teacher of Computing), Mearns Academy, Laurencekirk

Vision Software can be contacted on 0121 3543981.

BEST OF BRITSH

THE UK has played a pioneering role in the introduction and development of effective, educational IT, and its beneficiaries extend around the world. Clearly ahead, UK education, many would say is the best in the world, in spite of the demands of major changes to the National Curriculum and the introduction of IT across it.

Acorn Computers is proud of the key part it has played in the success of this process, from supporting the first government initiatives through to continuing collaboration with software developers who are now producing some of the most sophisticated and effective IT teaching material available.

From research undertaken throughout 1995, Acorn found teachers, schools, professional associations, IT Centres and educational suppliers undertaking imaginative projects and forging partnership which demonstrate real, practical, leading-edge use of IT. Here are just a few of the many casestudies which will serve as a real inspiration to Acorn users.

General education – a successful consortium approach to IT

The Leeds Education 2000 Project, started in 1990, is one of nine projects

At the grass

Beverley Adams indulges in some flag-waving and takes a look at a few of the more imaginative, ground-breaking educational projects and collaborations going on around the country

nationally affiliated to Education 2000, a charitable foundation which believes IT competency is an important part of any learning community. This committed, collaborative approach, managed by Leeds Education 2000, has brought together the Educational IT Centre (EdIT), the local TEC, businesses, schools (primary and secondary), parents and the rest of the community to help fund, support and implement clearly defined educational IT objectives.

Judith Robinson, the Project Director, is delighted with progress and comments: "Teachers have shown enormous

commitment to empower children to take charge of their own learning. IT is part of our future, and we must all do everything we can to help children and young people feel in control of IT and see its enormous potential for helping in their learning."

● *Information: Judith Robinson, Leeds Education 2000 Project. Tel: 0113 2806 662.*

Whole school networking – impressive connectivity

Forest School's computer network is probably the most powerful in Europe. Using Acorn ARM-powered RISC workstations and Motorola PowerStack Super Servers, Datathorn Systems has recabled and installed two servers running 72 Acorn Risc PCs in just eight working days! Then, while the school's Computer Centre was in continuous use, fibre optic cable was laid to connect the remotest classrooms and offices, and over 200 Category 5 network points and Acorn Risc workstations were established.

All the Risc PCs are running Microsoft Office Pro using the Acorn 486 PC card as well as the native RISC OS software, obviating the need for any other make of computer. To test the network, 150 computers were run concurrently for 36 hours – without any failure of *time-out* – and the installation was delivered on time and within budget. Design and installation was done under the watchful eye of Forest School's management consultant.

● *Information: Paul Buzzard, Forest School. Tel: 0181 521 6444.*

ssroots

Primary – teaching the past in futuristic fashion

The CD-ROM simulation Frontier 2000, part of the NCET CD-ROM promotion, has received nothing but acclaim. Winning a Gulbenkian Foundation Award for innovative educational software, it spans 2,000 years of England/Scotland border country history, and provides a plethora of primary and secondary material. The events which took Carlisle from Hadrian's Wall to the Victorian railway system are easily understood and close to home, and it is hard to equal for giving children a sense of chronology, and of change and development.

Colin Rouse, Deputy Head at Cranbourne Primary School, has used the software extensively. "It's brilliant," claims Rouse. "An innovative, interactive program which excites in children an interest in the past and allows exploration through technology."

● *Information: Colin Rouse, Cranbourne Primary School. Tel: 01344 882350.*

Middle school – a multimedia package supporting a core subject

A mixed ability class of Year 7 pupils at Ridgeway Middle School have produced Magpie binders as part of their creative English work. Working in groups of four, they have made up of their own stories and created a multimedia composition to tell these to others. In addition to a great deal of preparatory work, the children compiled their own text and graphics, took photographs, recorded sound samples for effects and explanations using an Oak Recorder, accessed CD-ROMs to incorporate clip-art, and designed page layouts.

Ridgeway's IT Co-ordinator, Helen Wilkes, comments: "The enthusiasm shown by the class at all stages was remarkable, and their IT skills improved, particularly among the less confident users."

● *Information: Helen Wilkes, Ridgeway Middle School. Tel: 01527 892867.*

Secondary – a stretching assignment in Southampton

A class of Year 11 students at Hounsdown Secondary School were briefed to research the context of leisure, adopting a theme of *how far, how many, how long,* and were asked to identify a design problem and develop an appropriate outcome. One student devised a gymnastic rep-counter, which records the number of weight lifts undertaken via a photoelectric cell, complete with an instruction booklet on how to set up and use the device.

The ensuing project involved students in *design and make* activities to produce a prototype in the workshop,
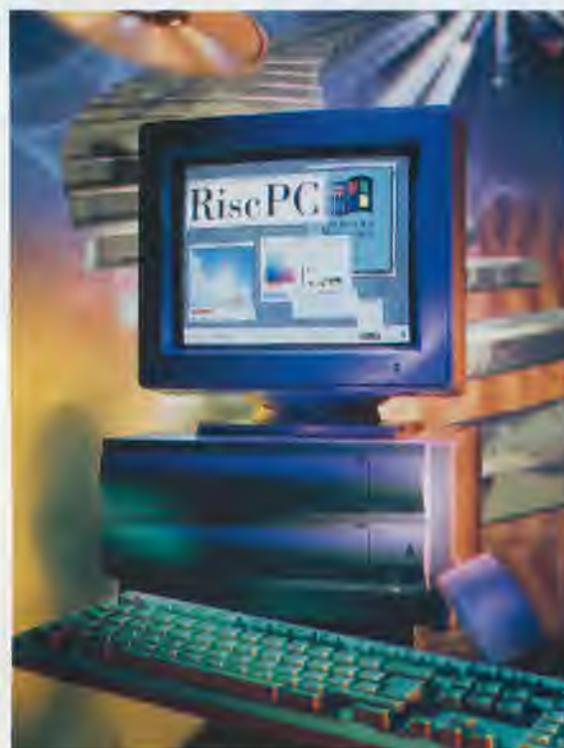
Forest School installed 72 Acorn Risc PCs in just eight days.

using every facet of the latest Acorn Impression DTP software, including importation of a Photo CD product shot and use of Artworks or Vector to generate fully rendered illustrations. With the launch of several 24-bit photo-retouching packages, Dave Thompson, their IT Co-ordinator, thinks the powerful Acorn RISC OS platform is well equipped for such demanding tasks, and in line with his Key Stage 4 students' keenness to experiment.

● *Information: Dave Thompson, Hounsdown Secondary School. Tel: 01703 862981.*

Tertiary – art, computers and CD-ROM

A CD-ROM package is being developed by Strathclyde University's Faculty of Education in partnership with Glasgow Museums and Art Galleries. Based on an electronic collection of late 19th and 20th century art, it provides support for the expressive arts curriculum 5-14.

The disc offers: images, narrative and and text; exploratory pathways ensuring purposeful, interactive investigation of topics and themes; study and comparison of artworks; study of artists' media, tools and techniques; and an overview of the social and historical context of art movements. Uniquely, it combines technical and aesthetic dimensions with exploratory pathways. The pack includes teachers' notes and advice.

● *Information: David Hart, University of Strathclyde. Tel: 0141 950 3273.*

Special education – accessing the Valiant Turtle

Developed by Lin Hopkins, an advisory teacher in Solihull, out of a need to open up more of the curriculum to her physically disabled pupils, the Turtle program allows the Valiant Turtle to be accessed from Acorn computers by *mouse* or *switch*. Turtle can run at four different levels with varied length of turtle steps. Lin's pupils were enthralled by their new achievements in operating the remote turtle: drawing a house, knocking over skittles and scoring a goal for the first time.

In Lin's words: "It allows children to explore all the things they should with robots." The program is proving its use with all Key Stage 1 and 2 pupils, and older Key Stage 2 children are surprising their teachers with the insights they gain in relation to shape, space and work on angles.

● *Information: Lin Hopkins, Solihull Unit for IT in Education. Tel: 0121 707 9488.*