

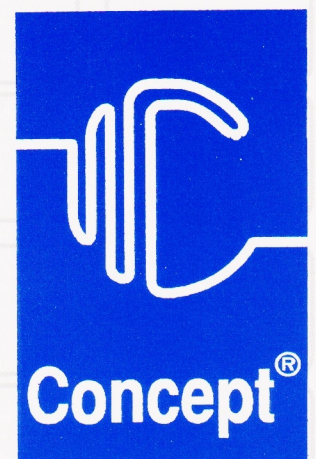
MICROSCOPE -

► Special

► Spring 1995

Concept Keyboard Special 1995

► Sponsored by Concept



NEWMAN COLLEGE with MAPE

MAPE Concept Keyboard Special 1995

by Jennifer Taylor

Contents

Introduction	1
In the classroom	3
Preserving and designing overlays	4
Technical information	9 - 13
Informatrix and Informax	14
Why use them?	15
CKs and National Curriculum - case studies	19
Resources	27
Addresses	32
Sample overlays	centre pages

MAPE is grateful to The Concept Keyboard Company for their sponsorship and advice in the production of this Special.

Editor: Chris Robson
Sub-editors: Anne Farr, Chris Robinson, Janice Staines, Trevor Wright, Senga Whiteman
Cover design: Mike Faux

Jennifer Taylor and MAPE would like to thank all the people who wrote articles, donated overlays and gave invaluable advice:

Barbara Ainscough & Dick Steel, Hummec	Mike Bolton, Somerset LEA
Bury IT Centre	Chris Hopkins & Berkshire teachers, Berkshire LEA
Jayne Jakeman, Hereford & Worcester IT Centre	Nicky Johnson, Stanley Grove Infant School
Les Mason, Lancashire IT Team	NW SEMERC
Marian Parkes, Bisop Grosseteste College	Helen Rawlings and the Hampshire IT Centre
Phil Solomon, Martineau Centre, Birmingham	Margaret Still, Still Educating
TERU, Goldsmiths College, London	

and those who donated software for evaluation:

The Advisory Unit: Computers in Education, 4mation, esm, Longman Logotron, NW SEMERC, Sherston Software, Widgit Software.

© Newman College/MAPE 1995
ISSN 0264-3847

Correspondence to the Editor: *MICRO-SCOPE*, 99 Foxcote, Wokingham, Berkshire RG11 3PG

MAPE (Micros And Primary Education) is open to individuals and institutions. The current subscription of £15 pa UK; £10 pa students; £20 pa overseas; includes direct mailing of *MICRO-SCOPE*.

Application forms from: Mrs G Jones, 'The Old Vicarage', Skegby Road, Normanton on Trent, Notts NG23 6RR

Individual copies from: **MAPE Publications, Technology Centre**, Newman College, Bartley Green, Birmingham B32 3NT
The Concept Keyboard Company Ltd, Moorside Road, Winnall Industrial Estate, Winchester, Hampshire, SO23 7RX

MAPE reference for Income and Corporation Tax relief on membership fee: T1644/23/1968/MT
Charity Commission reference: OSP-292898-R Reg No 292898

VAT number: 544 9661 18

Produced by The Castlefield Press, Kettering, Northants

Introduction

Concept Keyboards are everywhere

About twenty years ago computers were used increasingly to control manufacturing processes. It quickly became apparent that a regular keyboard was not the ideal input device for flour-covered bakers or engineers up to their elbows in axle-grease.

The Concept Keyboard Company (then Star Microterminals) was formed in 1981 as an industrial manufacturer of "membranes and membrane keyboards". They now produce dedicated concept keyboards for use throughout industry.

In the car accident and repair market :

... bodyshop technicians with no specific keyboard skills can successfully produce typewritten estimates by touching a series of preprogrammed keys.

For dental practices:

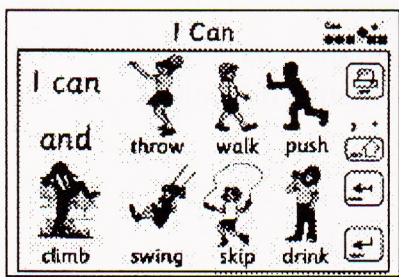
dentists can use the system during the treatment of patients without compromising cross-infection controls ... its (the concept keyboard's) simple design enabled keys to be configured which represent all the teeth, standard filling arrangements, cavities and fee codes. It is, therefore, possible to record all the clinical information in the surgery without computer or typing skills.

And in the search for oil:

Halliburton needed a data entry device that was rugged yet both simple and effective to use on site. Another consideration was the long and complicated sample names which needed to be entered with maximum accuracy ... enables both technical and nontechnical staff to use the system with equal ease.

And now concept keypads are everywhere - fast food outlets, cash points, airports, pub tills, the Ideal Homes Exhibition and drinks machines.

Concept Keyboards in School



It Works, SEMERC

Early in the development of the company a customer with a young family, using a concept keyboard at work, realised that keyboards like this could give children access to the new microcomputers that were just beginning to be bought by families and schools. Teachers began by using them with pupils at an age and stage where a replacement for a regular keyboard was desperately needed. Now, ten years later, you will find concept keyboards in chemistry labs and modern language departments in secondary schools as well as nearly every primary classroom.

This booklet shares ways in which concept keyboards are being used to support work in the primary classroom as well as logging some of

Introduction ...

our thoughts and experience gained during a decade of computer and concept keyboard use in schools.

New Computers

As schools acquire new and more powerful machines, the potential for using concept keyboards to perform complex procedures and access original, exciting learning resources is tremendous.

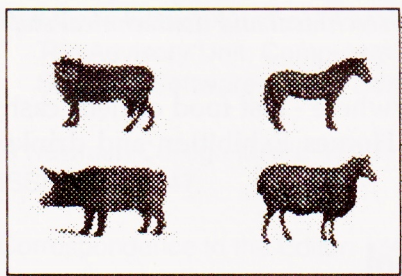
Overlays have never been easier or quicker to make. Once an overlay has been created, the same file can be used with lots of different programs sending pictures, sounds and even video clips as well as text.

Good Luck

We hope to encourage those of you who have just acquired a concept keyboard with your new computer to take the plunge and make overlays with and for your children, and perhaps to provide new inspiration for those of you who are already old hands.

A3 or A4?

There are several types of concept keyboard; you can see them illustrated inside the back cover. The type makes little difference to the user but they do come in two sizes - A3 and A4. People have very firm views about the best size to use with children. Here are some of the arguments. In the end, though, you will have to make up your own mind depending on your own situation and available resources.



Hampshire

A3

- nice for group work, accommodates several children around it
- allows for large text and white space even when there is a fair amount of information
- allows for good sized magazine pictures
- overlays can include more detail and more information
- areas are larger for children with targeting difficulties

or A4?

- marginally cheaper
- fits much more easily on trolley or desk
- A4 paper always ready to hand
- smaller overlays are more durable and easier to store
- light and easy to handle, can be passed round a group or used on larger children's knees especially with the longer cable
- some tiny children find it difficult to reach all areas of A3

In the Classroom

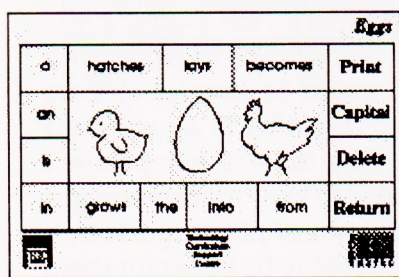
Most computers have to be stored and used on trolleys and there is not very much flexibility about positioning. Health and Safety issues also dictate proximity to sockets and forbid trailing flexes. Some trolleys have under-shelf wire baskets or pull-out shelves to store the concept keyboard. It may be feasible to use the concept keyboard from this shelf but it is likely to be some distance from the monitor. We cannot always achieve the ideal position for every child but we do need to be conscious of the ergonomics of the situation and need to do our best to make it as accessible and comfortable as we can. The ideal position and setups will vary according to activity and stage of the children.

- Can it be positioned so that a group of children can use it and have clear access from both sides?
- Is it in an area clear of other visual distractions?
- For older children and staff, are there some simple operating and emergency instructions?

Small Children

When small children are using the concept keyboard as the sole means of input, the regular keyboard can be moved right out of the way - perhaps behind the monitor, depending on your setup. Ideally the concept keyboard should be at the same level as the screen so that the child can see her action and its result together - this sounds obvious but some situations demand that children look right away from the monitor to make their selection from an overlay. If necessary the top shelf of a trolley can be removed to bring the screen down to the child's level.

Combining Concept and Ordinary Keyboards



Bury

As children begin to use the concept and qwerty keyboards simultaneously, look carefully at what they are doing and at the most efficient positioning of each keyboard. Once the regular keyboard is the major form of input children should be encouraged to sit squarely in front of it and use two hands, even if they are using an overlay for additional support. Mike Bolton, Advisory Teacher in Somerset, has been putting arrows on the spacebar which the child has to point at his tummy-button!

Mind the plugs!

It is much easier to leave the concept keyboard plugged in all the time and simply put it under a shelf or to one side when it is not being used. If you have to share it, do take care of the connections and trailing leads - these are the most vulnerable parts of a computer and the most likely to give trouble in a mobile system. Stepping on the metal ends of leads is ill-advised and serious harm can be done to the little pins in a plug by forcing them into wrong sockets or upside-down. Be really careful when pushing the system around school. Concept keyboards regularly fall from trolleys and dangle by their flexes - they almost always survive but tired and frustrated teachers have been known to do expensive damage to computers by knocking protruding plugs against doorjams.

Preserving Overlays

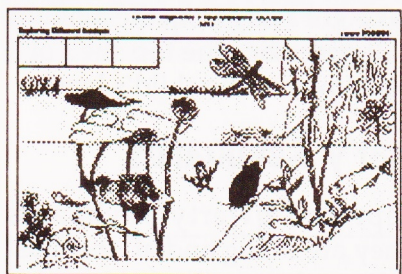
Paper overlays get tatty very quickly, especially if they are being used! They can be thought of as a disposable resource and regularly renewed - easier these days with access to photocopiers and programs that will print them out for you.

Keep them flat

The ideal way of keeping them flat and fresh is to laminate them. They can then be used for vocabulary support away from the computer, as wipeable mats at lunch time, scoops in the sand tray and it doesn't matter if they fall on the floor and get wellingtons and paint on them! But lamination is, however, expensive in terms of time and money.

Overlays can also be printed or photocopied onto thin card which can give them a considerably longer active life.

You can give your A4 concept keyboard a laminated feel by taping a piece of acetate along its top edge so that it can flap down onto the current overlay. This works very neatly with the older blue concept keyboards. For Concept Universals the acetate needs the corners trimmed to fit. This gives overlays good protection while they are in use.



Berkshire

Many people keep their overlays in ring binders with multipunched pockets (you can get A3 ones too). The problem with this is that the pocket is bigger than the keyboard area and so it has to be continually taken out of the pocket for use and put back for storage. This should not be a huge problem if you are not using too many overlays.

But you might be a support teacher using half a dozen overlays with three children in a quarter of an hour. It would be simpler, quicker and less wearing for the overlays to keep them flat in a cardboard wallet folder. Similarly if children are going to have independent access to them, they'll need to be quite skilled to keep corners straight and so on if they have to take them in and out of plastic pockets; a wallet folder, or series of folders, would probably be better for them too.

You can try cutting the tops off the pockets to make them fit. It is a fair solution for competent children. The bottom corners are anchored properly on a Concept Universal but the hole edge sticks out above the active area and the overlay can slide about a bit if you are not careful.

Failing all else...

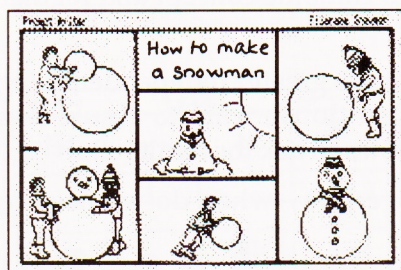
Blu-Tack works well!

Designing Overlays

A school policy

As more powerful multi-tasking machines become more widely available one overlay can be used in lots of different contexts - it is not tied to one program or one particular activity. A good "transport" overlay might be used for datahandling, geography or creative writing.

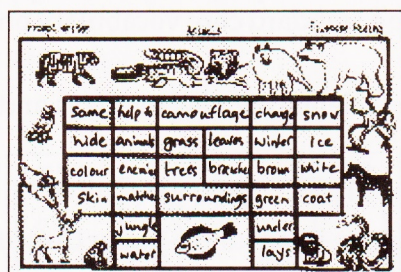
If you haven't really started using overlays consistently in school, but you intend to start, it would help the staff and ultimately the children to generate a whole school policy on overlay design, storage and use.



Berkshire

The advantages of this include

- quicker overlay design, as some of the thinking has already been done
- shared resources between classes
- resources for specific schemes and topics
- understanding (and approving of!) other people's resources
- increasing independence of children, not needing to learn new strategies for finding/using overlays
- developmental and consistent structure and use of resources through the school, for support staff and supply teachers too
- loads more resources for everyone



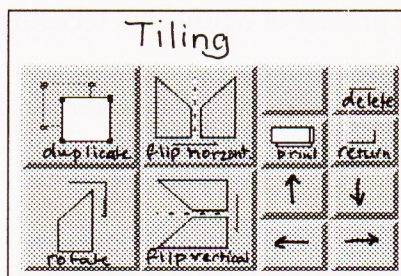
Berkshire

Questions to ask

The discussion and initiation of the policy will easily fill an inset day, touching on classroom management, all curriculum areas, IT policy, resource management, skill sharing (on this sort of training day one always prays that the greatest Luddite will be an excellent artist) and so on.

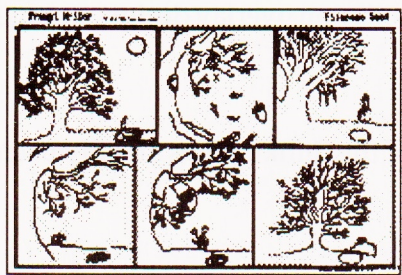
Some of the hundreds of questions to ask could be

- Do we want overlays which replicate the vocabulary in our early reading books?
- Which font will we use? Do we want a more grown up one further up the school?
- Where will we include file names; do we want to put the school's name/logo on the overlay for (i) ownership by children and staff and (ii) when other people from other schools think they are wonderful and copy them?
- Do we want some standard overlays with keyboard shortcuts for our particular wordprocessing, datahandling and graphics programs?
- What symbols will we use for eg Print, Cut, Copy, Duplicate ...?



Fairy Tales, TAG

Designing overlays ...



Berkshire

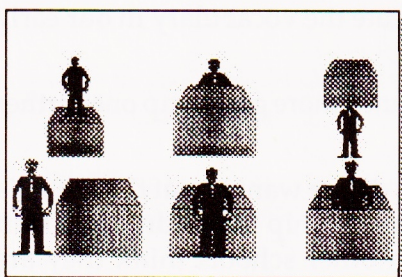
- Do we want our youngest children to use the ordinary keyboard at all to start with?
- At what stage do we want them to combine concept and regular keyboards?
- At what stage do we want to promote greater independence (eg including "Print" on the overlay) or do we want to ensure that there are natural and incidental times to ask for adult help?
- Can we reflect IT levels in our overlays - when do we need to include "Load and "Save"?
- Can we focus too on concept keyboard resources for Maths and Science?
- Can we give additional access to History and Geography for children who find reading difficult?
- How do we provide for differentiation eg addition of pictures or symbols or different files for the same paper overlay?
- Can we be consistent about where we put control keys?
- Can we be consistent about where we put core and topic vocabulary on an overlay? eg have a standard core vocabulary on the left and new on the right
- Can we have a system for sharing/celebrating new overlays and ideas?
- Will each class have a standard set? How will they be stored?
- Overlay files are small - do we want an infant and a junior disc of the most commonly used?
- Is this the IT coordinator's role or are subject coordinators responsible for the IT resources in Maths, Science and RE?

and so on.

Before you start

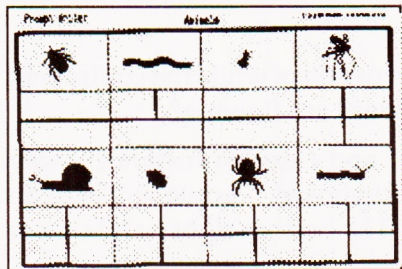
Think about your teaching objectives.

Are you



Hampshire

- encouraging creativity - easing the process of writing but focusing on structure and vocabulary?
- encouraging the use of a specific vocabulary (perhaps in science or humanities)?
- reinforcing words from the reading scheme?
- making an electronic worksheet?
- asking children to sequence mixed up letters/ words/ phrases?
- reinforcing other current teaching points (eg punctuation, finger spaces)?

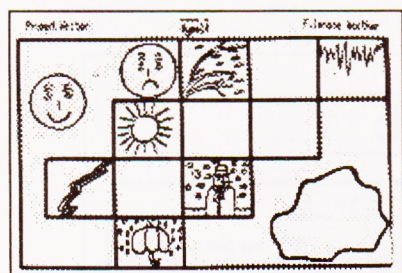


Berkshire

Making overlays encourages us to think carefully about the language that we want children to use. We may be asking them to use a controlled vocabulary. A database which is recording weather conditions needs consensus on the words which we are going to use - damp, moist, foggy, misty, cloudy, grey, hazy, overcast, wet, drizzling, could all (at a stretch) be used by different people to describe the same weather conditions. In this case we may want to create the overlay following a class discussion. We want the children to be able to find the most appropriate word quickly. The overlay will provide control over which words are used. A tabulated layout, perhaps with clear illustrations or weather symbols, will make word finding/spelling as accurate as possible (important when databases are interrogated).

If, on the other hand, we are expecting atmospheric poems and stories we want the children to be looking at lots of alternatives and possibilities. Maybe, following the same class discussion and brainstorming, our overlay could contain cloudburst, deluge, storm, drizzle, shower, sprinkle, spot, mizzle, murk In this case, an irregular array with graphics will help to get children to linger longer over choosing their words.

Similarly with cloze procedure exercises, we want the user to consider a range of alternative answers. Their position on the overlay will affect the complexity of the task.

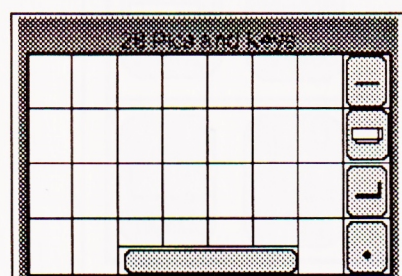


Berkshire

If we are asking children to sequence items we can differentiate or provide small steps into the activity by providing a range of overlays. In the first, we might simply ask the child to press the items in a straight left to right order. By the final stage the items could be mixed up with several distracters too.

Many people, when making overlays with whole word input, put automatic spaces after words. This makes things simple for early readers and writers and quicker for skilled ones. However, there may be a point at which spaces between words ("finger spaces") is a crucial teaching point and needs reinforcing with computer work too; in this case, word-space-word is an important discipline and needs including on the overlay. In the same way "full stop, new line" may be included as one process or two depending on the age and stage of the users.

And then



Editing Keys



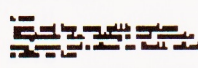




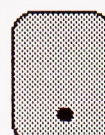
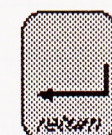

- start small - the magic of a few words or phrases appearing on the screen will do for both designers and users to begin with! If the first overlay aims to include all the vocabulary for Level 2 of your reading scheme you'll end up tired, frustrated and unwilling to try again!
- is the overlay going to completely replace the regular keyboard or be used in conjunction with it?

Designing overlays ...

- would it be useful to put the editing keys (space, return, delete) in similar positions to those on your qwerty keyboard?
- Are there conventions (whole school or your own) that can be followed - to make it easier for the designer and the user?
- Is there another similar existing overlay that can be edited to make your new one?
- Would it be sensible to make several overlays while the equipment is out, the software is loaded and ideas are flowing?
- Plan to put crucial functions (print and clear for instance) away from particular bits of the concept keyboard. People will lean on the board or pick it up to move it. The bottom right hand corner is especially vulnerable!
- Do you want to include extra picture resources, magazine cutouts, children's pictures or other copiable materials, computer clip-art?

Finally

- test it! This may be a good proofing exercise for the class (AT 5 at time of writing - garbage in, garbage out), but you may prefer to do it in private. This is advice from someone whose Christmas overlays included "frankinsense" and whose Record of Achievement phrases made sentences read "I can cook beans on toast" (OK) and "I like cook beans on toast"!

Word Processing		keyboard skills
I can	a b c d ... find letters	. , : ; " ' > use punctuation
	1 2 3 4 ... find numbers	... apple ... copy words
I want to learn to	aA bB 8*  use shift	where will you find an arrow plus copy sentences
	 use return	 copy a paragraph
I need more practice to	← → ↓ ↑ use cursor keys	 
	 use tab	
	 use delete	 
	 use space	

Record of Achievement

CKs with BBCs

Models

- BBC-B
- BBC Master
- BBC Compact

Cable

- Parallel connection lead supplied with Parallel Concept Keyboard (blue edged board) **also available as extra long lead for group work**
- Parallel cable for Concept Universal

Plugging it in

BBCs came with all the sockets that you could ever need - including the User Port for your concept keyboard. You will find this on the base of the computer clearly labelled "USER PORT". Ensure that you have the parallel cable the right way up by aligning the little lug with its associated notch.

Overlay Design Software

Concept, from NCET, is the one commercially available program which will allow you to make overlay files to go with some BBC programs. It is relatively straightforward but not recommended for the very beginner.

You will, however, probably be using software that has its own integral overlay utilities.

BBC concept keyboard software tends to be easy to use but you do have to discover the design process and idiosyncrasies for each different program.

Concept Keyboard Software Availability

All the major early wordprocessing programs have their own concept keyboard facilities.

A great deal of the BBC primary software allows concept keyboard input and comes with ready made overlays, for example *Worlds Without Words* (adventure), *Moving In* (language development/early reading), *Image* (graphics).

Other programs ("framework" programs) have been designed to allow people to make their own curriculum materials. Look at *What's That Picture* (Early Learning) and *Concept Keyboard Match* (computer word snap), *Data Collector* and *List Explorer* (data handling) and *Touch Explorer* (excellent across the curriculum).

CKs and RM

Models

- Nimbus 186

Cable

- BBC Parallel
- AUX port cable for Concept Universal

Plugging it in

- I-O port (known as Printer I-O port); many authorities specified this as standard on their 186 machines but some users may have had to buy a separate I-O module from RM later.
- AUX port

Overlay Design Software

- *Concept* from LETSS (formerly ILECC)
- *Concept Concept* from the Martineau Education Centre

Concept will produce overlay files which can be used with other Nimbus programs, but not recommended for beginners. *Concept Concept* is a more accessible version which will work with almost any Nimbus 186 program. It has been used to produce concept keyboard versions of *Caxton*, *Minnie*, *Podd* and so on.

Concept Keyboard Software Availability

There are two versions of *Touch Explorer* for the Nimbus 186 - one from NSNSU and the other from Staffordshire.

Count with Blob and *From Pictures to Words* are also excellent pieces of software for infant basics. Another popular nursery and infant language program is the concept keyboard version of *Podd*.

The *Suffolk Suite* is still available from some local authority outlets and comprises *Match Play*, *Concept Words* and *Concept Explorer*.

WHOW is an early wordprocessor which incorporates a simple and elegant overlay designer as well as an on-screen wordbank.

Stylus 2 is available too. This primary wordprocessor includes cut and paste.

BECK is concept keyboard snap, but with carefully contrived overlays can be used to produce word/picture matching activities, rhyming word games or children's own quizzes.

CKs and Macs

Models

- Mac Plus, SE
- Mac LCs, 475
- Powerbooks
- 600s , Quadra series
- Power Macintosh series onwards

Cable

- Serial 8 pin (for Apple Mac) from Concept Keyboard supplier

Plugging it in

Printer port or modem port (which are serial ports) - probably the modem because you have a printer plugged in. You'll have to tell the software which one you've used.

Overlay Design Software

- *Mac Designer*, from Concept
- *Intercept* from TAG
- *Informax* from SEMERC
- *HyperCard Developer Kit* - comes with *Mac Designer*

Mac Designer and *Intercept* are very similar and can interchange files (ie if you have *Designer* you can run and edit *Intercept* files and vice versa). The one major difference is that *Intercept* will make layered overlays. *Intercept* also is available as a run-time version which you are likely to acquire with other primary software (eg *Fairy Tales* from TAG). This will allow you to run but not edit *Intercept* and *Designer* files.

HyperCard Developer Kit is not for the fainthearted. You need to be a pretty unflappable HyperCard scripter to get to grips with it. A skilled designer can make lovely activities: press the cow to make it moo, find out what a robin looks and sounds like, QuickTime movie Snap and so on.

Concept Keyboard Software Availability

Mac numbers are steadily building in the primary sector and concept keyboard consciousness is growing.

A few very early learning activities (*Jocus Software series* and *First Class*) are available from Keyboard Technology. TAG are beginning to include overlays with some of their primary packs.

CKs and PCs

Models

- IBM PC compatible 386, 486
- RM 386 M series, S series

Cable

- RM 386 M series - BBC parallel lead
- RM 386 S series - 9 pin serial lead
- IBM PC compatible - 25 or 9 pin serial (depending on socket)

Plugging it in

- RM 386 M series - Parallel I-O podule
- RM 386 S series 9 pin serial socket
- IBM PC compatible- 25 or 9 pin serial socket

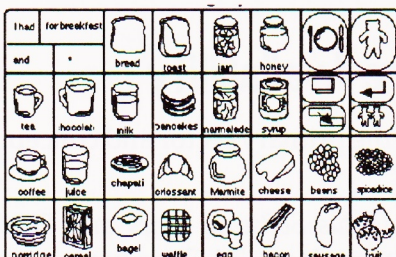
Overlay Design Software

- *Windows Concept* from Advisory Unit : Computers in Education
- *Informax* from NW SEMERC
- *Intercept* from TAG
- *Windows Concept* comes with lots of sample files and a booklet full of curriculum ideas.

Intercept also is available as a run-time version which you are likely to acquire with other primary software particularly from TAG. This will allow you to run but not edit any Intercept files.

Concept Keyboard Software Availability

There is very little software, other than the overlay design software, which has integral concept keyboard facilities. However, any files made with the design software can be used in any program which "understands" the input. So, an overlay like this might be used to label pictures in a graphic file, write sentences in a wordprocessor or send data to a database or spreadsheet.



CKs and Archimedes

Models

- all Archimedes from A3000 to RISC PC

Cable

- BBC Parallel lead
- or
- Archimedes serial lead

Plugging it in

Either

- User port for a parallel connection, essential if you want to use an old blue keyboard

or

- Serial port for serial connection

Pre-RISC OS 3 machines (A3000s) were delivered without any ports but more recent models have a serial port as standard. If you have a machine ordered by your local authority they may have had either a serial or a parallel port fitted.

Your additional port will come on a board with another socket too. There is a variety of boards - consult your local IT centre or dealer for the best one for you.

BEWARE: there are two different connections for concept keyboards and Archimedes machines - parallel (flat grey ribbon cable) and serial. These require different cables and different sockets. Some software supports both parallel and serial input but some software can only be used with parallel keyboards.

Overlay Design Software

- *Concept Designer* from Longman Logotron
- *Conform* from NW SEMERC
- *Intercept* from TAG
- *Informax* from NW SEMERC

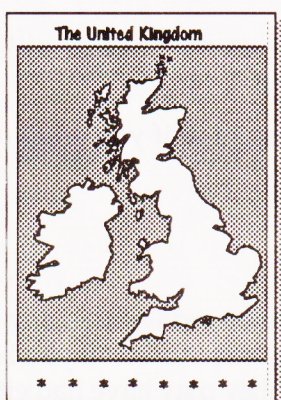
Concept Keyboard Software Availability

Lots of software for early learners, primary wordprocessing and datahandling. Software producers with good concept keyboard lists include Widgit, Hampshire Microtech, Bury TCSC, NW SEMERC, and Brilliant Computing.

Informatrix and Informax

Informatrix - the board

Informatrix is a new, high resolution A3 concept keyboard, designed by SEMERC and The Concept Keyboard Company. It has 4,096 (rather than 256) individual areas making it possible to produce smooth curves and dog-shaped dogs. It is especially useful for irregular shaped overlays and map work. Designers will be able to produce intricate overlay files to go with photographs and pictures. But the board can also be used in just the same way as a regular concept keyboard with your ordinary A3 overlays.



The U.K.

Informax- the software

Overlays can be designed with *Informax* - new software from SEMERC. The Archimedes version is available now with Windows and Mac versions available in 1995. Although *Informax* can make overlays just like the ones that we are using now and it can create files for ordinary concept keyboards, it also lets you send pictures and sounds straight to your active program. It will call up another file, so long as the computer can find it and the current application knows what to do with it! This feature allows you produce layered overlays for datahandling and investigatory activities.

The overlay keyboard can completely replace the mouse in PC and Archimedes versions with the additional benefit of click-on, click-off Shift and Control keys. All the keyboard shortcuts, some a mystery to all but the most experienced users, can be made available too.

The software is designed to be easy to use with alternative ways of defining areas and assigning messages. It includes pre-defined grids for speedy setups. Areas once defined can be quickly edited, having their shape and size changed and messages altered. Areas can be placed on top of one another as well as flowing round previously defined zones - anyone who has meticulously programmed each spot of sky in out and of trees and round birds and aeroplanes will be justifiably delighted with this!

Windows Concept can also be used to produce overlay files for Windows machines and Informatrix, as well as files for regular concept keyboards.

Informatrix just comes in A3 size and connects through the serial port. It comes with an Archimedes serial lead. Macintosh and PC leads are available from any Concept dealer.

Why use them?

Early Learning

A couple of years ago we might have said that young children need concept keyboards to gain access to ordinary activities on grownup computers but the generation of computer literate toddlers is now with us. Children of two and a half are helping themselves to CD ROMs from the desk drawer and loading their favourite programs. Special school nurseries have children teaching staff how to use a mouse to load a concept keyboard program!

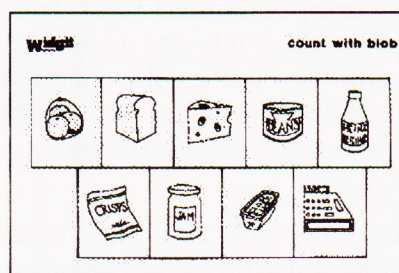
But not all tinies are this competent and there may be sound reasons for excluding young investigators from unprotected desktops. This is where we could consider moving the keyboard right out of the way, above or behind the monitor, and only allowing access through a concept keyboard.

There are lots and lots of excellent early learning programs which can be used in this way - look through your disc boxes. Here are just a few examples.

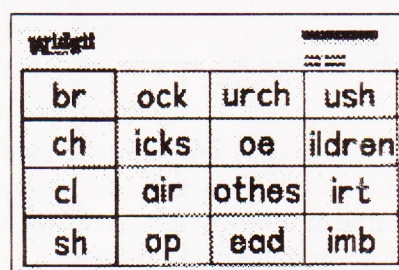
Count with Blob (Widgit) is a suite of counting-to-ten programs which range from simple counting (touch the overlay and watch the computer count), matching numbers to sets to remembering numbers of items on a shopping list. There are five basic programs but altering configuration (maximum number, input device and so on) gives the possibility of hundreds of different ways and levels of use. The concept keyboard can be used as a single switch (press anywhere on its surface) and then at a later stage with an overlay to input answers. One of the many nice features of this program is that it never leaves the child with a model of a wrong answer, but simply bleeps and carries on until the right answer is given, so even a child taking over an activity which is beyond them will have correct answers reinforced.

Another Widgit program - *From Pictures to Words* - links simple pictures to words for reading and writing tasks. In structured activities the program provides the pictures, asking for a particular answer, whereas in free-writing the program provides the pictures to go with the child's words entered, probably, from a concept keyboard. We could set up a nursery system with an "s" overlay and summer words - sand, sun, sea, spade, sandwich - and let the children do error-free initial sound matching. The program allows for copy-typing and spelling too. A sequence of overlays can provide for progression or differentiation within a single activity.

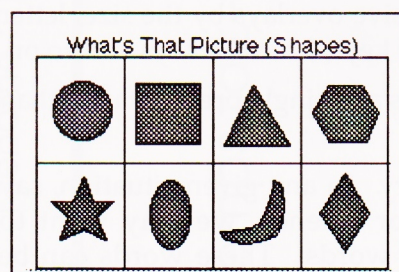
What's That Picture? by Chris Hopkins has two modes of operation using the same overlays. The first simply allows children to choose which picture (from 2,4,6 or 8 on an overlay) to display on the screen and the second rewards a correct match. Several different discs have been created with different pictures. *Five Green Triangles* (SEMERG) is a WTP disc, using it for colour, shape and number matching. Again making different paper overlays completely alters the complexity of the activity.



Count with Blob, Widgit



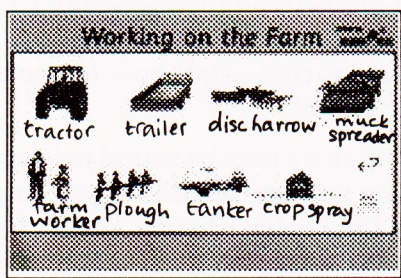
From Pictures to Words, Widgit



*What's That Picture,
Chris Hopkins*

Why use them?

Wordprocessing



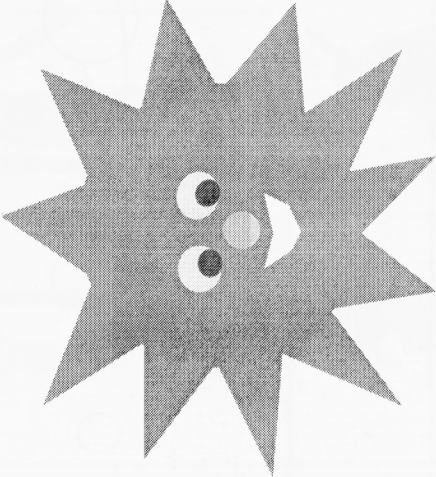
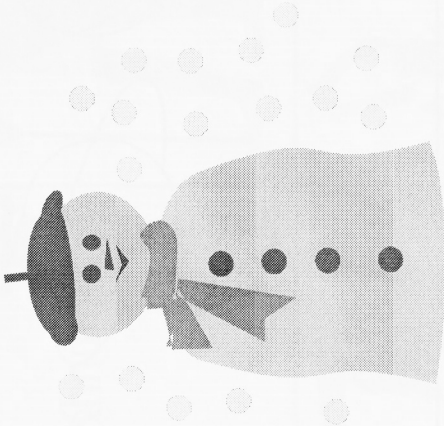

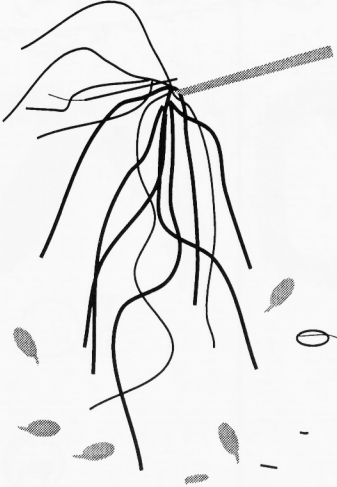
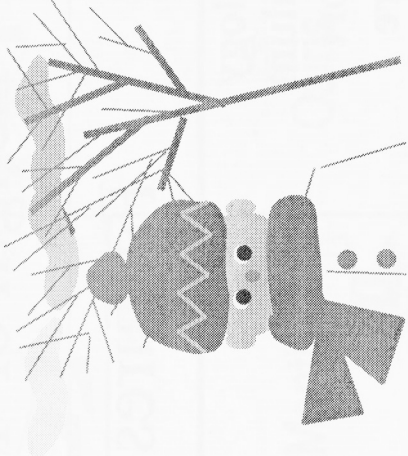
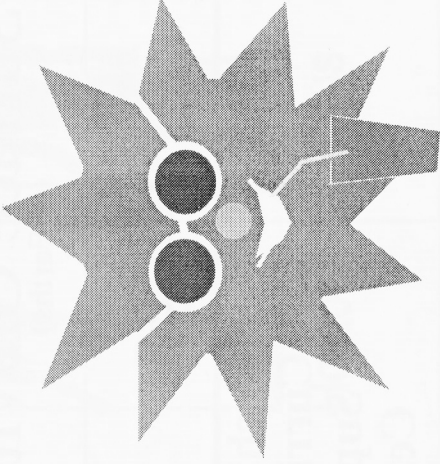
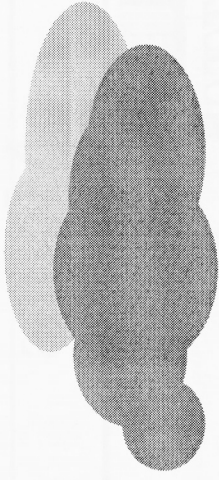

SEMERC

For many people the most useful function of the computer is as a wordprocessor. It lets us produce attractive and professional printed matter in a range of styles. We can check, change or restructure it at any stage, or store it to be used again in different contexts. It can also be shared with people on other computers, and work from several different sources can be brought together into one document. Concept keyboards bring these possibilities within the scope of children at the very first stages of recording their work as well as giving support or structure to written work right through the primary school.





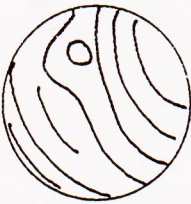




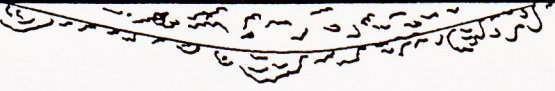
Text can be entered from the concept keyboard as letters, letter combinations, single words or even paragraphs (up to 256 characters at a time on a typical overlay designer for Arc, Mac or PC). So we've got all the advantages of wordprocessing alongside quick and easy ways of getting the words.

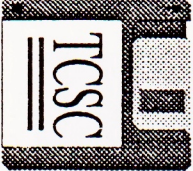
Some of the special things that concept keyboards add to an activity include

- allowing young users to concentrate on the **process** of composing a piece of text rather than the mechanics.
- accurate spelling - some children won't risk using "hard words" if they might make a mistake. Others don't worry but are left with incorrect or scribbled on models in their exercise books. A well presented end-product, clearly printed on screen or paper reinforces correct spelling.
- the possibility of using words at one's reading rather than writing/spelling level. Children can often read far more words than they can write - these can be made available to them on an overlay at a stage well before we would expect them to be writing them ...
... especially if the words are supported by pictures and symbols. Anything (smallish) can be stuck on an overlay - plastic animals, money, different textures, feely letters or simply pictures from children's own work or magazines.
- not having to use an ordinary keyboard. Using a keyboard is a major skill area on its own. We can phase the introduction to the qwerty keyboard through successive overlays by the size, letter case, arrangement and number of keys, function keys and so on.
- speed. Entering words or phrases at a single press is faster than typing for almost everyone.
- the use of a controlled vocabulary. In any given situation, say creative writing, Humanities or Science, we may want to encourage the use of particular words. These words can be provided on an overlay.

Quel temps fait-il?	Aujourd'hui	Ce matin	
			
			

Space List

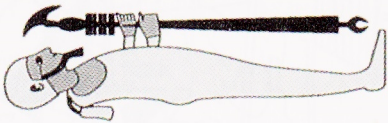
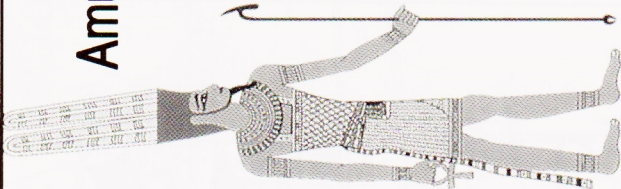
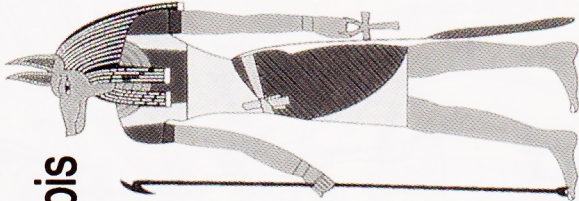
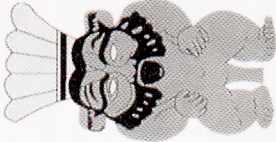
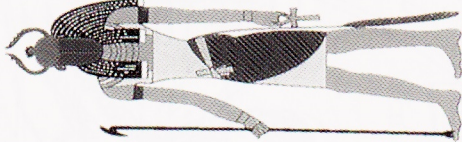
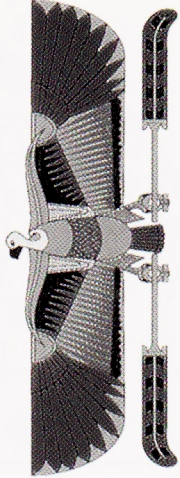
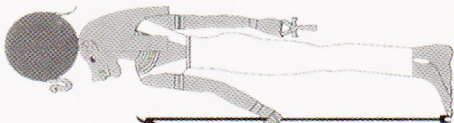
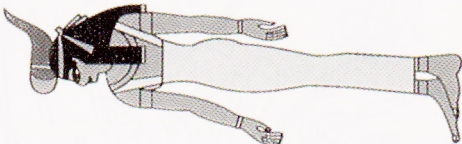
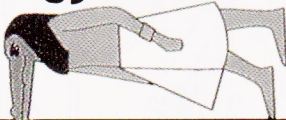
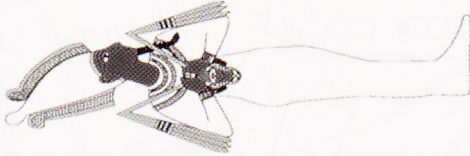
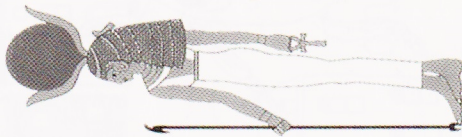

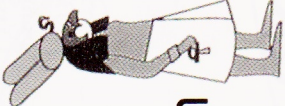
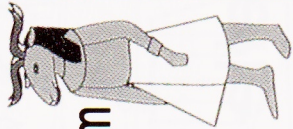

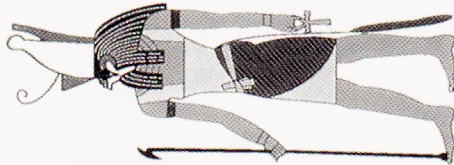
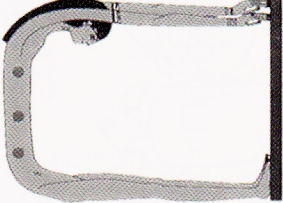
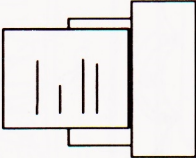
Distance from the Sun	Diameter (in Km)	Mass (in Earths)	Density (in g/cub.cm)
<div> <div>          </div> <div>  </div> </div>			
Rotation	Surface Gravity (in Earths)	Length of Year	Notes
Moons	Rings	Features	Finish



Technology Curriculum Support Centre

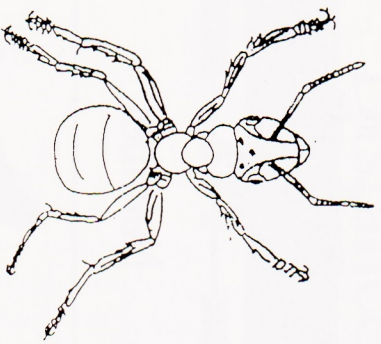
SEMERC

Phases - Ancient Egypt

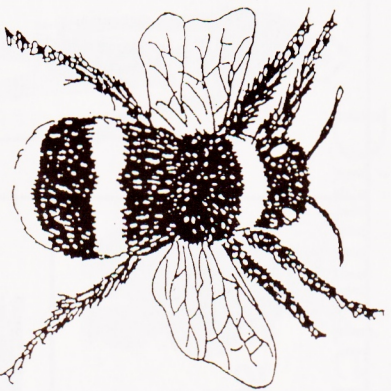
 <p>Ptah</p>	 <p>Amun_Ra</p>	 <p>Anubis</p>	 <p>Bes</p>	 <p>Khepri</p>	 <p>Nekhbet</p>
 <p>Sekhmet</p>	 <p>Selkis</p>	 <p>Sobek</p>	 <p>Osiris</p>	 <p>Hathor</p>	 <p>Isis</p>
	 <p>Month</p>	 <p>Khnum</p>	 <p>Ammit</p>	 <p>Horus</p>	 <p>Nut</p>
					 <p>Print</p>

Data Collector

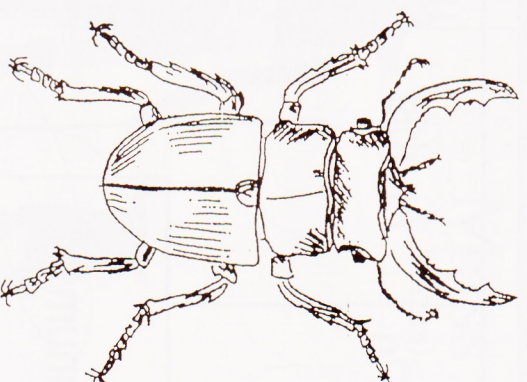
overlay name: insects



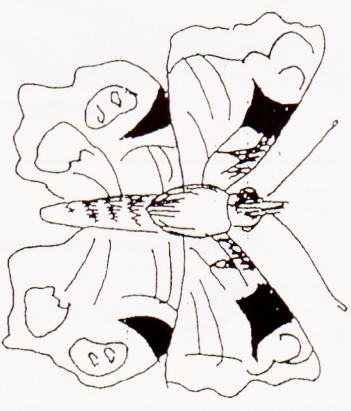
ant



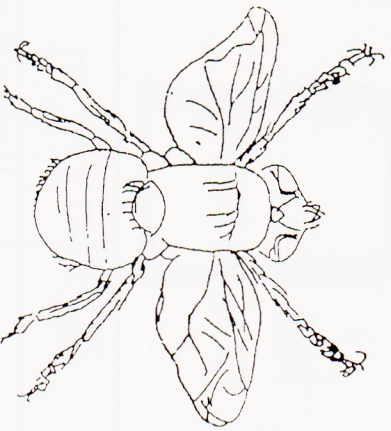
bee



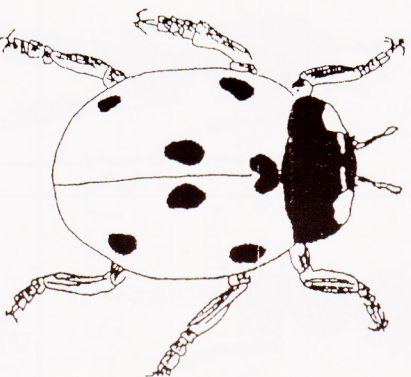
beetle



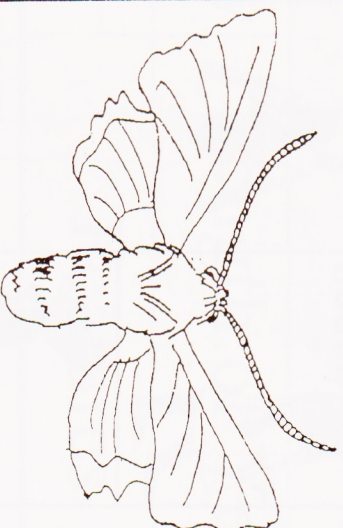
butterfly



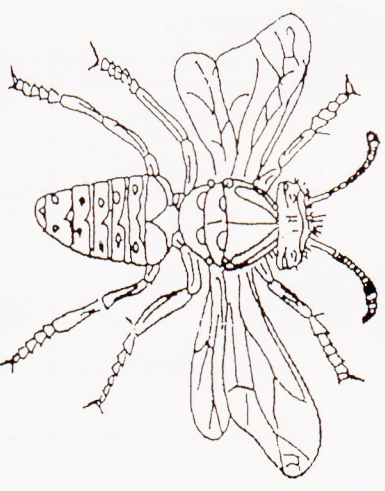
fly



ladybird



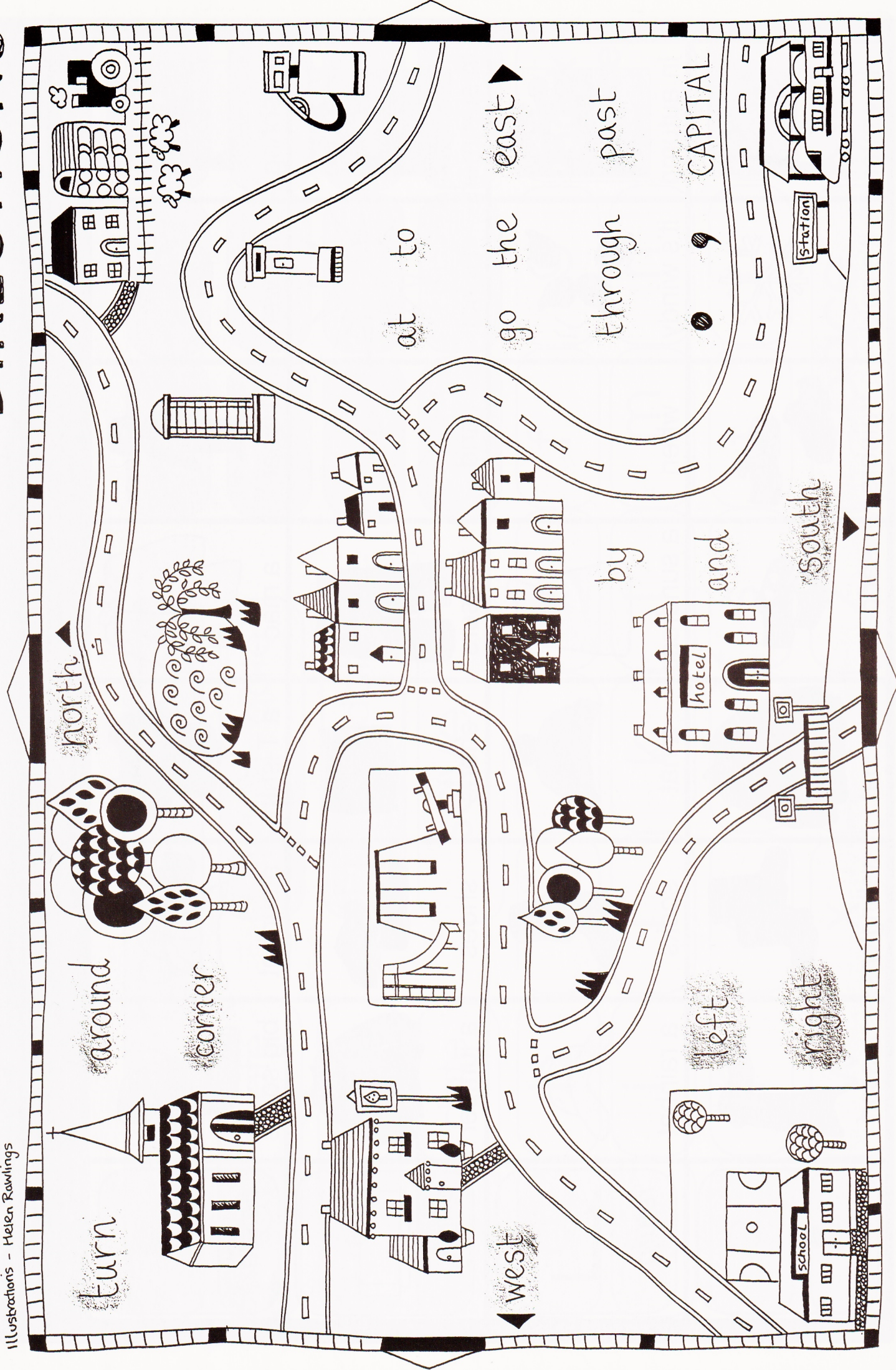
moth



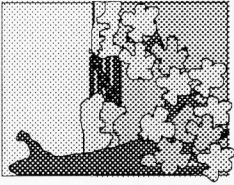


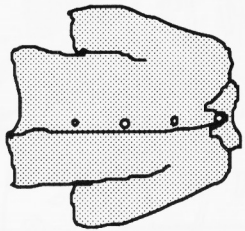

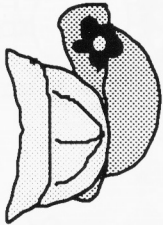


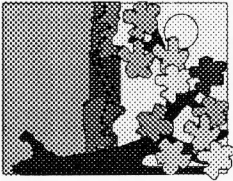
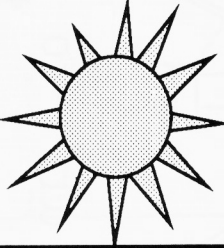
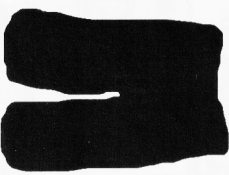
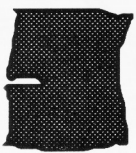
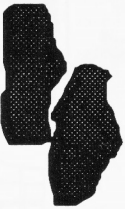
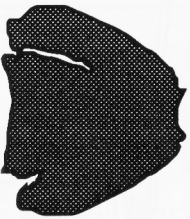

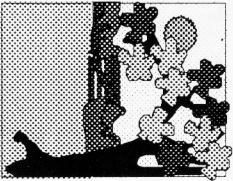

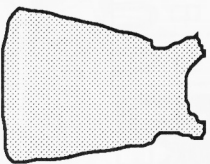
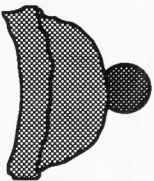


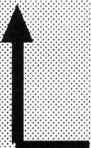
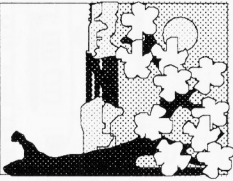

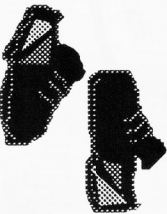

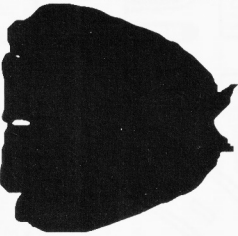
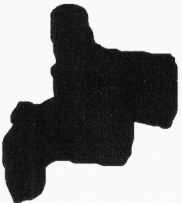
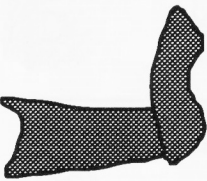

wasp

STONETREE

Illustrations - Helen Rawlings



What I wear

<p>In spring</p> 	<p>it's wet</p> 	<p>I wear</p> 	<p>a mac</p> 	<p>a T-shirt</p> 	<p>a sunhat</p> 	<p>big socks</p> 	<p>delete</p> 
<p>In summer</p> 	<p>it's hot</p> 	<p>and</p>	<p>trousers</p> 	<p>shorts</p> 	<p>shoes</p> 	<p>a jumper</p> 	<p>print</p> 
<p>In autumn</p> 	<p>it's windy</p> 	<p>when</p>	<p>a sundress</p> 	<p>a hat</p> 	<p>socks</p> 	<p>a rainhat</p> 	<p>return</p> 
<p>In winter</p> 	<p>it's cold</p> 	<p>trainers</p> 	<p>sandals</p> 	<p>a coat</p> 	<p>wellingtons</p> 	<p>a scarf</p> 	<p></p> 

My Diary

Overlay for
Image produced on:
Support file:
Font:

ClarisWorks Primary Templates.
ClarisWorks 2.1
Intercept Runtime
Avant Garde

My name

Mon date

Thur date

Tues date

Fri date

Wed date

save

a

b

c

d

e

f

g

back
space

h

i

j

k

l

m

n

o

p

q

r

s

t

u

caps

v

w

x

y

z

space

small

7

8

9

4

5

6

1

2

3

0

Full
stop

/

A

fish



horse



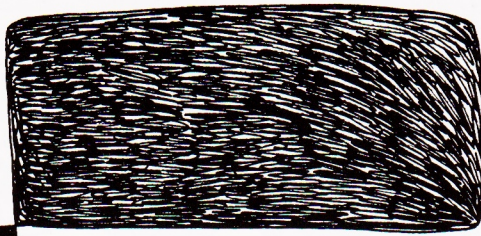
tiger



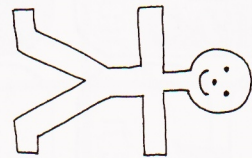
rabbit



bird



I



badger



bee



spider



pig



dog

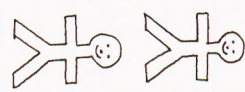


Space



delete

We



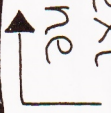
lives



live



next line



in a



and



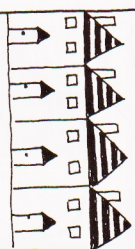
jungle

burrow

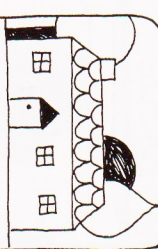
hive

web

terraced



bungalow



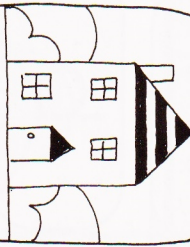
stable

nest

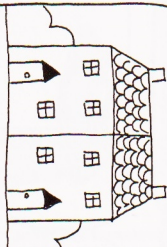
sett

kennel

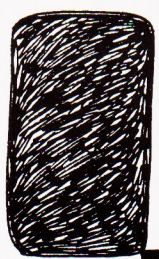
detached



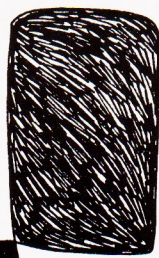
semi-detached



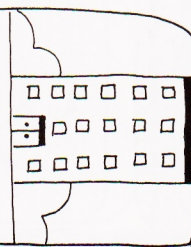
sty



pond



flat



house



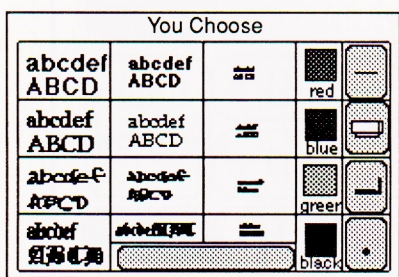
- support for correct syntax. Regularly used structures that children have difficulty with can be entered with an overlay, providing a good model for use later.
- providing a vehicle for collaborative work. The concept keyboard widens the access to the computer literally as well as figuratively. A group of children round an overlay can make co-operative decisions about their work. It also makes it possible for children with a range of skills to participate. The best writer might be doing a lot of thinking while the person who finds it most difficult to read is entering the text!
- motivation. If you are able to work faster, more accurately and produce classier work you're going to enjoy it so you'll work harder and learn more next time. OK?

Access

With newer, bigger computers (Macs, Archimedes and PC compatibles) most of the overlay designing software lets us use the concept keyboard to replicate anything that we can do from the keyboard. We can access things like

- general file and edit menu items - new, print, save, load, cut, copy and paste
- specific commands for particular pieces of software - duplicate, rotate, flip and so on in a graphics package or brush, fill, lasso in a painting package. A video technician I met had all his video editing commands on an overlay.
- macros - these are recorded sequences of key strokes and mouse movements, which may be integral in a particular program (eg *Claris Works*) or need additional software.

We can also use lowercase letters, in alphabetical, qwerty or any other order, and a restricted set of control keys (delete, shift and return for example).



You Choose

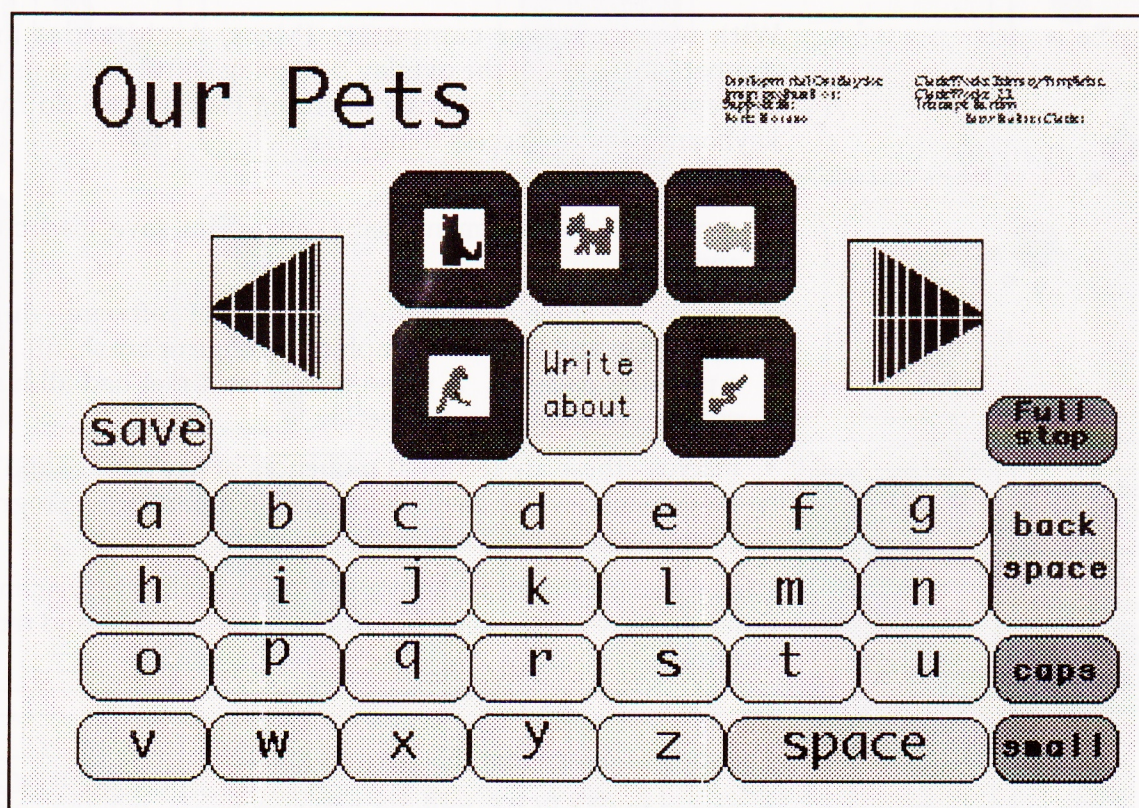
The sorts of things that this permits are

- access to CD ROM, moving between pages, making selections, conducting a search for particular items of interest
- entering records into a database and changing layouts
- putting pictures and sounds into compatible wordprocessed documents
- selection of font, styles, size and colour
- choosing tools, fills, lines and colours on graphics and paint programs.

Why use them ...

Well constructed overlays can give children access to sophisticated functions of programs without having to learn a whole range of complex procedures first. It is probable that they'll never need to know the intimate details of all the programs that they use. But we can provide a staged introduction to the various functions through a developmental sequence of overlays for those which they will have to learn to operate independently.

This might be something that happens slowly throughout the primary school - if we use *PenDown* we may go from the introduction of the print function at Y1 to ruler formatting at Y6. Alternatively, on *ClarisWorks* we may provide an overlay in Y4 for say, graphic shortcuts for a couple of weeks, on-screen buttons for another couple of weeks then teach children how to find and manage the buttons for themselves.



ClarisWorks Primary Templates, TAG

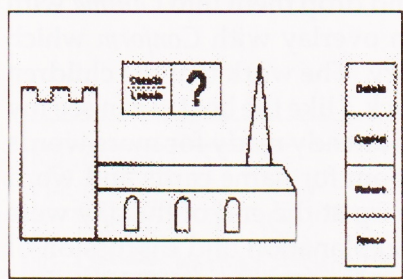
CKs and National Curriculum

The use of concept keyboards in the curriculum is, of course, the subject of this entire publication. In this section, however, we list elements of the National Curriculum programmes of study at key stages one and two where concept keyboards can make a substantial contribution. These are followed by articles from experienced teachers.

Communicating and handling Information

Pupils should be taught to

- *generate and communicate their ideas in different forms, using text, tables, pictures and sound; (KS1)*
- *use IT equipment and software to communicate ideas and information in a variety of forms, incorporating text, tables, pictures and sound, as appropriate showing sensitivity to the needs of their audience; (KS2)*
- *enter and store information; (KS1)*
- *use IT equipment and software to organise, reorganise and analyse ideas and information; (KS2)*
- *retrieve, process and display information that has been stored; (KS1)*
- *select suitable information and media, and classify and prepare information for processing with IT, checking for accuracy; (KS2)*



Hampshire

from Technology in the National Curriculum, Programmes of Study for Key Stages 1 and 2 (Final Draft, November 1994)

Our Day Out

Nicky Johnson : Stanley Grove Infant School, Manchester

Last summer our reception class went on an expedition to Uppermill - a Pennine village with a canal, rural visitors' centre and lots of good places to picnic and play. We went from our school, two miles south of the city centre of Manchester, out into the country. The children were thrilled at the sight of cows and sheep in the fields and the journey flashed past while we counted animals and tractors and played I-Spy. The plan for the day was a narrow-boat trip up the canal through a lock, pond-dipping with Catherine, resident countryside ranger, a visit to the museum, picnic by the river and then walk back along the canal to the bus. We had done lots of work on this already and Kayleigh, Ayesha and Vicky sang "Rosie and Jim" for the whole barge journey.

The majority of the children speak Punjabi or Urdu at home and Sajjad had arrived in the U.K. only three days earlier, so the major focus of our work that day was language experience.

We took a tape recorder, a still video camera and Debbie, an

CKs and National Curriculum ...

educational media student from the Poly, with us. Debbie took about 150 photos with the camera and the children took 50 more (the camera has reusable disc so there are no cost implications). We finished up with pictures of everything from the "no ducks" in the grass, through sequences of the boat rising in the lock to close-ups of minibeasts that Damien had caught in his fishing net.

Debbie took the photos and turned them into pictures that we could use on our A3000. She also took snatches of our tape recording and made these into computer sound too. Debbie, with time and commitment made these into a beautiful talking story book with sound effects ("Rosie and Jim" as well as quacking ducks and splashing water in the lock) using *Genesis*.

Our Day Out			
I	can	see	the
I	like	my	and
boat	friend	duck	X

Stanley Grove

I was able to take the same pictures and drop them into *Optima* with some sound effects too. I created an overlay with *Conform* which reinforced our current sight vocabulary. The work that the children produced was lovely - I can see the duck, I like the boat, I can see my friend and so on. Some children were already ready for more words and went off to corners of the classroom for name cards and word banks. Parents, coming to pick them up at the end of the day were drawn in too - leading to lots more explanation and discussion of our day out.



I can see the duck duck duck

But just think about Anup's own photo of three ducks hiding in the grass and "I can see the duck duck duck" typed underneath. This was a piece of five-year-old communication to be proud of.

CKs and National Curriculum

Assisting pupils to handle information

by Barbara Ainscough, Advisory Teacher : IT, Humberside LEA

Hummec have recently developed a set of templates aimed at promoting the strand of Information Handling within the National Curriculum Orders for Information Technology.

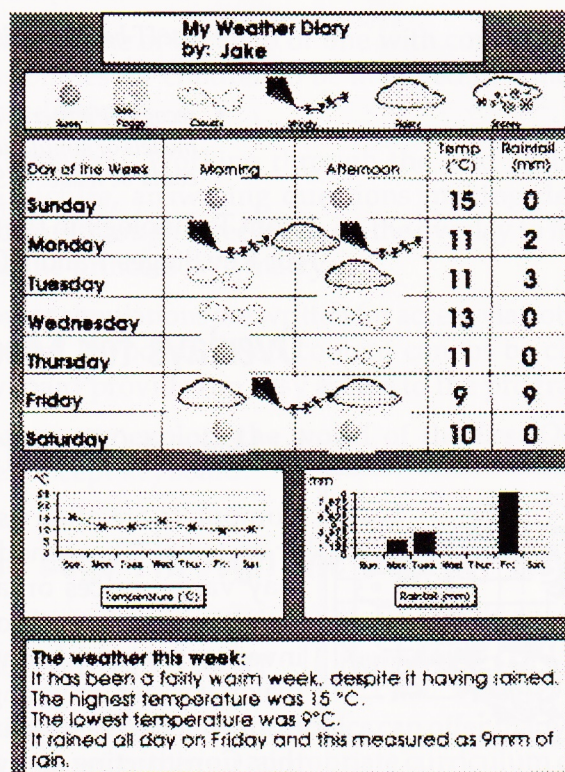
The Hummec templates consist of a set of predetermined data collection sheets which allow pupils to enter a limited amount of information and then display it in a particular way.

The templates have been designed to be used within the *ClarisWorks* 2.1 program on both the Apple Macintosh and PC platforms.

Most templates take the form of a data recording grid (a simple spreadsheet). Upon entering the relevant information this data will automatically be displayed as a graph, (block, pie and line graphs).

A word processing section is also available for pupils to comment upon their findings.

A screenshot of a data entry template. It features a grid for entering weather data for each day of the week (Sunday to Saturday). The grid includes fields for weather conditions (e.g., sunny, rainy, cloudy, snowy, foggy, windy, warm, hot, cold, freezing) and a section for temperature (warm, hot, cold, freezing). There are also buttons for navigation (up, down, return, delete) and a section for comments (On, was, was, and, feeding).



Furthermore, a number of overlays have been developed which allow less able pupils of all age groups with writing difficulties to access the templates in an alternative way. The overlays enable pupils to add relevant data to the data recording grid (spreadsheet), and also

CKs and National Curriculum

assist pupils in recording their comments and interpretations about the information displayed.

The templates themselves are both open-ended and dedicated in nature, and are aimed at inclusion in a range of primary themes such as:- weather, house surveys, plant growth, ourselves, likes and dislikes, our favourite things and a magic number square.

They will serve as an support for developing pupils' understanding of information handling at Key Stage 1, and also consolidate and extend early experiences of older pupils.

Controlling and modelling

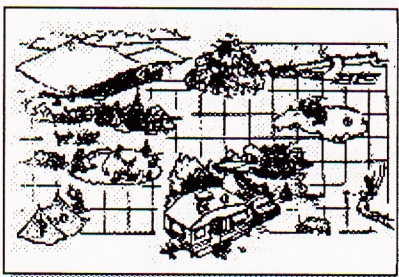
Pupils should be taught to

- recognise that control is integral to many everyday devices; (KS1)
- give direct signals or commands that produce a variety of outcomes, and describe the effects of their actions; (KS1)
- create, test, modify and store sequences of instructions to control events; (KS2)
- use IT and software to monitor external events; (KS2)
- use IT-based models or simulations to explore aspects of real and imaginary situations; (KS1)
- recognise patterns and relationships in the results obtained from IT-based models or simulations, predicting the outcomes of different decisions that could be made. (KS2)

from Technology in the National Curriculum, Programmes of study for Key Stages 1 and 2 (Final Draft, November 1994)

Overlays for Modelling

by Margaret Still : Still Educating

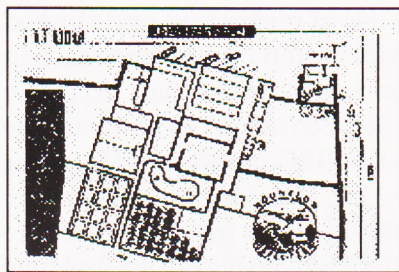


The Camp Site

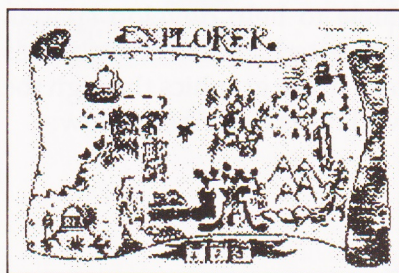
Computers are often used to create models of situations, processes or systems. These models have a basic framework but the content may vary - prices on a shopping list, electricity consumption or activities on a farm throughout the year. They can be explored and investigated in a variety of ways. Using a concept keyboard overlay makes it easier for younger children to establish a fixed or focal point from which to base their thinking. Using sets of overlays can extend this. Constructing an overlay develops a sense of spatial awareness and a certain degree of lateral thinking. Older children should be encouraged to build up their own scenarios.

Several *Touch Explorer Plus* activities can be used as modelling as well as datahandling exercises. It would depend on how the overlays are used. Are the children gathering information? What are they asked to do with the information? Are they presenting it to others?

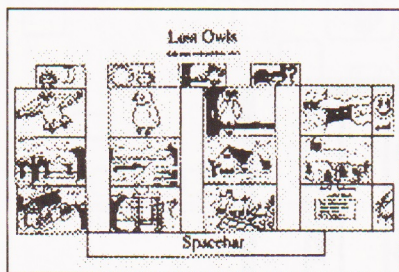
CKs and National Curriculum ...



Our Neighbourhood



Shipwrecked Sailors



The Lost Owls, MAPE

(handling information) or are they having to make decisions? Is one piece of information guiding them to make decisions to explore further? Are they faced with alternatives ... What would happen if...? (Modelling)

Suppose we have an overlay which is a map of a neighbourhood locality. The "levels" are six different times throughout 24 hours. Press the clocks to find out what is happening in different locations on the map. This could be fact or fiction. Build up a picture which could lead to creative writing or pose a situation/problem to which there is no one correct answer. The overlay could represent any location absolutely anywhere: any country, any environment, underground, outer space. The school day could also be used in a modelling situation.

Maps give lots of opportunities for collection and collation of facts as well as starters for creative work. If we were working on the topic 'Normans' we could ask Where shall we land? Build our camp? Position our defences? Where shall we start our settlement?

Or Shipwrecked Sailors. How will we survive? Where's the nearest fresh drinking water? Shelter? Food? What are the immediate dangers?

Using just the outline of the map or one with contours gives rise to endless possibilities for children to be involved in either adventure games or simulations.

The Tough Princess. Working through the grid system children explore the picture, answering questions making decisions and solving problems through three levels on the overlay to find the name of the prince the princess is to marry.

Many computer simulations are written for access via both the qwerty and the concept keyboard. Their content cannot be changed. The concept keyboard provides an easy access to the program.

Young children can explore the world of the *Lost Owls* (MAPE) through the concept keyboard.

Accessing Logo Through the Overlay Keyboard

by Dick Steel : Advisory Teacher : IT, Humberside LEA

Activities based on Logo/turtle graphics can offer many stimulating experiences and, set within an appropriate curriculum context, they can be linked to tasks which are either highly structured or of the open-ended problem-solving nature. Tasks can therefore be differentiated to meet the needs of the individual or groups of pupils.

This article focuses on using the overlay keyboard in connection with the turtle graphics environment. For most youngsters their first encounter with turtle graphics will probably be through the use of a

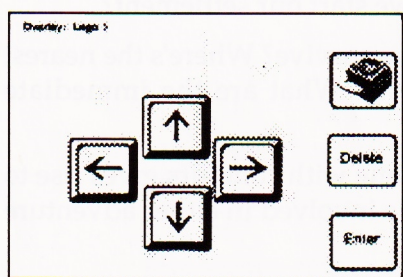
CKs and National Curriculum ...

floor robot, like a Roamer or Pip. The use of mazes and grids linked to appropriate overlays can help provide a step by step approach in preparation for using a full on-screen Logo. In the past access to turtle graphics through the overlay keyboard has been available through software such as *DART* on the BBC computer. However newer programs such as *LogoWriter* (PC and Macintosh) include facilities such as the ability to slow down turtle movement and to design your own turtle shape. Both these will be highly appropriate for younger pupils and those with learning difficulties.

Set within an appropriate curricular context the turtle graphics environment can be a powerful vehicle to help develop spatial, mathematical and language skills. A suggested sequence of activities which offer a starting point for on-screen turtle graphics through the use of an introductory sequence of overlays is described below:-

ACTIVITY TYPE 1

Simple Grid Activities - Overlay : Logo 1



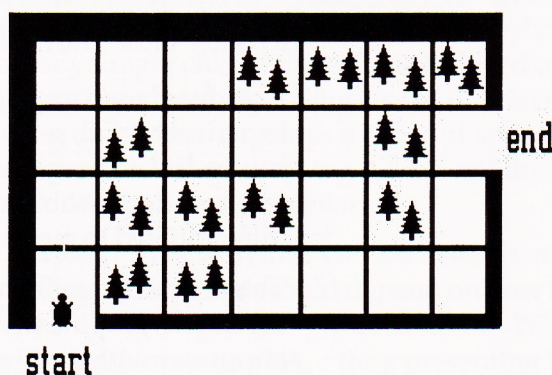
Simple Grids, one route with a start and finish point. The overlay is programmed to give choices through the use of arrows (preset with units of movement and 90 degree turns) and turtle is set to Slowturtle so that pupils can see units of turn.



ACTIVITY TYPE 2

More Complex Grid Activities - Overlay : Logo 1

Grid with alternative routes. Overlay settings same as Activity 1.



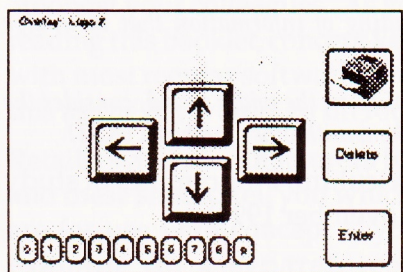
More Complex Grid Activities - Overlay : Logo 1

Grid with alternative routes. Overlay settings same as Activity 1.

ACTIVITY TYPE 3

Simple Mazes - Overlay : Logo 2

Simple Mazes with entrance and exit squares. The overlay is programmed to give choices through use of direction arrows (90 degree turns preset), with units of movement selected from the overlay.



ACTIVITY TYPE 4

More Complex Mazes - Overlay : Logo 2

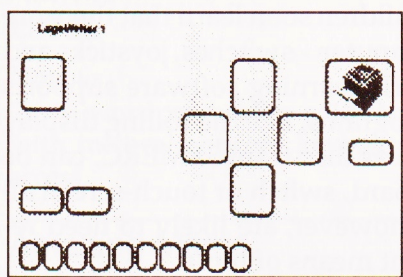
Overlays programmed with direction arrows with units of movement and angles of turn selected from the overlay.

ACTIVITY TYPE 5

Drawing simple shape and patterns - Overlay : LogoWriter 1

Drawing simple shape, capital letters etc. Overlay contains limited functions used in conjunction with direct input onto Logo screen.

An overlay such as LogoWriter 2, which contains most of the main functions of the program, could be used in connection with direct input or the building of procedures which would progress in difficulty, and could eventually lead to the use of more complex functions ie repeats, loops, and the use of procedures within procedures.



Programmes of Study in Mathematics Key Stages 1 & 2 emphasise that pupils, 'should be encouraged to explain their thinking, ask questions and follow alternative suggestions to support their development of reasoning.' PoS also state that 'where appropriate pupils should be given opportunities to use IT to support and enhance their learning of mathematics.' The use of Logo remains a powerful vehicle with which to assist learning for pupils of all abilities, serious consideration should be given to its potential not solely in mathematics but across a wide range of curricular areas.

And in general

Pupils should be given opportunities to

- use a variety of IT equipment and software, including microcomputers and various keyboards to carry out a variety of functions in a range of contexts; (KS1)
- explore the use of computer systems and control technology in everyday life; (KS1)

CKs and National Curriculum ...



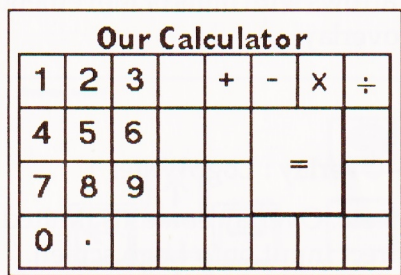
Hounslow High Street

- examine and discuss their experiences of IT, and look at the use of IT in the outside world; (KS1)
- use IT to explore and solve problems in the context of work across a variety of subjects; (KS2)
- use IT to further their understanding of information that they have retrieved and processed; (KS2)
- investigate parallels with the use of IT in the wider world, consider the effects of such uses, and compare them with other methods. (KS2)

from Technology in the National Curriculum, Programmes of study for key stages 1 and 2 (Final Draft, November 1994)

Classroom Ideas

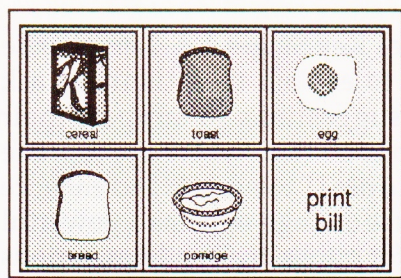
by Margaret Still : Still Educating



Our Calculator

Part of the aim of the IT curriculum is simply learning about using the computer itself - becoming familiar with the hardware, software and how they are used around us. Children soon learn that there are different ways of accessing their computer - switches, joysticks and concept keyboards. Much of the early learning software supports alternative means of input. Some programs, like the rolling display of *Garden Birds* on the Mac *Just Pictures* disc from SEMERC, can be operated by spacebar, concept keyboard, switch or touch-screen all at the same time! Most programs, however, are likely to need re-configuring to accommodate different means of input.

The concept keyboard can also be used to emulate some of the IT applications found in a child's everyday world. Discussions can be encouraged which deal with the effects of the computer in both the economic and social aspects of our lives.



Breakfast Café

Make use of the computer and the concept keyboard in "real-life" situations. In the classroom where a shop, office, bank, estate agents, café or leisure centre has been set up, use the overlay to produce the bill, order, ticket etc.. A useful program is *Big Calculator* which turns the whole computer screen into a keypad operated from an overlay.

Let the children look for keypads at cash points, fast food outlets, in museum information displays and so on. They can design their own keypads too for a range of purposes (Design Technology) and a selection of these can be turned into working overlays to go with databases or spreadsheets in the classroom.

Resources

This is only a brief catalogue of software designed specifically for concept keyboards covering a range of machines. There will be other favourite programs which are not included so ask around amongst your colleagues. As you will know from reading this booklet, concept keyboards also work with most regular software - we haven't included this as the list would go on for ever.

Retailers and manufacturers have extensive lists and these should tell you which of their products are for use with concept keyboard. Rickitt, for example do a separate concept keyboard supplement as well as showing clearly in their regular catalogue which products are suitable for concept keyboard use. You will also get advice from your local authority computer centre or NCET LINK-IT centre. Remember too that your

authority may have subsidies, bulk purchase schemes or licences for particular pieces of software so find out what is available from them.

Some of the programs for BBC and Nimbus 186 machines are no longer commercially available. They are included here so that teachers with access to these machines can beg, borrow or root them out of the back of old disc boxes.

One more useful source of information is The Concept Keyboard Company themselves. They have produced a number of information leaflets and a series of videos showing how concept keyboards can be used with Macintosh, IBM PC compatibles and Acorn computers. These are available from The Concept Keyboard Company or any Concept dealer (see inside back page).

Allwrite LETSS

Nimbus

Early wordprocessing software with integral concept keyboard access.

Amazing Maths

Cambridgeshire Software House

Archimedes

Practise the four rules in an entertaining if competitive environment.

An Eye for Spelling esm

BBC, Archimedes, Nimbus 186

An Eye for Spelling uses a "look-cover-spell-check" approach with words displayed in joined up script. There are three large word banks and spelling lists can be chosen according to the age of the speller, the letter groups to be worked on or on the teacher's own selection. The program also includes a monitoring system to check on individual problems.

Animated Alphabet Sherston

BBC, PC, Archimedes, Nimbus 186, Nimbus 286/386/486

An old favourite to reinforce alphabet recognition and initial letter sounds. Teachers can choose the letters they wish to appear and configure the program to present them randomly or in alphabetical order.

Big Calculator 4Mation

BBC

This program displays a screen sized calculator which can be used via a concept keyboard. Children or teachers can design and save new layouts. It provides a good introduction to calculator work, as well as opportunities for extension activities. The size and method of operation make it useful for group work too.

Caption NCET

BBC

A program which allows children to wordprocess on a graphic screen.

The full package comes with a variety of activities and the ability to do-it-yourself. Run-time versions such as *The Very Hungry Caterpillar* and *Christmas Caption* may also be in your cupboard.

Choices Widgit Software

Archimedes

Lots of early graphic number and reading activities - Odd One Out, Sorting, Matching, Jig-Saw, Sequencing and so on. The program comes with lots of activities and pictures ready for use but teachers can add their own graphics and make more of their own games.

Colourcopter esm

BBC

Seven early learning programs with useful teacher options.

Compose (Special Needs version) ESP

BBC

A lovely program which represents

Resources ...

musical phrases by pictures. It comes with a number of different sets of musical styles/pictures. These can be sequenced, played and rearranged at will. The special needs version added concept keyboard access.

Compose World ESP

Archimedes

Leads on from the BBC program. There are additional features such as the possibility of easy inclusion of children's own pictures, harmony, percussion tracks and MIDI output.

!Con-text

Hampshire Microtechnology Unit

Archimedes

A straightforward program for producing text overlay files. It features a "sticky shift" facility as well as options for auto-spacing and multiple overlay operation. It is available in two versions for Parallel (User Port) or Serial connection.

!Con-verse

Hampshire Microtechnology Unit

Archimedes

!Con-verse comes with its own microphone. Sounds are added and played back via the concept keyboard together with a text display on screen. The program has been designed to be very easy to use. Children can use it in the same way as Language Master equipment, with applications for early readers, bilingual teaching and modern foreign language work.

Concept

ILECC (now from LETSS)

Nimbus

Designer to create overlay access to other Nimbus software. Not for beginners!

Concept Designer Longman Logotron

Archimedes

Concept Designer makes overlay files which can be used with any standard Archimedes program. Overlays can be "layered" so that huge *Touch Explorer / List Explorer* activities can be designed. It also supports mouse and function key emulation.

Concept NCET

BBC

An overlay designing program, needed for *Turtle Concepts*, *Infant Tray/Concept* or *Caption*. It can also be used for making overlay files for use with other wordprocessors such as *View*.

Concept Keyboard Match NW SEMERC

BBC

A neat program which makes computer 'Snap' out of any *Prompt/Writer* overlay. By creating a variety of paper overlays (pictures, initial letters, quiz questions, French translations) an apparently simple activity can be used and enjoyed in many different ways.

Concept Kids Sherston

BBC

An activity and adventure program making full use of the concept keyboard. The pack includes a full colour children's book as well as teacher materials and overlays.

Conform NW SEMERC

Archimedes

A very simple overlay designer for Archimedes series machines which not only allows overlay files to be designed but also prints the overlay itself, pictures and all. The printout is in either A3 (enlarge it on your photocopier) or old A4 formats

Connections Sherston

BBC, PC, Archimedes, Nimbus 186, Nimbus 286/386/486

Connections reinforces alphabet recognition and initial letter sounds. Teachers can choose the letters they wish to appear and configure the program to present them randomly or in alphabetical order.

Count with Blob Widgit Software

BBC, Archimedes, Nimbus

An essential suite of early years number programs from single-switch counting to remembering numbers of items on a shopping list. The disc can be set up in literally hundreds of ways to create lots of different activities accessed in a variety of ways.

Eautun Hereford and Worcester

BBC

A huge, attractive pack of introductory French resources based around the people, places and activities in the little French town Eautun.

First Class Squeeze Software

Mac

Colourful nursery/infant early learning activities. Requires *HyperCard*.

Folio

esm

BBC, Archimedes

A widely used and flexible wordprocessing program with its own integral overlay designer. The program also has a range of page layouts and print styles as well as Punjabi, Gujarati, French and German versions.

Freddy Teddy's Adventure Topologika

Archimedes

A variety of number and reading tasks get Freddy through the woods to his picnic.

From Pictures to Words Widgit Software

Archimedes, BBC, PC, Nimbus

A suite of language and literacy programs providing a route from initial letter matching to free writing via word recognition and spelling. The program has a library of 300 pictures which are linked with particular words. These are then used in activities which can be set up for individual children or for specific topics and skills.

This program has the simplest, neatest overlay editor ever!

There are additional picture libraries including Christmas, Animals, and the complete Rebus glossary. New picture libraries can be created with the picture editor giving the program limitless scope.

Full Phase NW SEMERC

Archimedes

A wordprocessing environment which supports facilities such as block move, search and replace, rulers and so on. *Full Phase* also has integral synthesised speech and a notepad facility. *Touch Explorer*-type activities can be designed and pictures can be sent to the notepad

via the concept keyboard. These can be dragged onto the main text area and integrated with the child's writing.

Go Go! NW SEMERC

Archimedes

A turtle graphics program designed to be accessible to children at a range of stages from "one key control" to "if ... then ... else" statements. Commands are all configurable, and overlays are included which support progression. The sound and graphic capabilities of the machine are used to good effect. Backgrounds, for example children's own computer art or scanned maps, can be included and the pointer can be any *!Draw* file.

Graph Plot NW SEMERC

Archimedes, PC

Simple data collection from the concept keyboard. The data is displayed graphically as soon as it is entered as a bar chart, pie chart or a line graph. It also supports negative numbers and decimals. Overlays are included but you can also make your own with one of the regular overlay designers.

GridIT Widgit Software

Archimedes

Designed to encourage spatial awareness, early number skills and logical thinking through maze games. The program comes with a range of ready-made activities but with the opportunity to do-it-yourself. You can even use your own, or better still the children's sounds and graphics.

Hands on Spelling ESM

BBC

The computer builds a word around a chosen letter pattern and then displays it in joined up writing for the child to copy. The child stays in control of the activity selecting words either with the keyboard or from an overlay.

HyperCard Developer Kit Concept

Mac

Adds concept keyboard access to *HyperCard*. It's extremely effective but not for the fainthearted or newcomers to *HyperCard* programming.

In Touch Hampshire Microtechnology Unit

Archimedes

A concept keyboard package with five modes of operation - Touch and See, Touch and Match, Touch and Build, Touch and Return and Touch and Scan. It offers early learners opportunities for picture/colour / letter / number recognition as well as matching, memory and sequencing tasks. All the activities can be enhanced with the addition of sound samples.

Infant Tray /Concept NCET

BBC, Nimbus 186

One of the best programs for exploring text at all levels from early readers onwards. The text is gradually revealed as children use inferential skills to hypothesise about the missing letters. There are options for displaying text in a variety of ways. If teachers want to make their own activities they will need *Concept*.

Resources ...

Informax SEMERC

Archimedes, PC, Mac

Informax is available for all the major platforms and allows users to create their own overlay files including keyboard shortcuts and layered overlays. It has been specially designed to create overlays for the new high resolution keyboard (Informatrix) but will also produce overlays for ordinary concept keyboards.

Intercept Mikrodaisy (from TAG)

Archimedes, PC, Mac

Intercept is available for all the major platforms and allows users to create their own overlay files including keyboard shortcuts and layered overlays. A run-time version exists too, so you will find that some programs come with *Intercept* files ready for you to use.

Mac Designer Concept

Mac

Designer allows users to create their own single layer overlay files. These are interchangeable with *Intercept* files.

List Explorer NCET

BBC

Overlays give a pictorial interface for the interrogation of specific databases. The program comes with several ready made files and overlays (planets, faiths and children) but the best ones are those that teachers and children create themselves.

Numbercopter esm

BBC

Early number programs with access from the concept keyboard.

PenDown Longman Logotron

BBC, Archimedes, Nimbus 186

PenDown provides a comprehensive word processing environment for younger users. Facilities in the earlier versions included Dictionary, Planner, a range of fonts and a font designer. The newer version on the *Archimedes* has all the features that we have come to expect in adult wordprocessors. A version which includes speech synthesis is also available as *Talking PenDown* and has proved extremely useful in remedial programmes for children with reading and writing difficulties.

Podd esm

BBC, PC, Archimedes, Nimbus 186, Nimbus 286/386/486

Another favourite now versioned for a range of machines. Guess what Podd can do or instruct him from an overlay. "Podd can pop" was always a good one!

Prompt/Writer NCET

BBC, Nimbus

Two early writing environments for children on school computers. Type in single or double-height text and print out your work. The disc has as an integral overlay designer.

Proteus Scenarios NW SEMERC

BBC

Titles include *Toycupboard*, *Moving In 2*, *Elmtree Farm* and *Our School*.

Use the overlays to create and manipulate scenes - "Put the cow in the field" "Put the lollipop lady on the crossing" "Make it winter"! The discs come with overlays at three levels from simple pictures to sentence sequencing but you can create more of your own. The standard vocabulary have synonyms added to include the children's own words and names.

Scenario Key NSNSU (from Keyboard Technology)

PC, Archimedes, Nimbus 186, Nimbus 286/386/486

Scenario Key is needed to run NSNSU's series of Scenarios. These include *Getting Dressed*, *In the Kitchen*, *My Island* and *Watch Me*. The Key disc comes with *Aquarium* and *Old Peat Works Farm* already to run. These scenarios work in the same way as the BBC originals but reflect the additional graphic and vocabulary capabilities of newer machines.

ScreenPlay Widgit Software

Archimedes

Create an animation with *ScreenPlay*'s own backgrounds, pictures and sounds or use your own. Add text for a multimedia single-switch storybook.

Stylus MAPE

BBC

An excellent first word processor which SPEAKS. Work can be printed out in three sizes of three type styles as well as a border font. The overlay designer is especially quick and easy to use.

Stylus 2 MAPE

BBC, Nimbus 186

Stylus with cut and paste instead of speech. Work can be printed out in three sizes of three type styles as well as a border font. The overlay designer is especially quick and easy to use.

Switch On

Switch On Travel

Switch On Actions

Switch On Zoo Brilliant Computing

BBC, PC, Archimedes

Attractive and motivating programs with bold graphics and good sound to encourage picture building and picture matching.

The Puddle

The Wardrobe Topologika

Archimedes

Sort out indecisive Freddy Teddy's clothes. Programs, as well as poem and song books, to encourage visual discrimination, sequencing and visual memory for pre- and early readers.

The Playground Topologika

Archimedes

A series of activities to develop Logo skills. Freddy Teddy's antics in the park can be controlled in real time mode or procedures can be built via the concept keyboard.

Touch Explorer Plus NCET

BBC, Nimbus, PC, Archimedes

Touch the concept keyboard to explore streets, facts, maps, pictures and so on. Store the messages and write more in a notepad, print your text when you need to. The program comes with a range of example files but full instructions to create your own tailored to your curriculum. Look out for lots of other third party curriculum materials made with *Touch Explorer Plus* - *Rushall Farm* is a favourite.

Turtle Concepts NCET

BBC

Works in conjunction with *Dart* or Longman Logotron's *Logo* chip to add a concept keyboard facility to regular Logo activities either on-screen or with a floor turtle. A progression of useful overlays comes with the package as well as the facility to make your own.

WHOW Newman College

Nimbus 186

This first word processor

incorporates an easy-to-use overlay designer as well as an on-screen wordbank.

Windows Concept Advisory Unit: Computers in Education

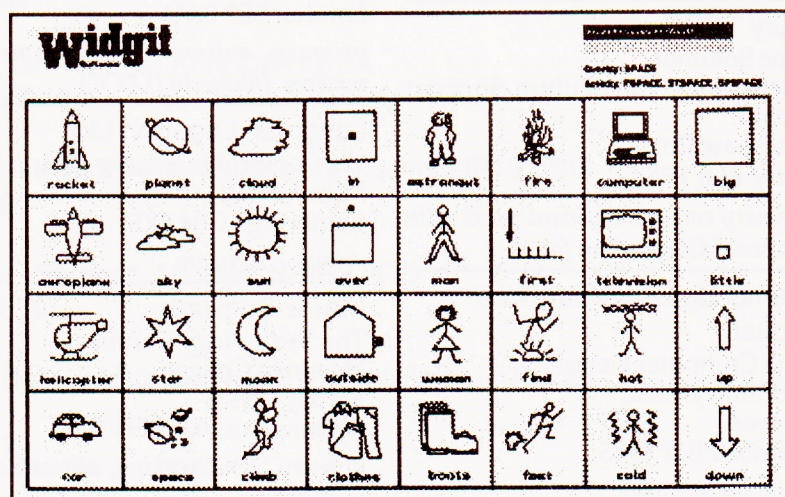
PC (Windows)

An overlay designer for *Windows* machines. Anything that can be done with the keyboard can be done with an overlay! Pictures and sounds can be accessed as well as keyboard short-cuts and mouse movements.

Writing with Symbols Widgit Software

PC

A "symbol" processor. This program allows text to be entered via the regular or a concept keyboard adding the appropriate symbol above the word. This provides support for early readers and writers as well as children for whom English is a second language. The program allows teachers to produce high quality printed output for displays, reading books and other learning materials.



From Pictures to Words, Widgit

Useful Addresses

4Mation

14 Castle Park Road
Whidden Valley
Barnstaple EX32 8PA

primary software

Acorn Computers Ltd

Fulbourn Road
Cherry Hinton
Cambridge CB1 4JN

Archimedes hardware producer, some information

Advisory Unit : Computers in Education

126 Great North Road
Hatfield
Hertfordshire AL9 5JZ

primary software (PC)

Apple Computer UK Ltd

6 Roundwood Avenue
Stockley Park
Uxbridge UB11 1BB

Mac hardware producer, some information

Berkshire IT Centre (BITT) & Chris Hopkins

Easthampstead Park EC
Easthampstead Park
Wokingham RG11 3DF

primary software

Brilliant Computing

PO Box 142
Bradford BD9 5NF

early years software

Bury TCSC

Jane Solomon
Technology Curriculum Support Centre
Walshaw Road
Bury BL8 1RN

primary concept keyboard packs with National Curriculum focus

Cambridgeshire Software House

The Computer Centre
8 Bramley Road
St Ives
Cambs PE17 4WS

primary software

Concept Keyboard Company

Unit 6 Moorside Road
Winnall Industrial Estate
Winchester SO23 7RX

concept keyboards and overlay design software

esm

Duke Street
Wisbech
Cambridge PE13 2AE

primary software

Hampshire Microtechnology Centre

Connaught Lane
Paulsgrove
Portsmouth PO6 4SJ

primary software (Arc)

Hereford and Worcester

Jayne Jakeman
Hereford Education Centre
Blackfriar's Street
Hereford
HR4 9HS

concept keyboard software

Keyboard Technology Ltd

Unit 3
Gordon Road
Meadow Lane Industrial Estate
Loughborough LE11 1JX

primary software

LETSS

The Lodge, Crown Woods School
Riefeld Road
Eltham
London SE9 0AQ

primary software, peripherals & services (formerly ILECC)

Longman Logotron Ltd

124 Cambridge Science Park
Milton Road
Cambridge CB4 4ZS

primary software

MAPE Software

The Technology Centre
Newman College
Bartley Green
Birmingham B32 3NT

primary IT networking, software and publications

Martineau Education Centre

Balden Road
Harborne
Birmingham B32 2EH

Nimbus software

NCET

Milburn Hill Road
Science Park
Coventry CV4 7JJ

publications, software, networking

NSNSU

Keyboard Technology
Unit 3
Gordon Road
Meadow Lane Industrial Estate
Loughborough LE11 1JX

primary software (Arc and PC)

Research Machines

New Mill House
183 Milton Park
Abingdon
Oxon OX14 4SE

Nimbus hardware and information

NW SEMERC

1 Broadbent Road
Watersheddings
Oldham OL1 4HU

software, peripherals

Sherston Software

Swan Barton
Sherston
Malmsbury
Wilts SN16 0LL

primary software

TAG Developments Ltd

19 High Street Gravesend
Kent DA11 0BA

primary software, all platforms but especially Mac

Topologika

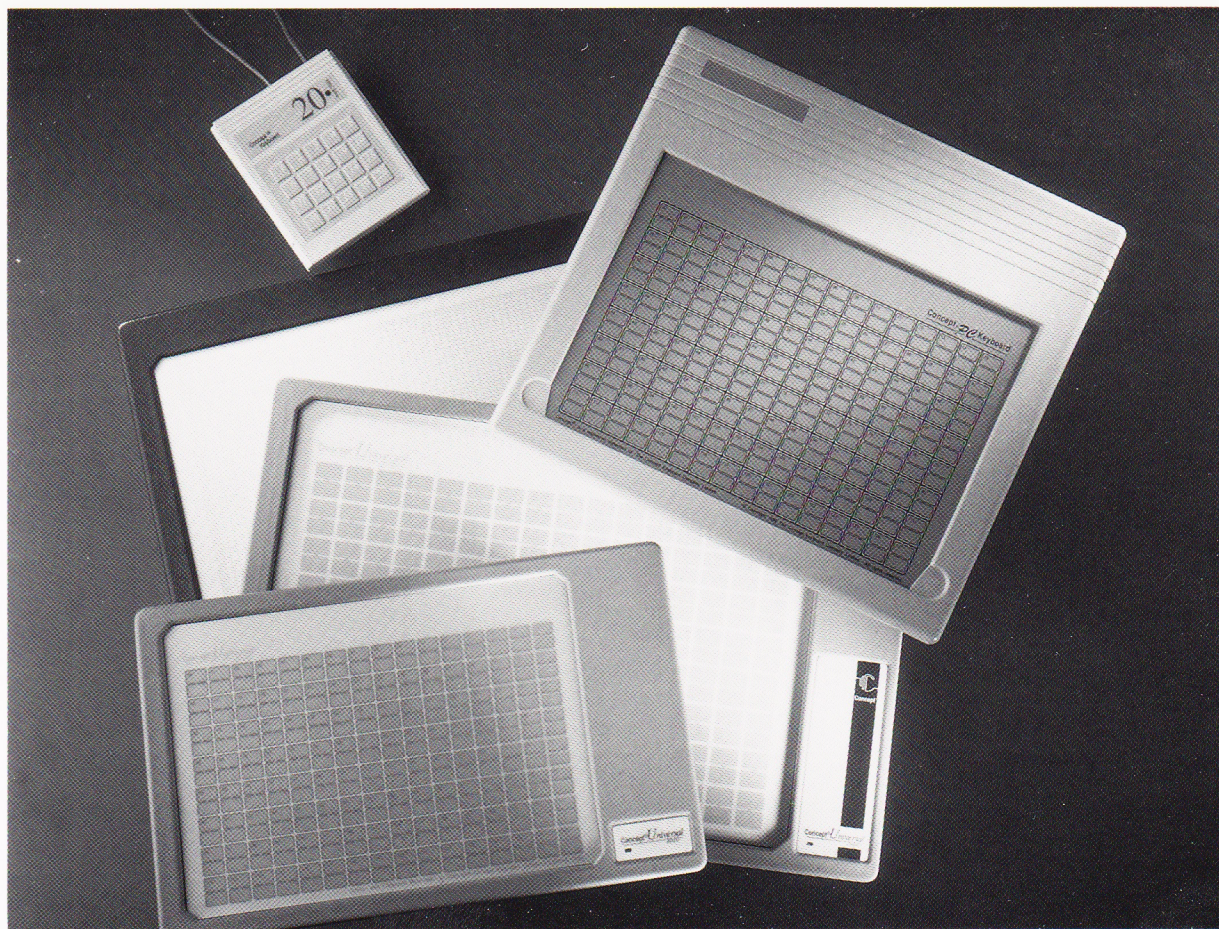
PO Box 39
Stilton
Peterborough PE7 3RL

primary software

Widgit Software

102 Radford Road
Leamington Spa
Warwickshire CV31 1LF

primary software



Concept TM products are available from:

The Concept Keyboard Company Limited, Moorside Road, Winnall Industrial Estate,
Winchester, Hants, SO23 7RX Tel: 01962 843322 FAX: 01962 841657

and from the following registered dealers:

Eltec Computers, 2-8 St Martins Avenue, Fieldhead Business Centre, Bradford BD7 1HR
Tel: 01274 309999 FAX: 01274 722680

Lansdowne, Alder Hills Park, 16 Alder Hills, Poole, Dorset BH12 7AR Tel: 01202 743336 FAX:
01202 737411

NW SEMERC, 1 Broadbent Road, Watersheddings, Oldham OL1 4HU
Tel: 0161 627 4469 FAX: 0161 627 2381

TAG Developments, 19 High Street, Gravesend, Kent DA11 0BA
Tel: 01474 357350 FAX: 01474 537887

Lindis International, Wood Farm, Linstead Magna, Halesworth, Suffolk IP19 0DU
Tel: 01986 785476 FAX: 01986 785460

Action Computers, 12 Windmill Lane, Southall, Middlesex UB2 4QD
Tel: 0181 813 8131 FAX: 0181 571 6889

CEM Computers, Victoria Business Park, Westbank Road, Belfast Harbour Estate,
Northern Ireland BT3 9JE
Tel: 01232 556677 FAX: 01232 556678

3SL Ltd, Brook House, 501-511 Crewe Road, Wheelock, Sandbach, Cheshire CW11 0QX
Tel: 01270 761516 FAX: 01270 768200

MICROSCOPE -

MAPE
(Micros And Primary Education)
MAPE...

is a national organisation
whose main aim is to encourage the effective use
of information technology across the primary curriculum.

MAPE...
has registered charity status
and is organised and administered by a thriving network of practitioners,
providing members with both national and regional support.

MAPE...
provides its members with a range of publications.
Every term there is an edition of the house journal - MICRO-SCOPE -
and, in addition, Specials such as this are regularly produced.
Members also receive software, at no cost.

If you would like to know more about MAPE, please write to
Gloria Jones, The Old Vicarage, Skegby Road,
Normanton-on-Trent, Notts, NG23 6BR



Price: £5.00

Published by Castlefield (Publishers) Ltd, Castlefield House,
12 Headlands, Kettering, Northants NN15 7HP

NEWMAN COLLEGE with MAPE