Help

National bodies

The national focus for IT in education is the BECTA or **British Education and Communications Technology Agency**. See Becta's National Grid for Learning for IT and primary science activities. Start at **www.becta.org.uk**

Focus for science teaching - the **Association for Science Education: www.ase.org.uk**

The **National Centre for Initial Teacher Training in Primary Science**, SCIcentre, School of Education, 21 University Road, LE1 7RF Tel 0116 252 3659 Email mw47@leicester.ac.uk

Advice and training

IT in science - Roger Frost at **IT in Science** provide specialist advice. See www.rogerfrost.com

General Science

All about science...

Science Explorer I and II (age 8-11) are full of information and investigations - well written, it is bang on curriculum target. It's something pupils can use to clue up on science in the classroom or library. (CD-ROM for Acorn/ Mac/PC from Granada Learning).

Science Fair (age 5-8, CD-ROM for PC/Mac/Acorn from Sherston) is a title to investigate. OK for infants.

Oxford Children's Encyclopaedia (age 9-13) is a quality encyclopaedia for a young UK audience and most recommended to schools (CD-ROM - mail order).

Microsoft's Encarta (age 12-adult, CD-ROM - mail order) is good for finding information. It's very attractive, easy to use but the language is too hard for primary children.

Dorling Kindersley's **Eyewitness Encyclopaedia of Science** (age 11-15, CD-ROM - mail order) is attractive, but is patchy and focuses more on pure rather than applied science - so for swots only. Dorling Kindersley's **First Incredible Amazing Dictionary** (age 5-7) has bits of science - body words for example - and worth having never mind the science.

CD-ROMs

CD-ROM software for science is listed in the ideas section of this book. Choose your topic area and look for the bold text where you will find a brief review.The positive reviews are clear pointers to what is worth having, less definite ones mean that you should see them before buying. Education 'trade shows' such as the UK **BETT** exhibition and the **ASE** annual meeting (early January) are excellent events to do hands-on shopping. Roger Frost's **Software for Science Teaching** (Out of print - ASE) is the book with detailed reviews of 'everything' but it's better value for the secondary school. Also see **Using CDROMs in primary Science** - a booklet from National Centre for Initial Teacher Training in Primary Science, SCIcentre, - address on this page.

Some titles were too broad to put under any heading in the Ideas section: **Science Explorer** (see this page) or **Sammy's Science House** (age 4-7, mail order) for the early years are among them - both are well above average. SSH looks at weather, the environment, sequencing and classification. There is a construction workshop where you put together structures from bird boxes to helicopters. It's intelligent and ahead of the rest. **Smudge the Scientist** (age 4-7, floppy disc from Storm) has a grow-a-plant simulation, a decay simulation as well as sorting exercises on magnetic or non-magnetic and floaters or sinkers. Not at all bad, not special and looks dated beside others.

For SATs practice see **Practise Science for the National Tests** (age 9-11 for PC/Arc from Granada Learning) which does just what the title says.

Software catalogues

Are available from software suppliers (AVP and TAG). Get the special needs software catalogues from Semerc and Inclusive Technology. General purpose software is available from Microsoft dealers, BlackCat, SPA, Flexible software, Logotron, Kudlian Soft.

Branching databases

Flexitree 2 (for PC from **Flexible Software**) is a rare breed of program - the branching database. This one is capable and not expensive. It saves it's output to web pages if you wish. The blindingly simple, **Sorting Game** (for BBC Acorn and Windows from MAPE) still goes strong. Oxford LEA offer **Branch** (DOS PC) which does the business. Kudlian do **Retreeval** - which is fine and also 'Ask Oscar' which works in a paticularly intuitive way.

Clip-art & multimedia

When children need to illustrate their work, it's good to have a collection of clip-art. The Internet has loads (see **www.google.com/images**) also Sherston offer loads on **CD-ROM** (www.sherston.com) The professional graphics programs all provide huge collections of this. You could look for titles like **Corel Draw**, **Page Plus, Micrografx Designer** and **Draw Plus** (all on mail order). They are not that expensive but some would say you don't need anything this good. You will find collections of art bundled free with **Microsoft Word**, **Publisher, Micrografx Draw** and **Works**. You may just need to hunt through the hard disc to find them. Remember that your CD-ROM encyclopedia will often let you clip pictures into your work. The Internet can also be culled for clip art.

Ready-drawn 'clip-art' to illustrate children's work is widely available. Collections of zoo animals, birds and pond life in **Just Pictures** (from Semerc). There is **Clip Art CD Collection** (age 7-14) from Sherston which has the best set of curriculum use pictures I've seen. You can find clip-art packages with thousands of images in retail outlets but do check to see whether it has what you need. **PowerPoint** and **Multimedia** programs allow children to assemble text, pictures and video and make a presentation. These also come with clip-art libraries.

Special needs

Clicker grids and/or **overlay** or **concept keyboard** are flexible tools used with special needs and young children. In the Ideas Section you will find many uses in science. Also, for various needs, there are large and small keyboards, electronic stylus, tiny mice, roller-balls instead of mice, speech devices and switches. Suppliers include The Advisory Unit, Semerc and Inclusive Technology. **Windows Concept** (for PC from AU) is a program which makes Windows programs accessible with an overlay keyboard. **Clicker** (Arc/PC/Mac from SEMERC) comes in various flavours allows you to dispense with an overlay keyboard. The 'keyboard' is shown on screen. Recommended.

There are a few outlets for ready-made overlays for the concept keyboard. For example, **Science Simply 1 & 2** (age 8-14 from Cleveland) is a selection of overlays to support writing activities in science. These you can use with word processors such as **Folio, Prompt Writer, Stylus, Concept** and **Intercept**. Cd Computing is another supplier.

Handling information...

Investigations for Key stage 2 (from BECTA and on the Internet at www.becta.org.uk) is a pack with good, worked through ideas for handling information in science. **Getting Started with Information handling** (from BECTA) also has worked through activities and several for science. **Science Investigations: an INSET pack for teachers** (from BECTA and on the Internet) is a folder with investigations that generate data they can process with the computer. **IT's primarily science** (Age 8+, from BECTA) is a free and very useful set of leaflets setting out some starting points for using IT in science work.

Your choice of data handling software is best driven by a school policy, but here are a few leads: **Junior Pinpoint** (from Logotron) is deservedly popular and very good for surveys. **Clipboard** (age 7-12, from Black Cat Software) is an easy, capable database program. The younger version is **Counter** (age 6-9, from Black Cat Software) and even better **First Workshop** (age 6-9, PC from Black Cat). **Flexidata** (age 9-15) is very capable. **Counting Pictures** (age 5-9, PC/Nimbus from Black Cat Software), **PicturePoint** (age 6-9 from Logotron) and **Pictogram** (from Kudlian) do pictograms easily. For the easiest of spreadsheet programs see **Number Box** (age 7-13, from Black Cat Software).

Word processing tools...

You will almost certainly have a word processor, but these writing tools are a bit out of the ordinary, interesting and at risk of being overlooked.

Write Away (age 5-12, from Black Cat Software) can be used with different age and ability levels. It is very well tuned to classroom use. **Talking Write Away** speaks the typed text and is also available as an upgrade.

Flexiwrite (age 9-15) is very capable and makes an old Nimbus look like it is running Word for Windows. **Textease** (age 6-13, from SEMERC) will be a favourite - it talks as you type, you click anywhere on the page to write or draw. Nice feature - on a PC it feels like an Acorn program.

Inspiration (from TAG) helps to structure all kinds of writing - this version can turn text to speech. Cloze exercises or missing letters and words so often they make for good learning activities - see **Sherlock** (Acorn PC disc from Topologica). To make nice on-screen puzzles, see **Hot Potatoes** (free from www.halfbakedsoftware.com)

Internet

There are tools in your word processor that make web pages. If you're building a web site get something that manages the links between pages - or you'll spend too much time on it. There are even web pages (www.schoolmaster.net) that let you make web pages. Another neat place is www.digitalbrain.com

What's good on the Internet is more the subject of a magazine than a book, but the most persistent advice is to find a service aimed at schools and start from there. Try www.schoolzone.co.uk but we'll keep you posted at www.rogerfrost.com if we see anything better.

Control technology...

Places to look first: Data Harvest (www.data-harvest.co.uk) ; Commotion (Lego) ; Deltronics (www.deltronics.co.uk)

Data Harvest has 'mimics' as well as a variety of control boxes and **Flowol** software. Lego have **the Mindstorm's intelligent brick** which makes control easier than ever. With its data logging add-on it become incredibly powerful- your robot can sense, measure and do things. It's certainly one of the top systems to consider.

Deltronics Control-IT (from Deltronics) and the **Deltronics Serial Interface** (for PC/Arc) are input and output control boxes. These come in several versions, taking jack plugs, banana plugs and a variety of control sensors and accessories.

Discovery (from Economatics) offers sensing and control features from one box. For a very inexpensive approach see the **SenSci Control Box** (from Valiant Technology).

Control Accessories

You need devices to plug into the inputs and outputs on the control box. All the control box suppliers offer the necessary input and output bits in various bundles. The output devices include lights, buzzers and motors while the input kits offer light sensors, temperature sensors, pressure mats, reed, push, tilt and light switches. For some unusual projects get a **hydraulic pump** (TTS) and use it to pump water into a tank or water a plant. There is also a ram rod device which has a push-pull action - it might open a 'window' if a greenhouse gets hot. For some challenging work there is even a **Robot Arm** which the children can program to wave hello or perhaps pour a drink (from TTS).

Control Pictures ('mimics' from Data Harvest) provide a choice of ready-made control systems - **Traffic Lights**, **House Alarm** and **Washing Machine** scenes. These plug into the standard 8 inputs and 8 outputs control box. They make things easy for beginners - the children use them by writing programs in control software. Ready-made starter models such as a **Clown**, **Buggy**, **House** or **Traffics lights** are available (Commotion) and these should also plug straight into any control box you have.

Control software

Today there are so many hardware options and machine combinations that it is safer to buy your control software with your control box. You can sometimes use software from one firm with the hardware from another and there is just a chance it will work. There are some third party products too like **Junior Control Insight** (from Logotron). **Investigate** (PC - from RM) makes it very easy to build elaborate control systems. **Flowol** (age 11-18 - Data Harvest) lets you build control systems using a flowchart system - this is fine, but may be daunting at first.

Robots...

Pixie (Swallow Systems) is a simple and small programmable floor robot. Uses rechargeable NiCad batteries, a small keyboard and can remember programs, even when switched off. It can be programmed to ride on play mats with letters, numbers or farmyard scenery.

Pip (Swallow Systems) is a well established robot with a 24 key membrane keyboard. You can program it to move forward, turn, make a sound, or go backwards. Sensors such as a light sensor, a bump sensor or a magnet sensor can be attached so that Pip can be made to change its direction when it bumps into an object. It can connect to a computer for use with software. It looks best when dressed-up as a lorry or animal.

The **Valiant Control Console** (Valiant) is a stand-alone controller keypad which saves you having to use a computer. You plug your model into the console and then use the keypad to enter commands. The console can remember procedures (sub-programs) which you can assemble in a larger program.

The **Valiant Turtle** (BBC/Arc/PC/Nimbus from Valiant) is the original remote controlled turtle which responds to Logo commands from the computer. Plenty of scope for fun with Logo variants such as WinLogo, Logotron Logo, PC Logo and LogoWriter. **The Valiant Roamer** is a Smartie-shaped robot with a keypad. It can be programmed to follow a route. Accessories, such as basic sensors, trail pens and fix-on jackets are available. A computer interface (from Valiant) and software allows you to store Roamer programs on disc while a control box allows you to use the Roamer keypad to write control programs.

The **Lego Dacta Control Centre** (from Commotion) can control three output devices, such as a light and motor on a Lego model, using a simple keypad. It works independently of the computer and can learn sequences of actions and replay them repeatedly. However Lego's **Mindstorms for Schools**, mentioned earlier, is more the object of desire.

Sensor kits...

Explorer (from Griffin, Commotion, Research Machines, or Logotron) is a junior version of the LogIT Datameter 1000. It's inexpensive and very capable. A second temperature sensor is worth having to compare temperatures for example, one can be indoors and one outdoors.

Though outshone by Explorer, **Live** (for from Griffin, Commotion, Research Machines, or Logotron) is a junior version of the LogIT device used in secondary schools. The basic kit comes with carrying case, computer cable, Live box, a temperature sensor, light sensor and sound sensor - all you need except the software. You can then choose your preferred software from **LogITLab, Junior Insight**, **Insight** or **Investigate**, described below. There is an accessory pack with useful sensors: two light switches for timing events, a handy extension cable and another temperature sensor to help you compare readings between say, cooling cups of tea. One other device included is an LED - which you can switch on or off in a simple control system. A good range of other sensors are available to use with **Live** (from Griffin). These allow you to measure pressure, breathing, air humidity, position and more. Useful is the **CheckIT** clip-on display unit that allows you to see readings away from the computer. So too is the connecting kit which gets the Live system working with palmtop computers.

Discovery (from Economatics) is a control and sensing kit with a variety of options. It uses **Discover Sensing** software.

Ecolog (from Data Harvest) is a budged priced device that takes reading from built-in sensors though extra plug in sensors are available. Also takes readings away from the computer and works with Sensing Science software.

First Sense (from Philip Harris) has a designed look to it. The **First Sense software** is simple and versions for older computers are overshadowed by versions for today's computers. You can add control accessories and extra sensors to the kit.

The **Logbook** (from Brighter Minds) can log data away from the computer. Like most devices here, it has no built-in display so is limited.

RM Detector (RM Window Box PC from RM) possibly the cheapest of all the logging systems - this uses the computer sound card to capture very approximate temperature and light level information. The graphs, appear within Microsoft Excel. It's just good enough but see if you can stretch to **Explorer**

Extra Sense (for PC/Arc from Deltronics) and **Sense-IT** (for BBC/Arc/Nimbus from Deltronics) are used in secondary schools and you make up your kit depending upon what you need. There are sensors for temperature, light and sound as well as light gates or light switches for timing events. Extra Sense comes with software but also works with Insight or Junior Insight software.

The latest sensor kits have the additional facility to take sense readings away from the computer. You could take the sensors out of doors and monitor the weather, noise pollution and so on. The following kits are aimed at secondary schools, but middle schools should find them of interest:

LogIT Datameter 1000 (Griffin) is a compact device with a built-in screen, a green start button and a red stop button. Like the **Live** box above it uses the same LogIT sensors - which there are many in the range. Those who have the older LogIT device can benefit from the **CheckIT** display unit - showing readings and additional information on a small screen. These all work with Junior Insight, Insight and Investigate.

EasySense (Data Harvest) has a remote facility too. It works with Junior Insight, Insight, Investigate, Sensing Science software.

The **DLplus** (Philip Harris) uses First Sense sensors and has a screen which helps when you want to see readings from the sensors. The keyboard and menu make it easy to use away from the computer.

Discovery (Arc/PC/Mac from Economatics) comes as a remote logger.

Weather stations which are specially designed for long term monitoring are also available (from AU).

Sensor software...

All the sensor suppliers should be able to supply you with a full kit of sensors and software. You can get software which works with your kit from third parties too.

Investigate! (for Windows from Research Machines) was developed at Homerton College and supports most sensor kits that work on the PC. It offers a choice of ways to see your measurements - such as a bar gauge, a time graph, a number and it will even speak its readings. It can control devices using a control box connected to the data logging interface and it does so easily. Still ahead of its time. A booklet and video is available called '**Investigate' data logging in the primary school** - from SCIcentre - the National Centre for Initial Teacher Training in Primary Science (address on page 123)

Junior Insight (for Windows/ Arc/Mac from Logotron) was developed at Leicester University and supports most sensor kits that plug into modern computers. Uses a simple start button to start recording as well as some tools that let you take readings from the graph. A second program is part of the package and allows you to time events if you have light switches or light gate sensors. Middle schools should also look at Insight - a version for older children.

Sensing Science (age 8-11 from Data Harvest) has displays - a bar, a digital reading, a meter with a needle and a time graph. A 'snapshot' feature takes one-off readings and shows these as a table or series of bars. A nice, if brilliant feature lets children record for up to a minute and pause the display as they draw and predict where the graph line will go next. The software works only with Data Harvest equipment including Sense & Control, **EcoLog** and **Easy Sense** (Disc for Acorn/Mac/PC from Data Harvest)

Sundries

Cables and connectors in all forms - Videk Ltd

Glossary

Branching Database - a special kind of database. It allows you to build an identification key to sort out a set of animals, plants and so on. A branching database on animals asks you questions about an animal and will identify it for you. Using a branching database encourages observation and discussion.

CD-ROM - a computer disc which looks like a compact music disc. The disc stores text, photos, moving images and sounds. An incredible amount of information - an entire encyclopaedia can be stored on one compact disc. Increasingly overshadowed by the Internet, children can search a disc to explore a topic. Often there is a measure of interaction and this, of course, is a good starting point for something educational.

Concept keyboard or Overlay keyboard - is an alternative to a button-type keyboard. The keyboard is an A4 or A3 sized tablet which plugs into the computer though wireless versions are available. Onto this you place a sheet of paper, called an overlay. The overlay has words, pictures or even objects on it. When say, a picture is pressed the screen displays some words. This tool can make computing more accessible to pupils - especially younger ones and those with special needs. There is a software version of the keyboard called Clicker.

Control technology - allows you to control a motorised device, such as a fan, with the computer. Using sensors you might arrange for the fan to switch on and off as the temperature changes. Control technology develops problem solving and computer programming skills. It is an aid to understanding how things work. Control technology has some applications in science teaching.

Database program - a program which lets you store data - such as the data you collect in a survey. You set up a series of headings under which you enter your survey results. You can search, sort, graph or print the data. You might search a database of people, to find those with dark hair and brown eyes.

Datafile - another word for a database, or collection of information about one topic.

Data logging - a method of logging or collecting data from sensors. Strictly speaking, data logging uses devices, called data loggers, which you can take away from the computer and collect readings in the field.

Desk-top publisher - a program to assemble a page with text, borders, boxes and pictures. The text is prepared in a word processor, the pictures in a graphics program. A DTP program can really help produce quite attractive work. Modern word processors have many of the features of DTP programs and are adequate in most cases. A DTP program would need to be special to have beside a good word processor.

Digital camera - uses electronic media instead of film. These are the ultimate instant-print cameras and many times more useful. Worth considering if you use cameras as a recording tool in your teaching.

Drawing program - a kind of graphics program where each item on the screen is an object you can scale, move or modify. These are the best choice of program for drawing diagrams. See also Painting program.

Graphics programs - these use the computer screen as an electronic canvas. It's very easy to erase mistakes, which helps those who cannot draw. There are also special features which have no comparison - such as painting with striped paint, copying areas, flipping areas upside down or changing their size. Pictures can be pasted into reports, posters and newspapers.

Multimedia / PowerPoint - technology which allows you to experience words, sounds, pictures, animation and/or video when you use the computer. With a modern computer, you can assemble such media yourself to create your own presentations. A major growth industry with potential for presenting science work.

Modelling - a way of representing real-life on the computer. You can experiment with a model and find out how things affect it. A spreadsheet can be used to create a mathematical model of how much water we use in a day. There are science-based programs which make modelling more accessible.

Internet - a world-wide network of computers that allows you to communicate with schools and anyone else on the system. You can also browse through and interact with Web pages. You need to link the computer to the phone line and subscribe to a service.

Painting program - a kind of graphics program where you paint on the screen. These are the best choice of program for working with 'art' and photographs. See also Drawing program.

Printers - there are many different printer technologies in circulation. The dot-matrix and daisy-wheel printers are pretty-much history now. Ink-jet printers are cheap to buy, do a good black, good photos and are worth having. Everyone should have permanent access to an inkjet or laser printer.

Robots - devices which can be programmed to follow directions, draw a trace on the floor or follow a light source. Some of these work independently of the computer, some can be remote-controlled by the computer.

Scanner - an accessory which allows you to capture pictures or photographs for the computer screen. The picture can then be re-sized and printed alongside the text in a worksheet. An exciting, easy and affordable tool which is well worth a look.

Sensors - there are sensors to measure physical quantities such as temperature, light or sound. Measurements are shown on a computer screen as a number or graph.

Simulation - a program written to simulate real-life. For example, 'At home in Wattville' is a simulation which shows the use of electricity in the home. You can switch appliances on and off and see the effect on the electricity bill.

Spreadsheet - a program that handles data in a table. The data can also be sorted and graphed. Spreadsheets are valuable for handling results from investigations.

Word processor - a program for drafting, improving and printing written work. Many word processors allow you to change the type style or even add pictures to your work. Presentation programs like **Microsoft PowerPoint** add another dimension - the children talk through their work.

Addresses

For updates of this list, see the Internet pages at www.rogerfrost.com

Advisory Unit (AU), Computers in Education, 126 Great North Road, Hatfield, Herts, AL9 5JZ. Telephone: 01707 266714. Fax: 01707 273684

Appian Way Software
www.appianway.co.uk

ASE, Association for Science Education, College Lane, Hatfield. AL10 9AA. Tel: 01707 267411 Fax: 01707 266532 Web: www.ase.org.uk

AVP, School Hill Centre, Chepstow, Gwent, NP6 5PH. Telephone: 01291 625439 Web: www.avp.co.uk

BECTA, British Education and Communications Technology Agency, Milburn Hill Road, Science Park, Coventry CV4 7JJ. Telephone: 01203 416994 Fax: 01203 411418 Web: www.becta.org.uk

BlackCat Educational Software - now at Granada - Web: www.blackcatsoftware.com

BT Education Services, 81 Newgate Street, London EC1 7AJ. Tel: 0207 356 5677 Fax: 0207 356 5675

Cd Computing, (Concept keyboard overlays), Thorpe Lea, Greenacres, Rawmarsh, Rotherham, S62 6LD. Tel: 01709 526833

Cleveland Educational Computing Centre (CECC), Prissick Base, Marton Road, Cleveland. TS4 3RZ. Telephone: 01642 325417.

Commotion, Unit 11, Tannery Road, Tonbridge, Kent, TN9 1RF Telephone: 01732 773399

Concept Keyboard Company Limited, 9 The Murrils estate, Portchester, Hants, PO16 9RD Tel: 01705 372233 Fax: 01705 372237 Web: www.conceptkey.co.uk

Creative Curriculum Software, 5 Clover Hill Road, Saville Park, Halifax, HX1 2YG. Telephone: 01422 340524 Fax: 01422 346388

Crocodile Clips, 43 Queensferry Street Lane, Edinburgh EH2 4PF Tel: +44 131 226 1511 internet: www.crocodile-clips.com

Data Harvest, 1 Eden Court, Leighton Buzzard, Beds LU7 4FY Tel: 01525 373666 Fax: 01525 851638 Web: www.data-harvest.co.uk

Deltronics, Church Road Industrial Estate, Gorslas, Llanelli, Dyfed, SA14 7NF Telephone: 01269 843728 www.deltronics.co.uk

Don Johnson Special Needs, 18 Clarendon Court, Calver Road, Winwick Quay, Warrington, WA2 8QP Tel: 01925 241642 Web: www.donjohnson.com

Dorling Kindersley Web: www.dk.com

Economatics, Epic House, Darnall Road, Sheffield, S9 5AA. Tel: 0114 2813344 Fax: 0114 2439306 Web: www.economatics.co.uk

Exampro - www.exampro.co.uk

Flexible Software, PO Box 100, Abingdon, Oxon, OX13 6PQ. Tel: 01865 391148 Fax: 01865 391030 www.flexible.co.uk

Focus Multimedia, Lea Hall Enterprise Park, Rugely, WS15 1LH Tel 01889 570156 Fax: 01889 583571 Web: www.focusmm.co.uk

Geopacks, 92-104 Carnwath Road, London SW6 3HW Telephone 08705 133 168, Fax 0207 371 0473 Web: www.geopacks.com

Granada Learning, Granada Television, Quay Street, Manchester, M60 9EA Tel: 0161 827 2927 Fax: 0161 827 2966 Web: www.granada-learning.com

Griffin & George, Bishop Meadow Road, Loughborough, Leics., LE11 0RG. Tel: 01509 233344 Fax: 01509 231893 Web: www.fisher.co.uk

Inclusive Technology, 2 Castle Street, Castlefield Manchester, M3 4LZ. Tel: 0161 835 3677. Fax: 0161 835 3688 Web: www.inclusive.co.uk

Initial Teacher Training in Primary Science, SCIcentre, School of Education, 21 University Road, Leicester LE1 7RF Tel 0116 252 3659 Fax 0116 252 3653

IT in Science & Roger Frost Cambridge, Telephone/Fax: 01223 410 560
For post address see www.rogerfrost.com

Kudlian Soft, 8 Barrow Road, Kenilworth, Warwickshire, CV8 1EH. Tel/Fax: 01926 851147 Web:www.kudlian.co.uk

Logotron, 124 Science Park, Milton Road, Cambridge CB4 4ZS Tel: 01223 425558 Web: www.logo.com

Mail Order suppliers include AVP, Schools Direct CD, TAG

MAPE (Micros in Primary Education) c/o The Old Vicarage, Skegby Road, Normanton-on-Trent, Notts. NG23 6BR

New Media Press, PO Box 4441, Henley on Thames, Oxon, RG9 3YR Tel: 01491 413999. Fax 01491 574641 Web: www.new-media.co.uk

Newman Software, Genners Lane, Bartley Green, Birmingham B32 3NT. Tel: 0121 476 1181

Oxford Computer Education, Wheatley Centre, Littleworth Road, Oxford OX33 1PH

Ransom Publishing, 2 High Street, Watlington, Oxon OX9 5PS. Tel: 01491 613711 Fax:01491 613733 Web: www.ransom.co.uk

Research Machines Ltd, New Mill House, Milton Park, Abingdon, Oxon, OX14 4BR. Tel: 01235 826000 Fax: 01235 826203 Web: www.rm.com

Rickitt Educational Media, Great Western House, Langport, Somerset, TA10 9YU. Telephone: 01458 253636 Fax: 01458 253646

SCET is now Learning & Teaching Scotland, 74 Victoria Crescent Road, Glasgow, G12 9JN Tel 08700 100 297 / 0141 337 5000 Fax 0141 337 5050 www.ltscotland.com

Schools Direct CD, The Green, Ravensthorpe, Northampton. NN6 8EP. Telephone: 01604 770099 Fax: 01604 770702

Scientific & Chemical Supplies, Carlton House, Livingstone Road, Bilston, WV14 0QZ Tel 01902 402402 01902 402343 Web: www.scichem.co.uk

SEMERC, Granada Learning, Granada Television, Quay Street, Manchester, M60 9EA Tel: 0161 827 2927 Fax: 0161 827 2966 Web: www.granada-learning.com

Sherston Software, Angel House, Sherston Malmesbury, Wiltshire SN16 0LH. Tel: 01666 840433 Web: www.sherston.com

Soft Teach, Sturgess Farmhouse, Longbridge Deverill, Warminster, Wilts BA12 7EA. Fax: 01985 840331 Tel: 01985 840329 www.soft-teach.co.uk

Softease Ltd, The Old Courthouse, St Peters Church Yard, Derby, DE1 1NN www.softease.co.uk

SPA, PO Box 59, Tewsbury, GL20 6AB. Tel: 01684 81700 Fax: 01684 81718 www.spasoft.co.uk

Storm Educational Software, Digby Road, Sherborne, Dorset, DT9 3NN. Telephone/Fax: 01935 817699

Swallow Systems, 134 Cock Lane, High Wycombe, Bucks. HP13 7EA. Telephone: 01494 813471 Fax 01494 813552

TAG, 19 High Street, Gravesend, Kent, DA11 0BA. Tel: 0800 591 262 / 0500 515152 Web: www.taglearning.co.uk

The Learning Company - Web: www.learningco.com

Topologica Software, 1 South Harbour, Harbour Village, Penryn, Cornwall, TR10 8LR. Telephone/Fax: 01326 377771 http://www.topologika.co.uk/

TTS, Nunn Brook Rd, Huthwaite, Sutton-in-Ashfield, Notts NG17 2HU Telephone 01623 447800 Web: www.tts-group.co.uk/

Understanding electricity, The Electricity Association, 30 Millbank, London, SW1P 4RD. Tel: 0207 344 5768

Valiant Technology, Myrtle House, 69 Salcott Road, London SW11 6DQ. Tel: 0207 924 2366 Fax: 0207 924 1892

Videk Ltd, (cables and connectors), Unit 10, Bowman Trading Estate, Westmoreland Road, London NW9 9RW. Tel: 0208 204 6690

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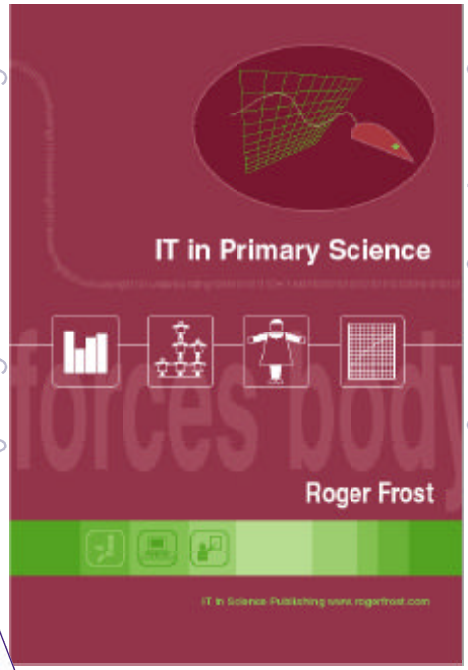
The definitive guide for those who need to know about primary science and ICT

www.rogerfrost.com

A manual of practical ideas and advice on:

Sensors
Science software
Word processing
Graphics
Databases
Spreadsheets
Control technology
ICT assessment
CD-ROM



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*20th reprint 2003 Also available in Dutch.

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