IMPACT

MICROELECTRONICS AND PUPILS WITH SPECIAL EDUCATIONAL NEEDS

SUPPORT MATERIAL FOR THE IN-SERVICE TRAINING OF TEACHERS

SUPPORT MATERIAL FOR USE WITH CONTENT-FREE SOFTWARE

Edited by
John Garrett and Bob Dyke

Microelectronics and pupils with special educational needs

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edited by
John Garrett *and* Bob Dyke

with illustrations by Pat Clarke

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Contents

Series preface

Packages in the Impact series are designed to enable materials generated from short courses in special educational needs to be made available to a wider audience. The materials have been developed by the course tutors with assistance from Project Impact, a research project funded by the Department of Education and Science and concerned with the development and evaluation of short courses. Each course has been evaluated twice, enabling materials to be modified in the light of the findings from the first evaluation. This package therefore contains the materials included in the second evaluated run of the course and further modified in response to feedback from course participants.

The Impact series covers a variety of topics relating to special educational needs and, although primarily aimed at educational staff in ordinary and special schools, it is likely to be of interest to many other professionals including health, social services and voluntary agency personnel. The materials are intended to be used as part of tutor-led courses and are therefore aimed at those with responsibility for staff development, but may also provide reading materials of more general interest. It should be acknowledged that discussions in a tutor-led course will help the participants towards a deeper understanding of the issues dealt with in the Impact packages.

Abbreviations

ACE	Aids for Communication in Education
CET	Council for Educational Technology
CPVE	Certificate of Pre-Vocational Education
FE	Further Education
IT	Information Technology
MEP	Microelectronics in Education Programme
MESU	Microelectronics Educational Support Unit
NFER/FEU	National Foundation for Educational Research Further Education Unit
SEMERC	Special Education Microelectronics Resource Centre
SEND	Special Educational Needs Database
TTNS	The Times Network for Schools

Introduction

This book contains examples of ways microcomputer programs might be used to teach across a range of curriculum subjects. The original ideas and materials were produced by practising special educators to support specific programs.

It is a practical section aimed at illustrating how a range of flexible programs might be used in the classroom. It includes examples of adventure, word-processing and framework programs.

Other suggestions and ideas are constantly being generated by former course members and others. The Special Education Microelectronics Resource Centres (SEMERCs) have examples.

As this section may be freely copied for non-profit-making educational use, the materials may form the basis of handouts to be used, and further developed, by course members.

Mary H. Hope

CHAPTER 1

Using adventure games in the classroom

Adventure games are fun. Teachers like them, educational theorists like them and, most importantly of all, the children think they are great. Adventure games are a bit like De Bono's lateral thinking exercises – if you are good at thinking of 101 uses for a brick, you are probably the sort of person who will get some inspired results from adventure games.

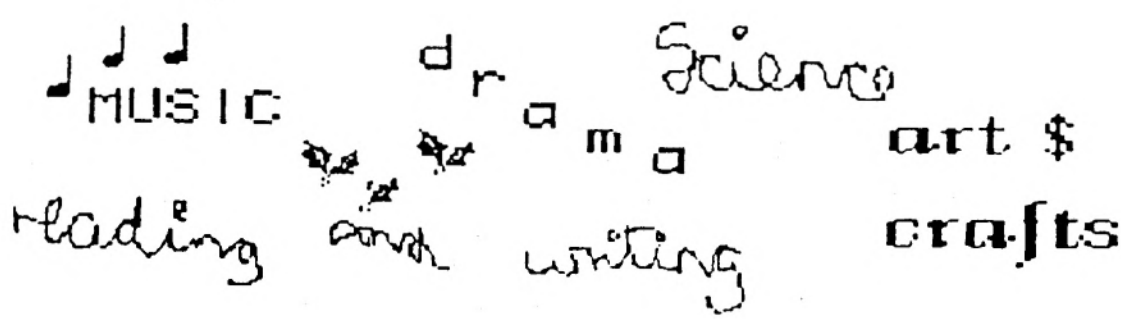
The secret of getting the most out of adventure games is to use them as the starting point. They act as the stimulus to get the children involved. Almost always they should be used with groups and almost always a lot of the work will be done away from the computer. Having laid down these absolutes, after that anything goes. The work that can be derived from some of the best adventure games is limited only by the time, energy and imagination of the teacher. Some teachers of children with moderate learning difficulties have spent up to a term on all the activities arising from one program.

1.1 The three main approaches to using adventure games

There are three main approaches to using adventure games, although of course there is overlap between them. The classification is to help think about how to use them in the classroom. They can be used as a stimulus across the curriculum, linked up with other computer programs or you can write your own.

1.1.1 *As a stimulus across the curriculum*

This use has been very well developed within the primary sector and is easily transferable to special needs schools. It appears not to have been implemented to the same extent in remedial support units in secondary schools.



With enough imagination there are few parts of the curriculum that adventure games cannot reach! The value of the computer program is that it engages and gets the children started. Once they are started, the periods at the computer will probably be interspersed with long periods working away from the terminal. There is always a place for work cards!

Granny's Garden Part 1
Write a story about a witch
Start your story:
One day I saw a witch and . . .

Granny's Garden Part 1 Teacher's card
Suggestions for art/craft work Large group poster or picture showing:
a) the magic tree b) the cave c) the creatures d) the magic toadstool e) the witch, etc.

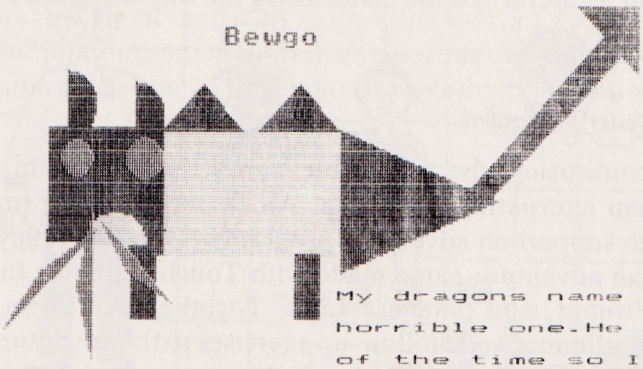
Chapter 2 is written by Margaret Murphy, who was the MEP Primary Co-ordinator in Northern Ireland. This gives some wonderful examples of work done by children using Granny's Garden.

Although Granny's Garden tends to be the adventure game that everyone refers to, there are others. Some that offer the potential to stimulate work across the curriculum are detailed below.

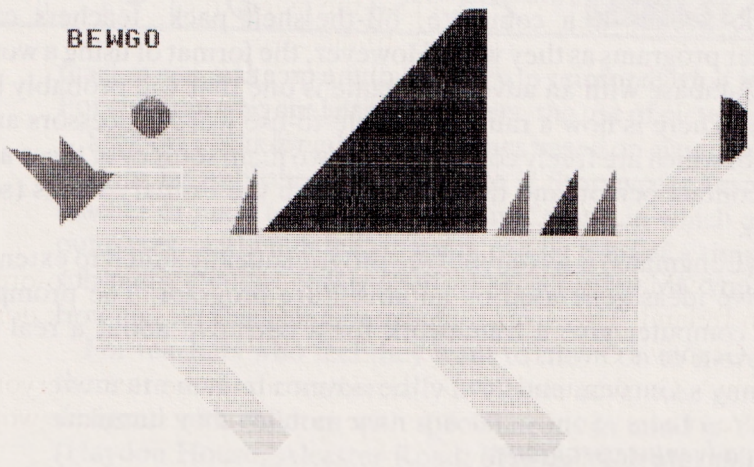
a. *Dragon's World* (4mation Education Researches, Linden Lea, Rock Park, Barnstaple, Devon EX32 9AQ.)
   This is from the same company that produced Granny's Garden and has been well received. It comes with lots of support material and ideas for classroom use. There is a useful section on music creation near the end of the program.
   (Some work done by children with moderate learning difficulties in Ian Butterworth's class in Wiltshire is shown below.)

b. Spacex (4Mation)
   In this program the children are space scientists exploring the planet Persephone. When they are about the leave they discover that part of their equipment is missing. The task is to retrieve this.

c. *The Lost Frog from the Primary Project.*
   This is supplied with the Infants and First School Pack. This was distributed to all Primary and Computer Advisers in LEAs and the software is freely copiable for educational purposes. Contact your adviser for further information. The object is to search for a lost frog and bring it back to the garden. It is designed for average seven to eight-year olds. It uses only text 'so that the children are encouraged to read and talk, to write and paint, and generally to let their imaginations run riot'.
   Also on this disc is Treasure Hunt which is a very simple adventure game intended for infants. The task is to find treasure that is hidden. There is a list



My dragons name is called Bewgo the horrible one.He gets upto tricks all of the time so I tell him not to. And sometimes he gets his tail and strangles me.I know how he gets up to tricks. He does it without me looking.



Dragons

Dragons like keeping pretty ladies.The dragons tail is pointed.Dragons like to kill people. Dragons like breathing fire. Dragons like gold.

of equipment that might be useful and the pixies along the way will swop the objects.

1.1.2 *Linked up with other computer programs*

This of course does not exclude using adventure games across the curriculum. It is an additional, rather than alternative, approach. An example of how programs can be interlinked to support an adventure program is Geoff Smedley's Magic Seeker. This links an adventure game made with Touch Explorer to a simple word processor, Prompt, and database Lists. Together they form a carefully structured set of preliminary and follow-up exercises to the adventure. The Magic Seeker Pack is available for £2.80 plus £1.10 postage and packing from Elm Bank Teachers Centre, Mile Lane, Coventry CV1 2LQ. The discs are not supplied with the pack; they are available from the LEA contact person. Contact your SEMERC for their name and phone number.

Whereas Magic Seeker is a complete, off-the-shelf pack, teachers can obviously use other programs as they wish. However, the format of using a word processor and a database with an adventure game is one that will probably be adopted by many. There is now a range of simple-to-use word processors and databases, many of which are freely copiable. The two main sources of these are the LEA-based contact person and the software from the Primary Packs (see above for details).

Other Worlds (Longmans) is a content-free program ideally suited to extending the imaginative ideas generated by an adventure program. The prompts provided by the computer give a framework for a narrative about a real or imaginary world.

1.1.3 *Writing your own adventure programs*

Although there are several framework programs that will help you to write your own adventures, this is not an activity for the faint-hearted. Nor is it likely that you will want to do this until you have played around with a few 'ready to use' adventure games. Writing adventure games is not necessarily difficult but it takes more time and energy than running someone else's program! Nevertheless it may be worth the effort to produce games helpful to pupils tackling a secondary curriculum.

The simplest first step is to use a program such as Touch Explorer. Below is a simple overlay prepared by a teacher.

When the child presses the picture the following messages are shown on the screen:

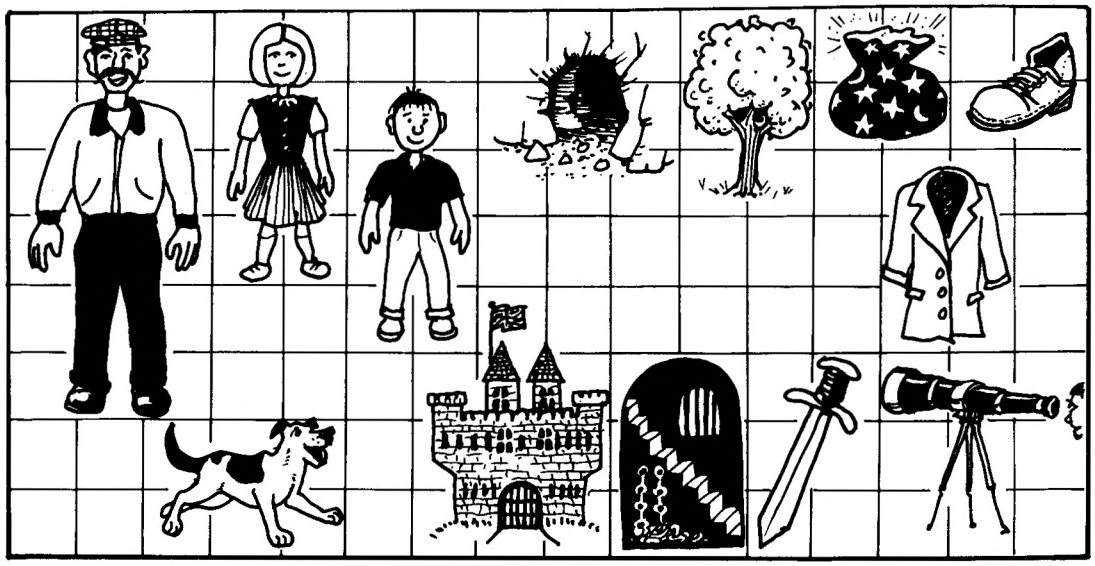
The Man: 'I am Mr Yog. I live by the sea. I like telling stories to Doreen and Cyril. I often go for long walks. Sometimes we find very interesting things.'

The Boy: 'It's me, Cyril. I have an ugly sister called Doreen. Sometimes we have fun when we go out for walks with our friend Mr Yog and his dog Woof.'

The Cave: 'You have found the hidden cave deep in the heart of the forest. Mr Yog has left his telescope in the cave. It is under an old coat.'

The Sword: 'Well done, you have found the silver sword. Mr Yog will be pleased. The silver sword is worth a lot of money.'

This is not a sophisticated adventure game, but it has the advantage that the



teacher can make up a suitable story to reinforce what is currently being taught. For children who are hesitant readers, the use of pictures can be very reassuring.

Support packs for adventure games based on classroom experience are beginning to be published. An example is Storywriter (esm). Storywriter enables teacher or pupil to write a 'branching' story, in which each page may have two outcomes. Although the program can be used at a simple level, more complex sub-plots can be constructed. The planning of 'routes' through the story becomes an absorbing exercise.

For teachers who feel they want to move on to more elaborate adventures, there are several commercially available adventure generators. One originally designed with children with special needs in mind is Your Adventure by LTS (Haydon House, Alcester Road, Studley, Warwickshire B80 7AP). Although this comes with two adventures it can also be used to generate new ones. The child has to answer the questions successfully before getting to a cave. When a new adventure is generated the graphics remain and the questions change. Because of this the uses for it are limited.

A more flexible, but more difficult to use, program is The Last Adventure also published by LTS. There are no graphics.

Another adventure generator has been produced by the AUCBE, Endymion Road, Hatfield, Herts. This is called Quest Adventures. To run it you need Quest and should ideally be familiar with the AUCBE style of program (i.e. can you cope with 'infile' instead of 'save'?)

In summary, it is relatively easy to produce a very simple adventure using a program such as Touch Explorer and Story Writer. With other generators you have to accept the loss of graphics and be prepared to do battle with the programs that are available.

Margaret Murphy, MEP Primary Co-ordinator, Northern Ireland
(Reproduced from Micronet *(Northern Ireland MEP), Issue 7)*

CHAPTER 2

Computer adventure games in the primary school

In some primary classrooms today there are many resources for stimulating the child's imagination. Some of these are:

Visual aids/posters
Poems/stories
Music/drama
Actual experiences, e.g. walks in parks
Microcomputer.

I have included the computer as I believe that, by using the appropriate software, it can prove to be another extremely valuable resource which the teacher can use to motivate children and stimulate their imagination.

2.1 What are adventure games?

An adventure game stimulates a situation of the imagination, e.g. Granny's Garden, in which the children are whisked away to the Kingdom of the Mountains and placed in a situation where they help to locate missing children who have been hidden by a witch. They have many obstacles to overcome as they investigate the witch's cottage, travel through the giant's garden and explore the City of the Dragons. Another example is Spacex, in which the children are space scientists exploring the vegetation etc. on the planet Peresphone and when they are about to leave they discover that vital pieces of equipment essential for their return journey have been stolen by the inhabitants. The children work as a team exploring the planet in an attempt to retrieve their equipment.

2.2 How can they contribute to language development?

Computer adventure games offer great potential in developing communication skills such as:

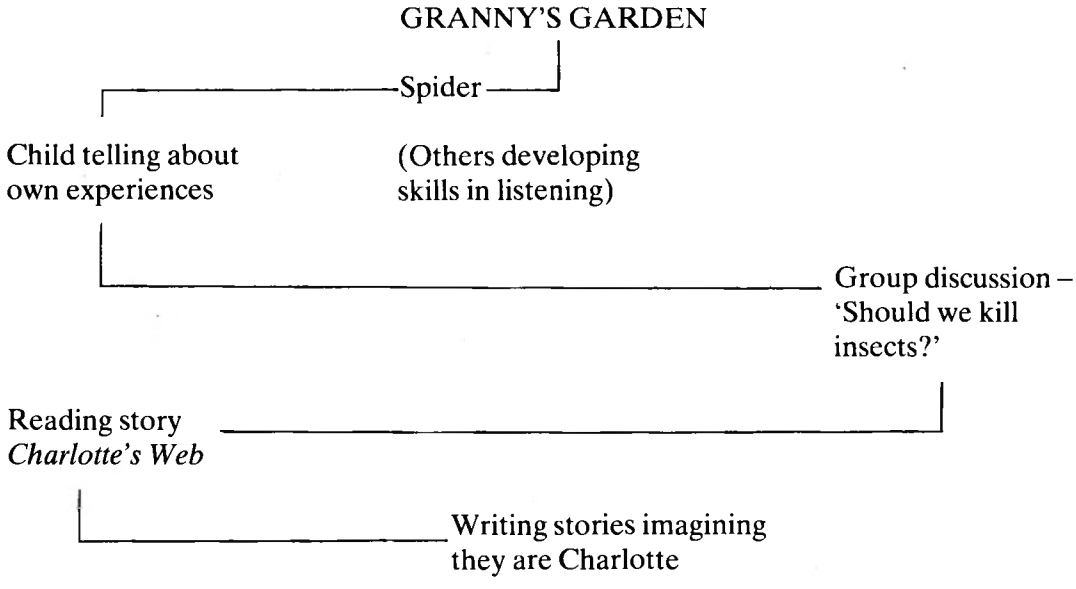
Talking
Listening
Reading
Writing.

These programs demand a high degree of logical thinking and, while the children make decisions as to which course they wish to take, a great amount of conversation is generated.

I have overheard various conversations by young children using Granny's Garden, e.g. in the course of the program they are introduced to a friendly spider and one six-year-old talked about how she felt when she found a spider in her bedroom. This led

on to a discussion about whether or not we should kill spiders or insects, which in turn led on to wasps and how it felt to be stung by one and was further developed by them writing a story about how they imagined they would feel if they had to live their life as a wasp. Later in the week a child brought in a copy of *Charlotte's Web* and I read it to them during the term.

This example shows how, from one incident at the keyboard, a range of activities can evolve.



2.3 How can these programs be used with a whole class?

What most teachers usually want to know is how to share *one* computer around a class of about thirty children, so what I hope to do is to explain how I have used it with Granny's Garden and leave you to decide if my method fits in with your teaching style and classroom organisation.

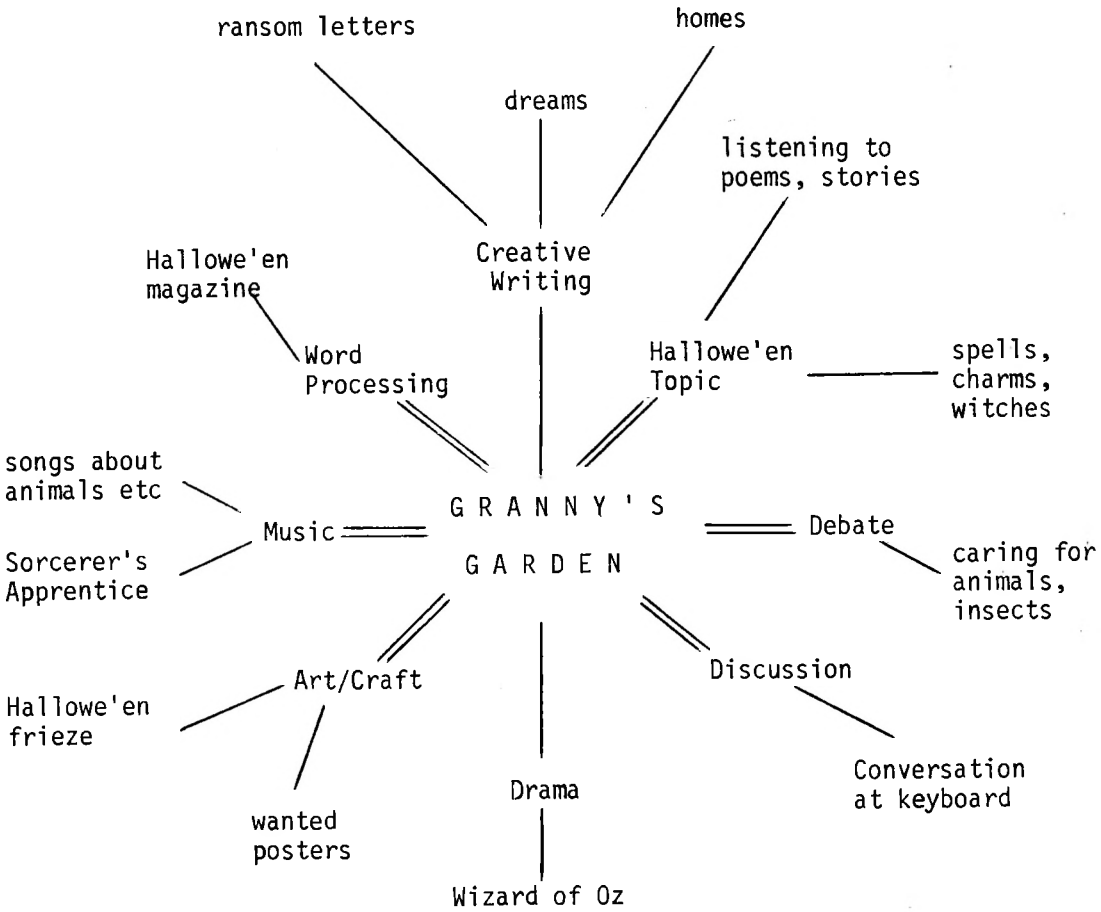
I used the adventure game as a starting-off point to stimulate and motivate the children and the first part of the program was done as a whole-class activity. The children sat in a large group around the computer and I told them the story of how the witch had kidnapped the children and hidden them in the Kingdom of the Mountains. I asked them if they would like to help find them, and so the adventures began. We made decisions as to whether we should take the apple off the tree, which room we would go into next, etc. and, as you can imagine, a tremendous amount of discussion was triggered off amongst the children.

This whole-class approach was used only to introduce the adventure and any further keyboard activities were carried out in small groups. Various language activities evolved – samples of which can be seen later in this article. Some of these were done as class activities and others as group activities, e.g. the children wrote a letter from Raven as a class activity while a small group worked at the keyboard, the Wanted posters were done as a class activity in Art while another small group continued with the adventure and dramatic activities took place in the assembly hall and involved no keyboard work.

In other words, while the majority of the class was carrying out activities suggested on

the worksheets, a small group was working away at the computer. I find that adventure games and simulations provide the teacher with the opportunity to involve almost every aspect of the primary curriculum and leave options for individual teachers to tailor them to suit the interests and needs of their particular class.

2.4 **How a computer adventure game can contribute to and support the primary curriculum**



2.4.1 *Creative writing*

Here is a letter which Raven has written to Esther.

Raven's Rest
The Palace

Dear Esther

I was very sad when the King and Queen told me you have been kidnapped and are being kept prisoner by the witch in the woodcutters cottage. Today I met some children who are going to try to find and rescue you.

Perhaps you could write a letter to me telling me how you are and what it is like being kept prisoner. Does the witch give you good food or is she cruel. Has she set any traps in the cottage? Tell me about them.

From your friend
Raven

'Sweet Dreams' by Ogden Nash
I wonder as into bed I creep
What it feels like to fall asleep
But I've told myself stories, I've counted sheep,
But I'm always asleep when I fall asleep.
Tonight my eyes I will open keep
And I'll stay awake till I fall asleep,
Then I'll know what it feels like to fall asleep.
Asleep,
Asleep,
Asleep.

Do you ever dream when you go to sleep? Write about a dream you have had which you would like to come true.

The City of Dragons was a beautiful city. Pretend that you go to bed and dream that you wake up in the City of Dragons. How will you escape?

Finish this story: I opened my eyes and stared all around me. What had happened? Where was I? My bedroom was no longer a bedroom – it was a large room with paintings of dragons on the walls and velvet cushions on the floor. What was once my bed was now an enormous chair. Where was I? Where were my toys? . . .

Hallowe'en – Charms and spells
All these charms and spells come from the days when many people believed in the power of witches.

People said these two charms to protect themselves:

Witch, witchy, I defy thee
Four fingers round my thumb
Let me go quietly by thee.

Matthew Mark Luke and John
Bless the bed that I lie on
Four corners to my bed
Five angels there lie spread
Two at my head and two at my feet
And one at my heart my soul to keep

This spell made the witch's broomstick fly. She said it three times.

Horse and hattock, horse and go
Horse and pellatis, ho! ho!

This is a spell a witch used to rouse storms:

I knock this rag upon this stone
To raise the wind in the Devil's name
It shall not lie until I please again.

Choose your favourite rhyme from these charms and spells. Write out the rhyme you choose and paint a picture to go with it. Make up a witch's spell, or a charm against witches, of your own.

2.4.2 *Project work – magic*

Sandra's seen a leprechaun
Eddie touched a troll
Laurie danced with witches once
Charlie found some goblin's gold

Donald heard a mermaid sing
Susy spied an elf
But all the magic I have known
I've had to make myself. Shel Silverstein

Do you really think Laurie danced with witches once?
Where do you think Charlie found the gold belonging to the goblin?
Which would you prefer to happen to you and say why:
1. See a leprechaun.
2. Touch a troll.
3. Dance with a witch.
4. Find goblin's gold.
5. Hear a mermaid sing.

Do you remember the pretty little cottage in 'Granny's Garden?' Do you know who owns it? Yes, that is right. The woodcutter owns the cottage. But where is he? No, he is not in the forest chopping wood. I shall tell you. . . .

A nasty horrible old witch called Winnie had kidnapped Esther and is keeping her a prisoner in the cottage.

Pretend you are the witch:
1. Tell me about yourself – hair, face, clothes, etc.
2. Describe the cottage – the rooms, stairs, curtains, furniture.
3. What magical spells can you do? Are they good or evil spells?
4. Write a story telling me how you caught Esther, where you keep her and what you are going to do with her.

2.4.3 *Investigation*

Me, I'm myself
No one's like me
And I'm not like anyone
I'm just myself
Little old me
I'm not quite sure what makes me different
No one's the same
Especially me Pat Kirk

Look very closely at your best friend. Draw this column on paper and fill it in.

Name	.....
Height	.....
Hair Colour	.....
Colour of Eyes	.....
Length of Hair	.....
Age	.....
Weight	.....
Clothes	.....

Now choose one of the six children who were lost in Granny's Garden: Esther, Tom, Anna, Clare, Jessica and Daniel. Fill in a similar chart for one of them.

By doing this survey on the rest of the class, you can find out how many children have blue eyes, etc.

2.4.4 *Nature study – Spiders*

Spiders are useful because they kill many insects. The garden spider is brown with a pattern on it like a white cross. Next to its jaw it has two sharp fangs. When the spider grips a fly with these fangs, poison flows into the fly's body and makes it helpless.

1. Why are spiders useful?
2. What are the spider's fangs?
3. How does the spider kill a fly?

Find out how a spider spins its web to trap flies and other food.

Draw pictures to show how a web is made. When you go into your garden or into a park, see if you can find a spider spinning its web.

2.4.5 *Music*

a. *The Sorcerer's Apprentice*

The Sorcerer's Apprentice is a story about the young servant of a wizard. One day, when the wizard is out, his apprentice tries out one of his master's spells. The spell begins to go wrong and the servant cannot stop it.

Find out what happens in the story.

Make up a story of your own about someone trying out a spell that goes wrong.

There is a famous piece of music by Paul Dukas called *The Sorcerer's Apprentice*. Perhaps you can play a record of it in your classroom.

b. *Instruments*

Explore all the percussion instruments in your classroom. Now use some of them to provide sound effects for a play you may have written for Hallowe'en, e.g. guiro (squeaking door) and kazoo (witch's voice).
Tape your performance on cassette.

2.4.6 *Drama*

a. *The Wizard of Oz*

The Wizard of Oz was a powerful wizard who lived in the land of Oz. He lived in a huge palace in the City of Emeralds. One day a little girl called Dorothy and three of her friends, Scarecrow, Tin Woodman and Lion, came to see the wizard. Perhaps you can find out the story of why they were looking for him.

You could make the story into a play.

Some songs have been written about the Wizard of Oz. You could use some of them in your play or you could make up other songs of your own.

b. *Magic words*

Cast
Powers
Spells
Spirits
Conjured

All these words have something to do with magic. Find out what each word means and mime them.

What other words do you know that have something to do with the magical power of witches, wizards and fairies?

Make a list of all the ones that you know. Here are some to start you off:

Elf
Sprite
Genie
Demon

Now try miming some words while the rest of the class try to guess them.

c. *The Ride-by-Nights*

Up on their brooms the Witches stream,
Crooked and black in the crescent's gleam,
One foot high and one foot low,
Bearded and cloaked and cowled they go.

This is the beginning of a poem by Walter de la Mare. He has written many poems about witches. Find some poems about witches and wizards. Make a collection of them and tell your favourite ones.

2.4.7 *Art – 'The Caterpillar'*

Brown and furry
Caterpillar in a hurry
Take your walk
To the shady leaf or stalk
Or what not
Which may be the chosen spot
No toad to spy you
Hovering bird of prey pass by you
Spin and die
To live again a butterfly.

What kind of house do you live in? Describe it to me? Is it large or small? How many rooms are there? Tell me about the furniture, carpets and curtains. Which is your favourite room and why?

Design an advertisement for your house, with a sign saying For Sale. Draw a picture of it and describe it.

Some comments made by Mike Matson, author of Granny's Garden

Three years ago I was adamant that computers should never be allowed in the primary school. It took some time for me to realise that here, at last, was the thing I had been seeking throughout my teaching career. It was fun. It was exciting. It made me want to stay up all night working out logical solutions to a set of problems.

This program can be used to promote useful activity across the curriculum but not on its own. No book, picture or computer program is more important than the activities which result from it. The computer does not reduce the teacher's workload but it may be of assistance in generating enthusiasm and providing the motivation for projects at a distance from the keyboard. The teacher is still the most important factor in the successful exploitation of a piece of software. Enthusiasm is, and always will be, the most infectious and powerful tool in the teacher's toolbox.

When children are immersed in a computer-based project, an observer may be astonished by the quality of the discussion which takes place. An adventure, an excursion into a fantasy world, can provide an environment in which children will want

to explore, discover and learn. A learning environment is what we should set out to establish. While the computer can play a useful role in all of this, it is up to the teacher to provide that little bit of magic which is such a spur to the child's natural curiosity and inventiveness.

A short while ago I was informed by a head that some of his children didn't like my program because they couldn't see what it was supposed to teach them.

'That's a relief,' I replied.

Bob Dyke, Manager, Manchester SEMERC, with assistance from David King, Special Needs Software Centre; Geoff Smedley, Coventry LEA; and Sue Williams, Clwyd LEA MEP Low Attainers Project

CHAPTER 3

Using Touch Explorer

3.1 A simple framework program supporting classroom activity

Touch Explorer enables the teacher to introduce an element of discovery into the classroom, putting a sparkle into any curricular area. Teachers have developed the original usage of the program ('see what is on the screen – draw it on the blank overlay') into many ingenious applications extending the curriculum for a wide age range of pupils and students.

The simple functioning of the program remains unchanged. Touch a square on the Concept keyboard and a message will appear on the computer screen. With a Type 'n' Talk speech synthesiser attached, the message is spoken.

This description of classroom applications is in four main sections:

1. Touch Explorer as a tactile database
2. Touch Explorer as a story teller
3. Touch Explorer as a builder of language and concepts
4. Talking Touch Explorer

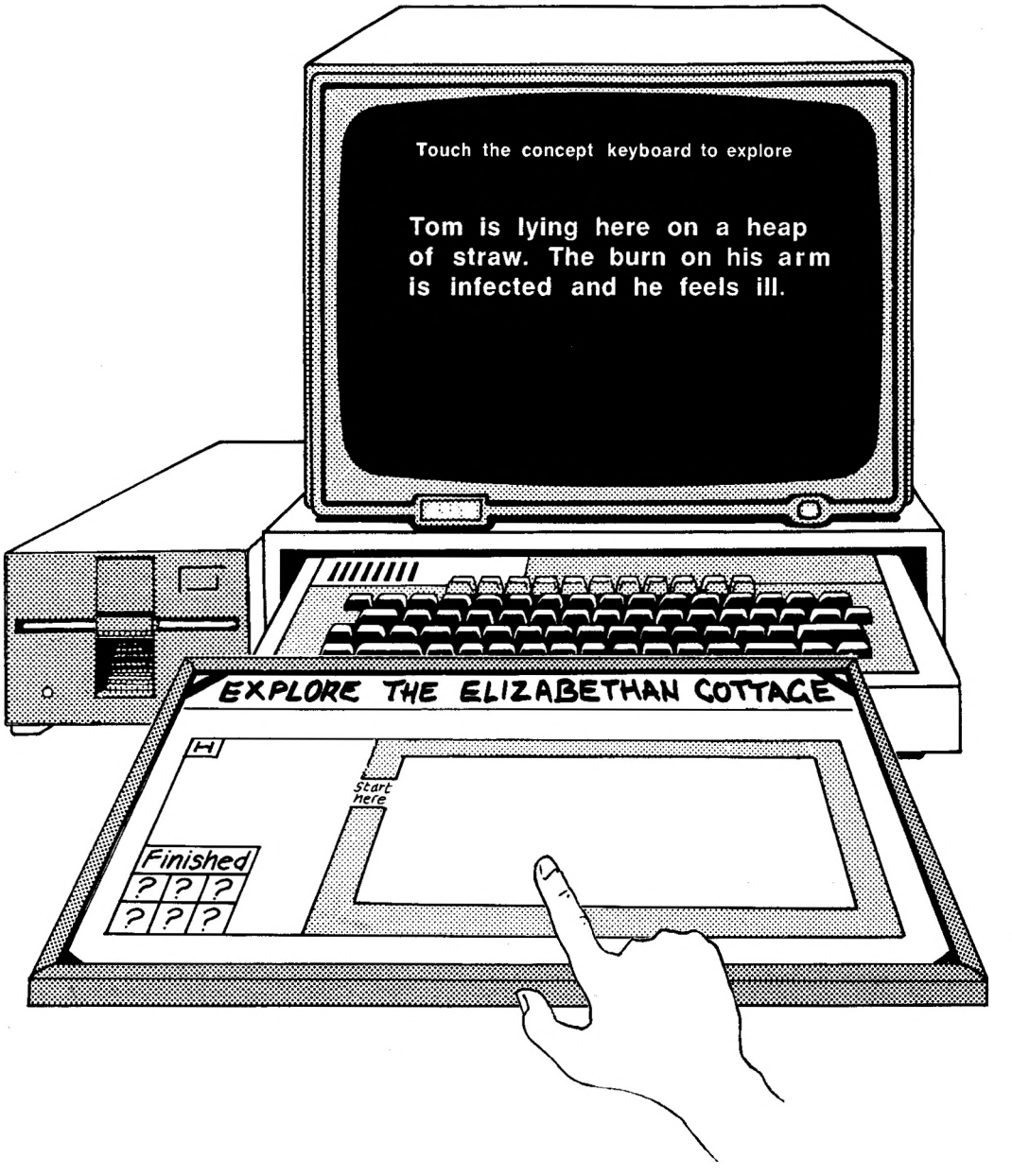
Many of the examples shown come into their own when used by a group of pupils or students. This may involve users in discussions of findings, development of search strategies or division of labour in recording and mapping.

Group co-operation is most effective when new materials are being created for Touch Explorer, with group members involved in research beforehand. This will lead on to planning of contents for the computer files, design of overlays and typing information into the computer.

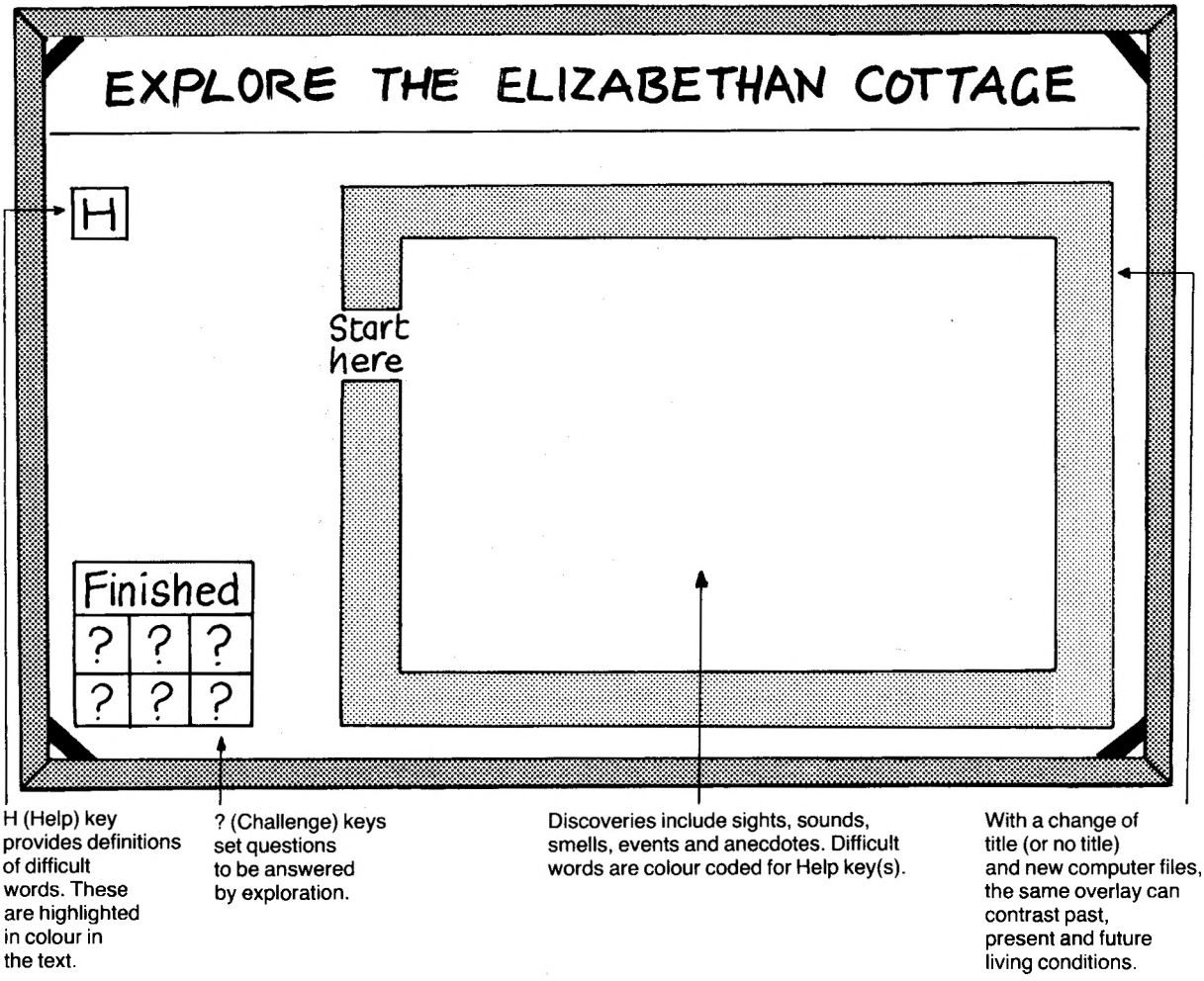
All of these ideas will work on the small A4 Concept Keyboard but obviously the larger (A3) board has advantages for many of the activities.

3.2 **Touch Explorer as a tactile database**

3.2.1 *Elizabethan cottage*

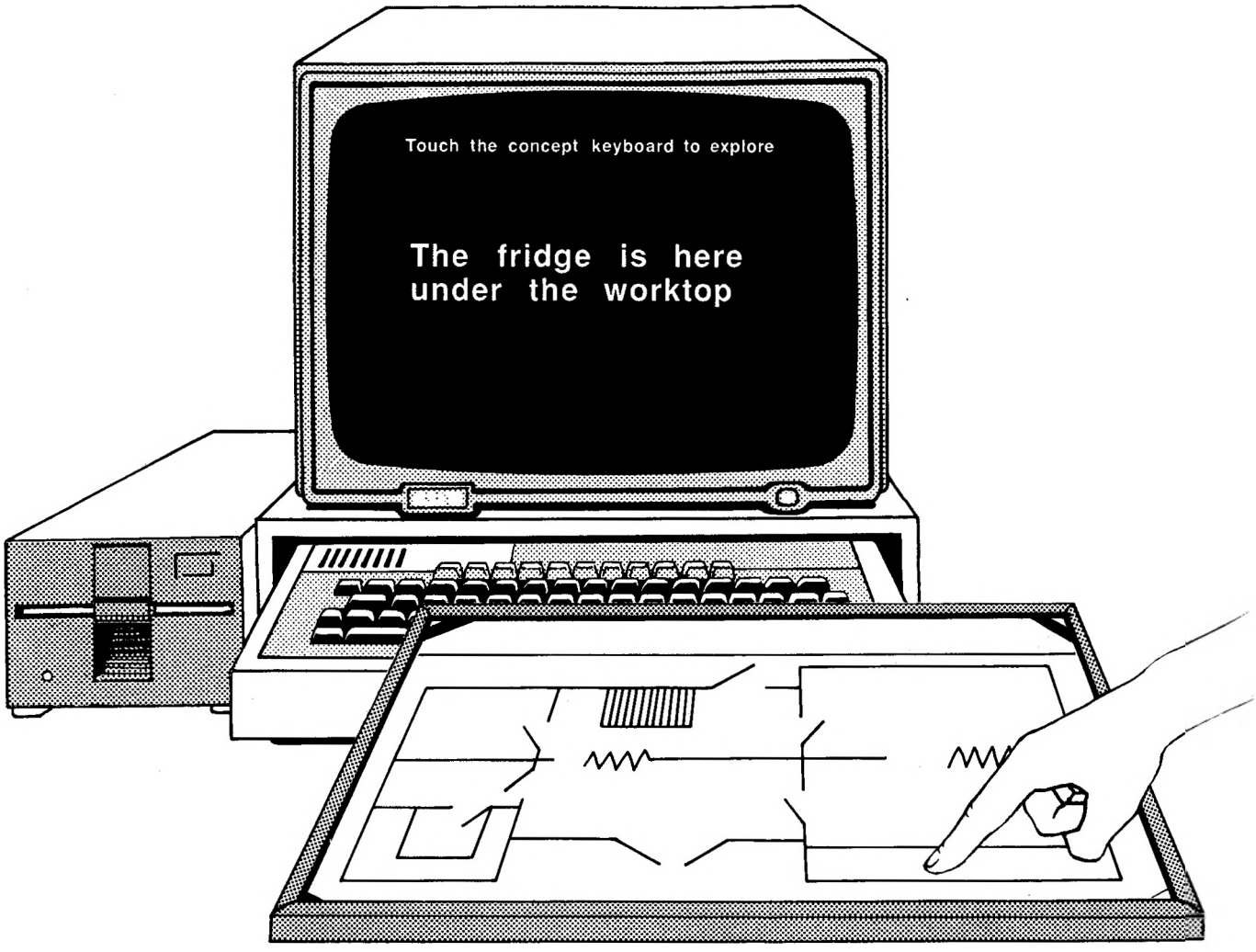


Here, Touch Explorer is adding an extra dimension to an historical project of housing. Touches around the wall of the simple floor plan reveal details of construction. Exploration of the floor area brings to light many details with insights into living conditions, sights and smells.



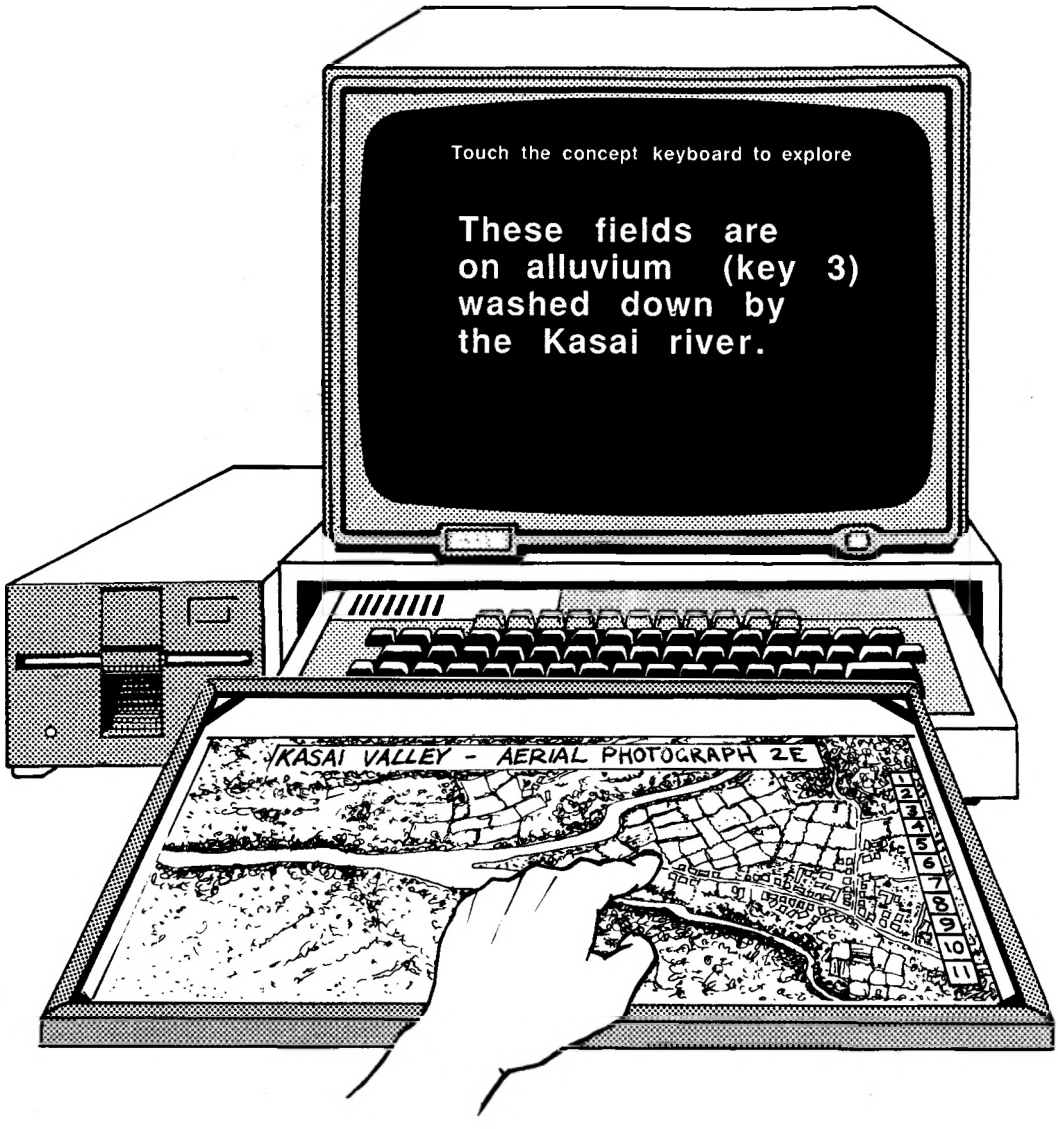
Some of the more technical words on the monitor screen appear in colour and these are linked to a reference page which appears on touching the Help key. The patch of keys with question marks pose challenges which can be answered in the course of exploration.

3.2.2 *Plans and diagrams*



Many other plans of building and towns have been brought to life with Touch Explorer. In this example, the screen brings up detailed notes which could not be accommodated on the plan. Students in Further Education have used a similar scheme to show disabled access to buildings in an urban area.

The user may be expected to place additional details in the form of cut-outs of furniture etc. on the plan.

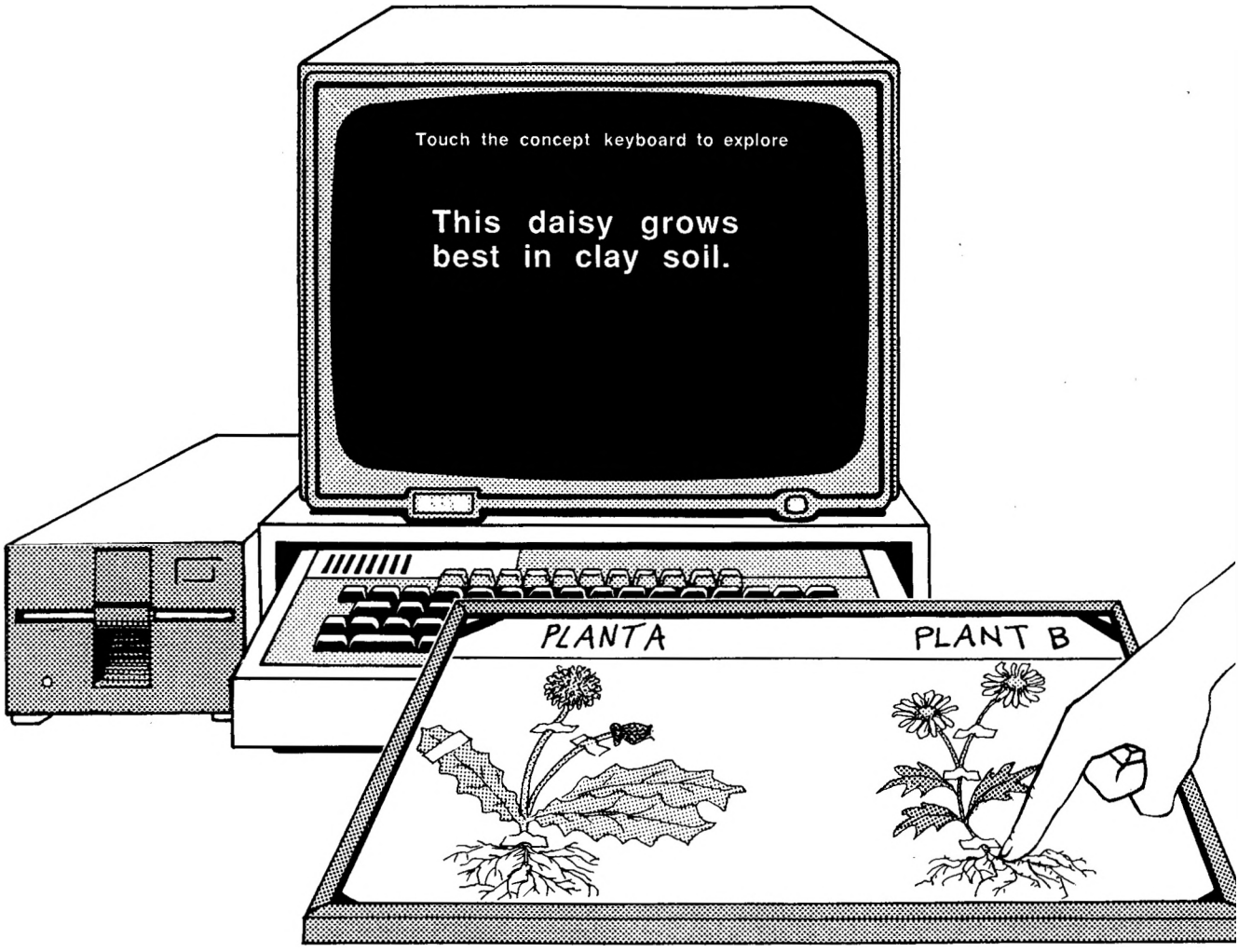


Notes on this aerial photo of an African river valley have been put into a Touch Explorer file by a group of pupils. They have compiled an extensive reference key for technical terms. A later development could be a question key section in the opposite margin.

3.2.3 *Identikit*

This example happens to use an outline face, with details of facial features ('bushy black eyebrows' etc.) of the particular person found by touching those features. Squares below carry further personal details. This technique can be extended to many other classes of broadly similar objects or animals.

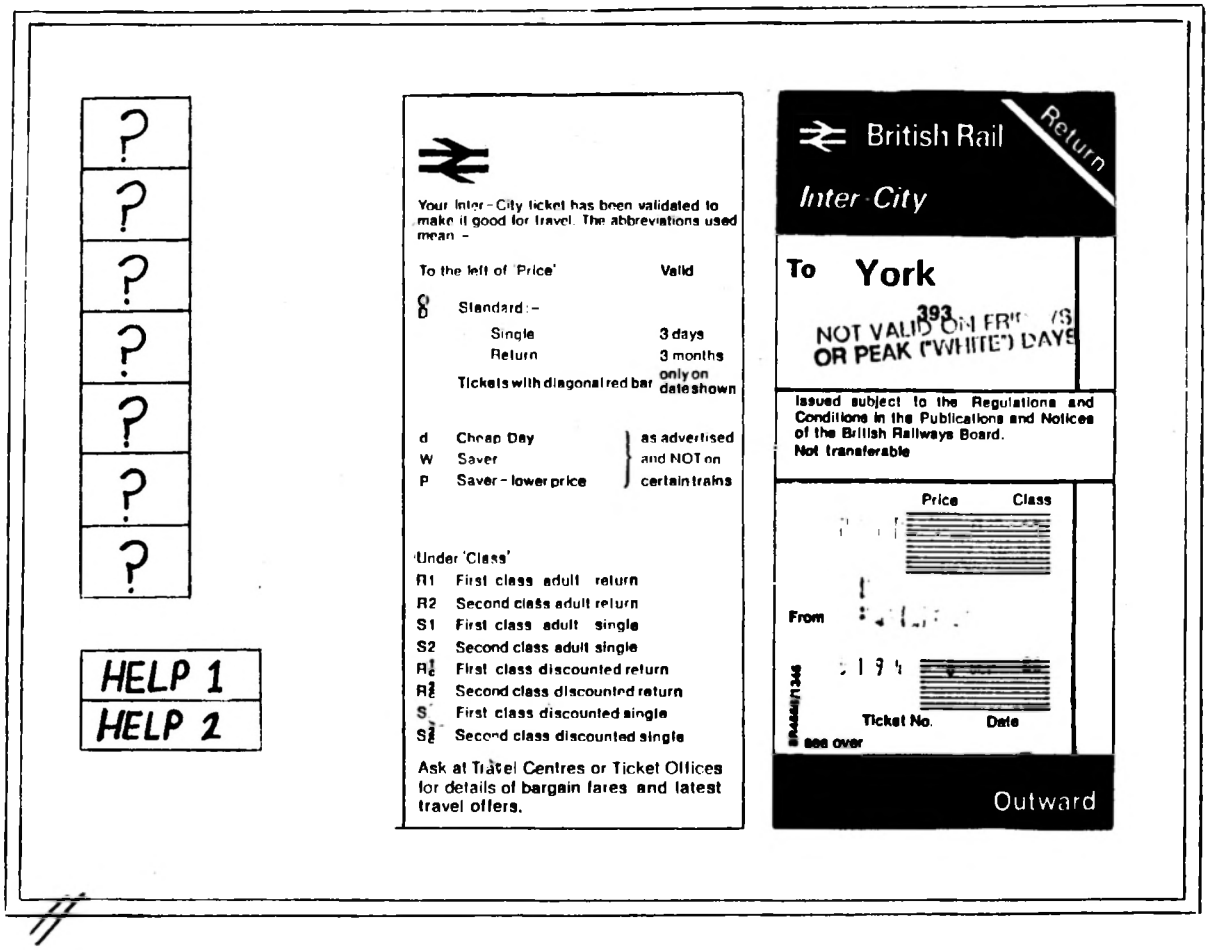
3.2.4 *Using real materials* (1)



Plants from a field trip have been pressed and mounted on an overlay. Touching the roots brings information about soil conditions in the habitat of the plant. Information about species' names, methods of dispersal, uses of the plant, etc. may be found by touching other parts of the plant. This technique may be used with sachets of chemical or soil, samples of rock, machine parts or any assortment of small objects.

With the facility of synthetic speech, this form of simple tactile database is ideal for use by visually handicapped pupils.

3.2.5 *Using real materials* (2)

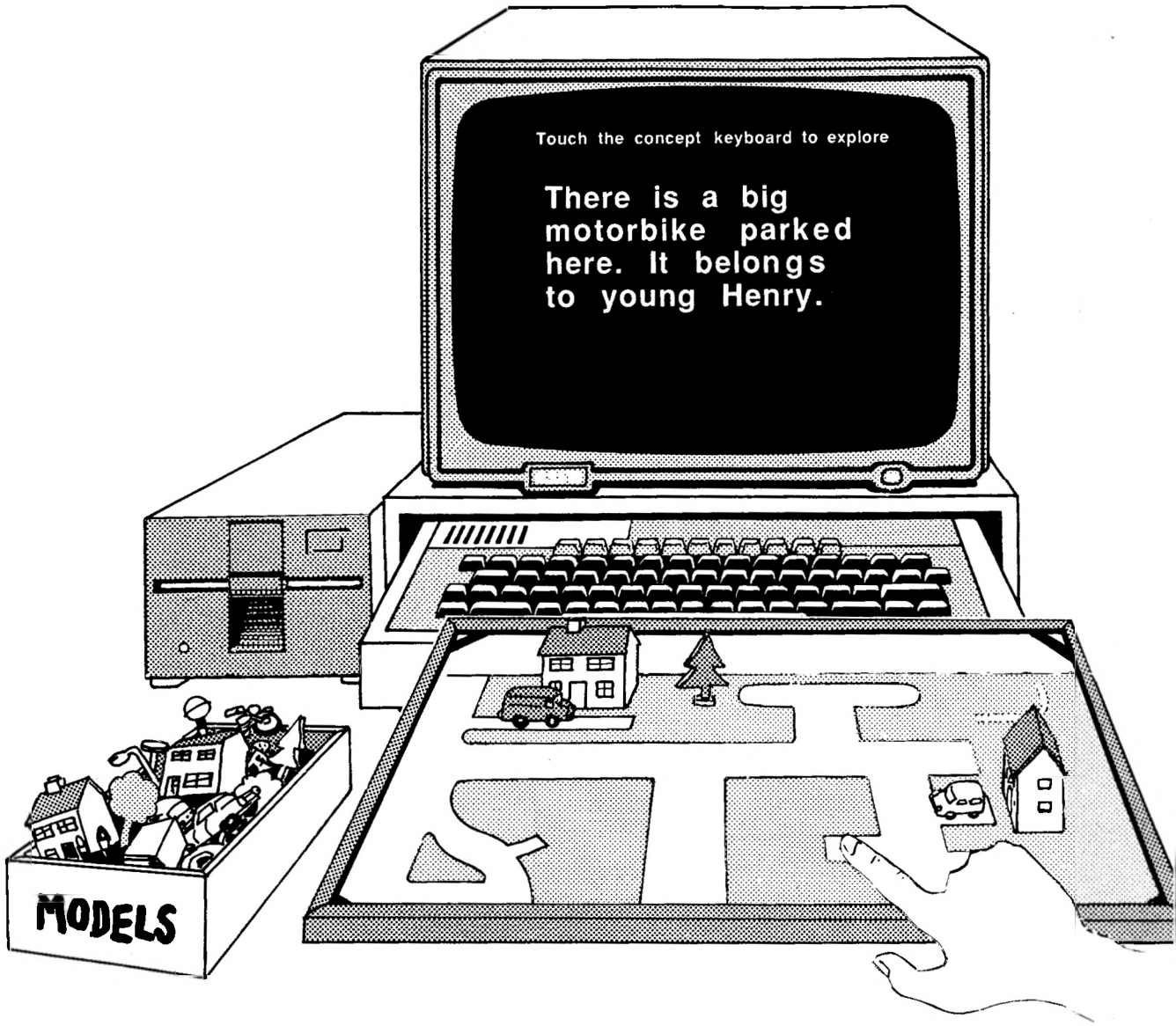


This enlarged rail ticket has been mounted on an overlay. Touches on the ticket explain the mysteries of pricing, journey and booking conditions.

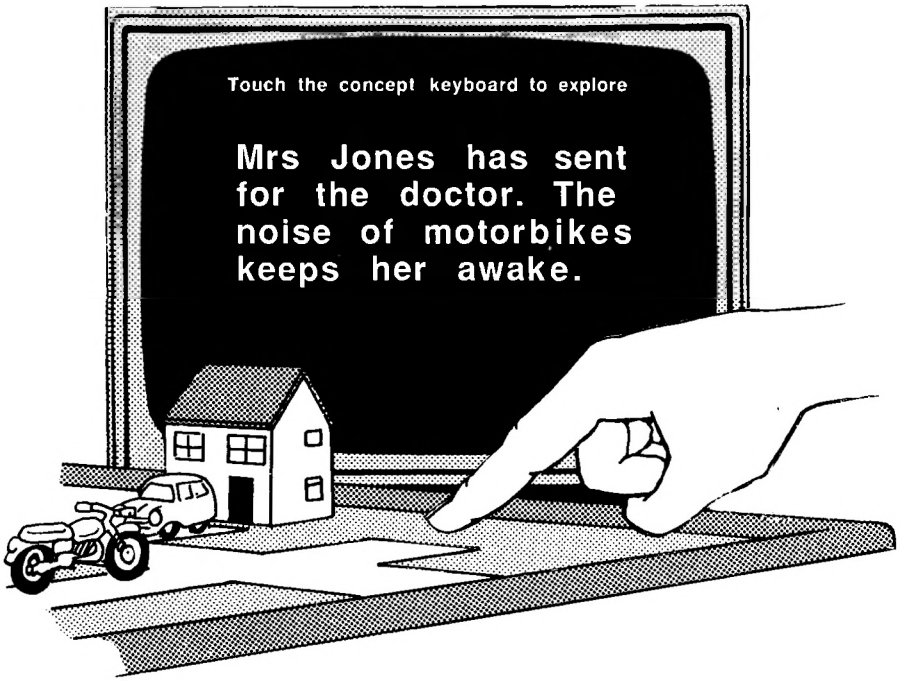
The same technique can readily be used with complex forms, time sheets, pay slips, etc. as part of a life skills or business studies course.

3.3 **Touch Explorer as a story teller**

3.3.1 *Neighbours*

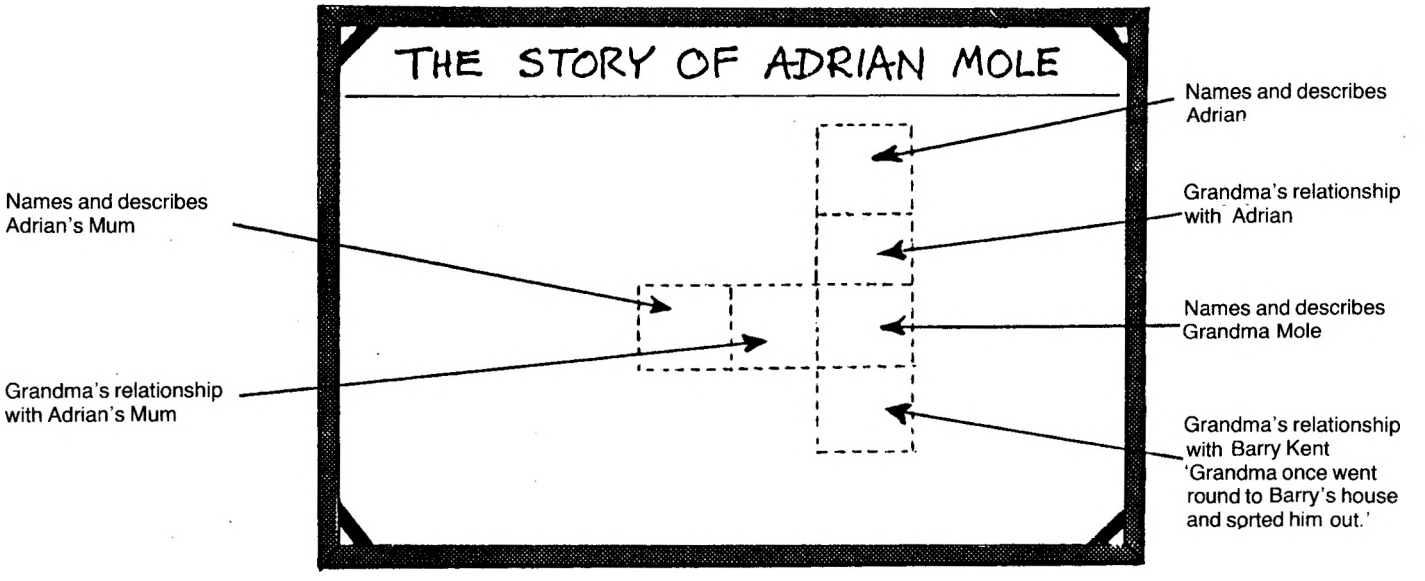


The Concept keyboard overlay has an outline of roads and gardens. Comments on the screen give details of small models (or pictures on card) to be placed on the outline. These comments can carry additional information about the items. Vocabulary can be controlled to give a good balance between ease of reading and extension of skills in reading for comprehension.



Intervening areas carry details of relationships between inhabitants and features of the landscape. The outcome after construction is an interactive story board whose contents are now familiar to the user(s) and ready for demonstration and explanation to others.

3.3.2 *Adrian Mole*



Here, the key features of characters in a story have been hidden on a blank overlay. Their relationships are described in intervening areas. Although this is a novel extension to the usual repertoire of story-telling techniques, the greatest value lies in a group of pupils making reference to the original story and creating the best possible content and layout for the overlay.

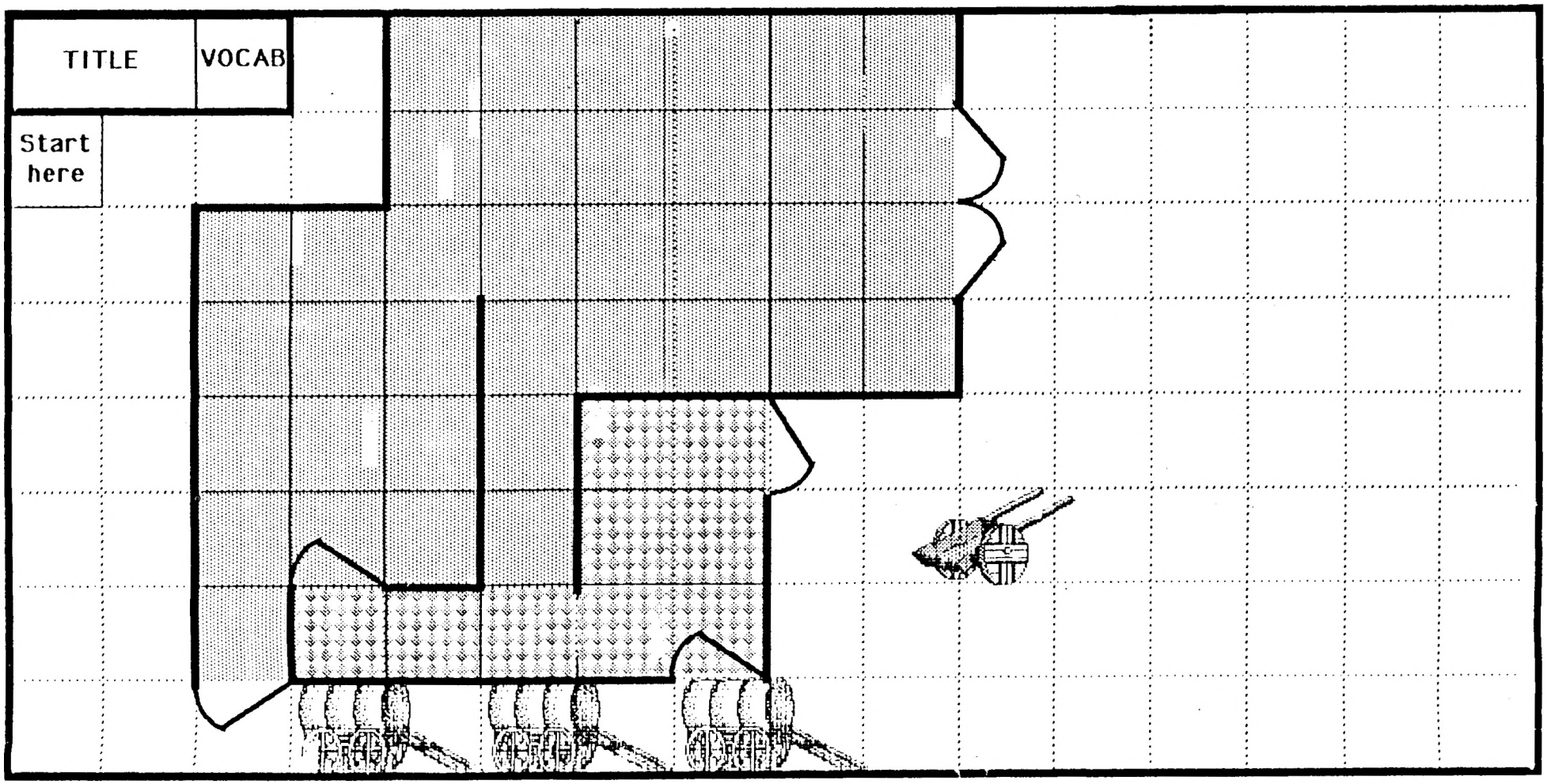
Willem Prinsloo's Peach Brandy, by Herman Charles Bosman

A Touch Explorer file based on a classic South African short story.

"Story"

To follow the story, move about from the start.
Apart from two very short parentheses inside the "voorhuis", the story is always continued on an adjacent square.

Artwork by Simon Anderson
version 2.1 (14/06/85)



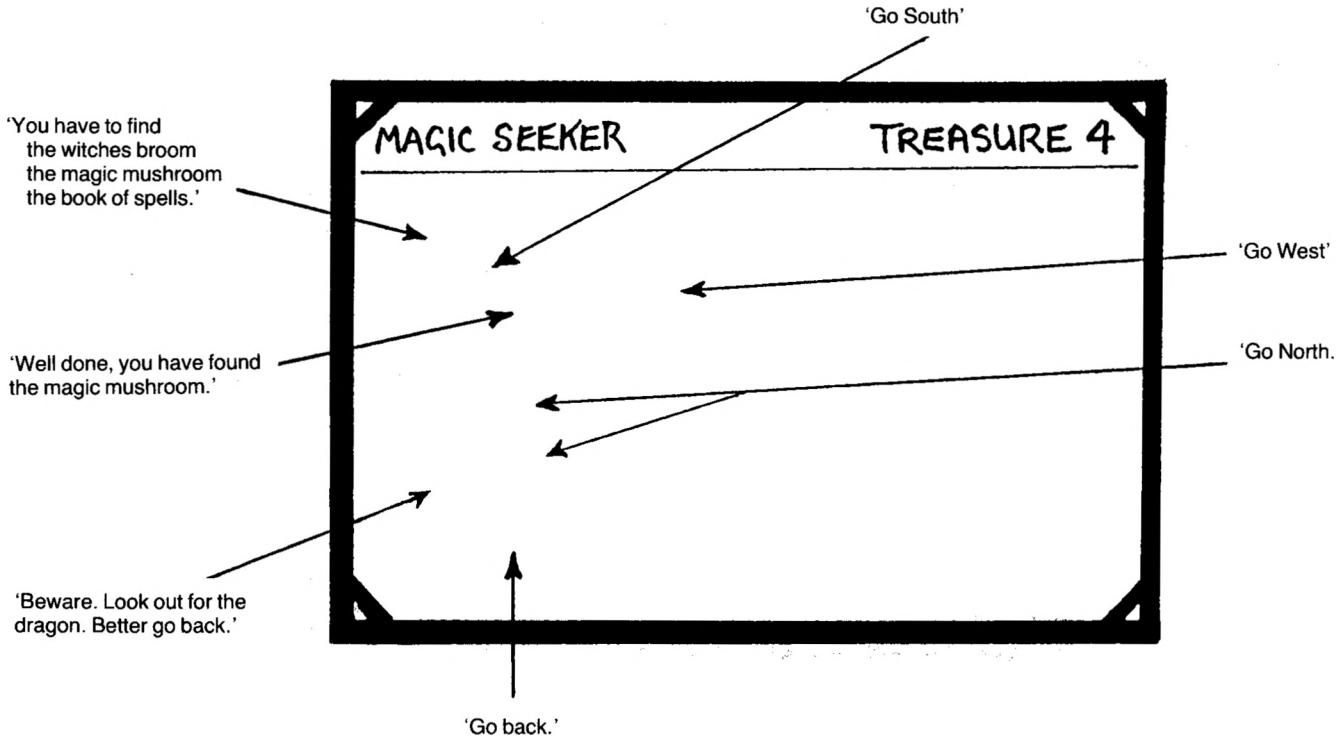
TOUCH EXPLORER

M.E.P. Special Needs Software Centre

In this folk tale, the story is told square by square in a winding but logical sequence from the start key at top left. The trick in following this extended story is to watch for a step out of sequence and to feel about, comparing story elements, until the correct move is found.

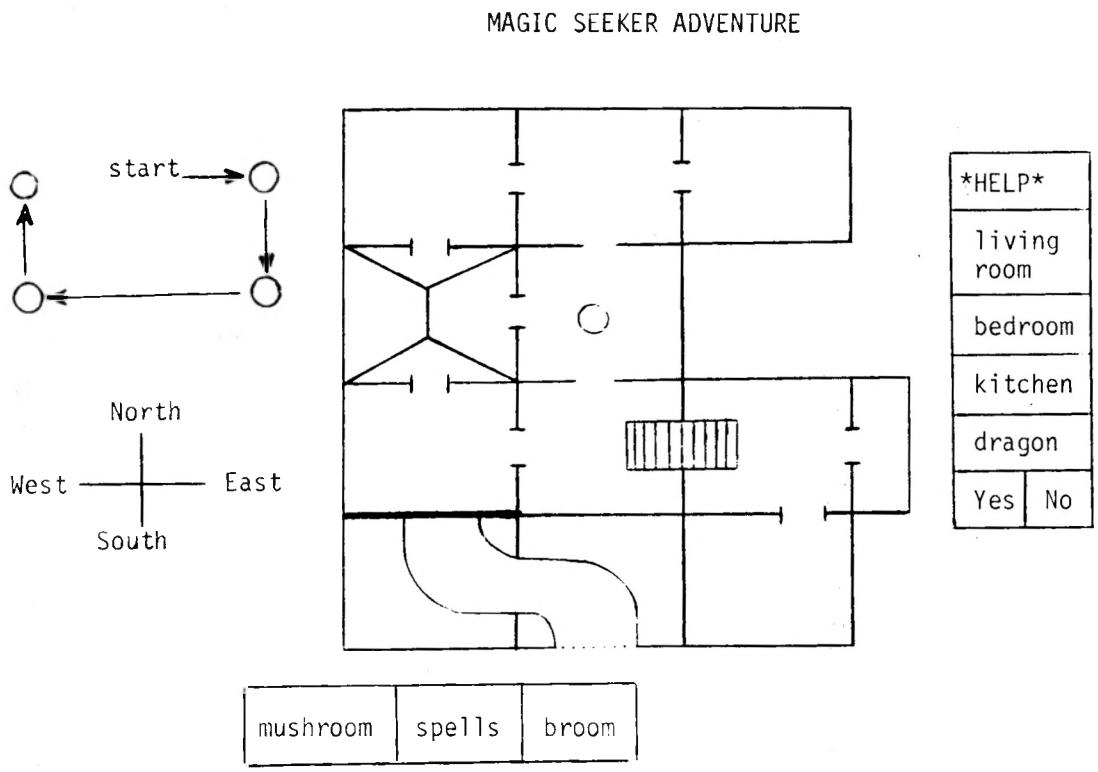
3.4 Touch Explorer as a builder of language and concepts

3.4.1 *Treasure*



This activity is practising awareness of compass directions, and the associated reading vocabulary, in readiness for a Concept keyboard-based adventure game. Successive files provide increasingly complex tasks in preparation for the game – Magic Seeker.

3.4.2 *Magic Seeker*



This is the overlay for the Magic Seeker adventure game, which is itself simply a Touch Explorer file with an outline overlay. Squares on the left provide on-the-spot practice and reminder activities, while the game is played within the house plan. The reward is hidden beneath the 'Yes' Help square and clues lead gradually towards this.

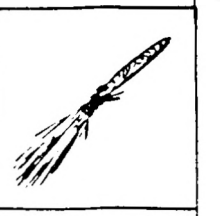
Of course, the structure of the current version of Touch Explorer does not allow any possibility of 'real' consequences to wrong moves. A touch of practical activity is added by these cut-out squares which are pasted on to the outline according to instructions in the game. This activity may well lead on to a more complex overlay keyboard adventure (e.g. Rescue) or a Concept Keyboard program related to a more specific curriculum area (Shops and Supermarkets).

MAGIC SEEKER

OVERLAY TILES

Cut out the pictures to use during the game.

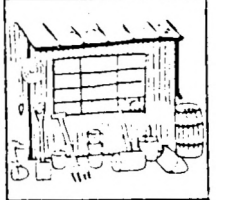
Witch's broom.....



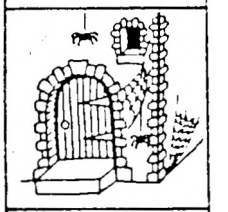
Magic mushroom .....

Book of spells.....

Garden tools .....

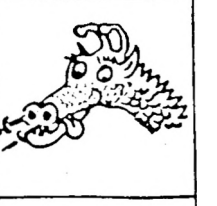


The house.....



Flowers.....

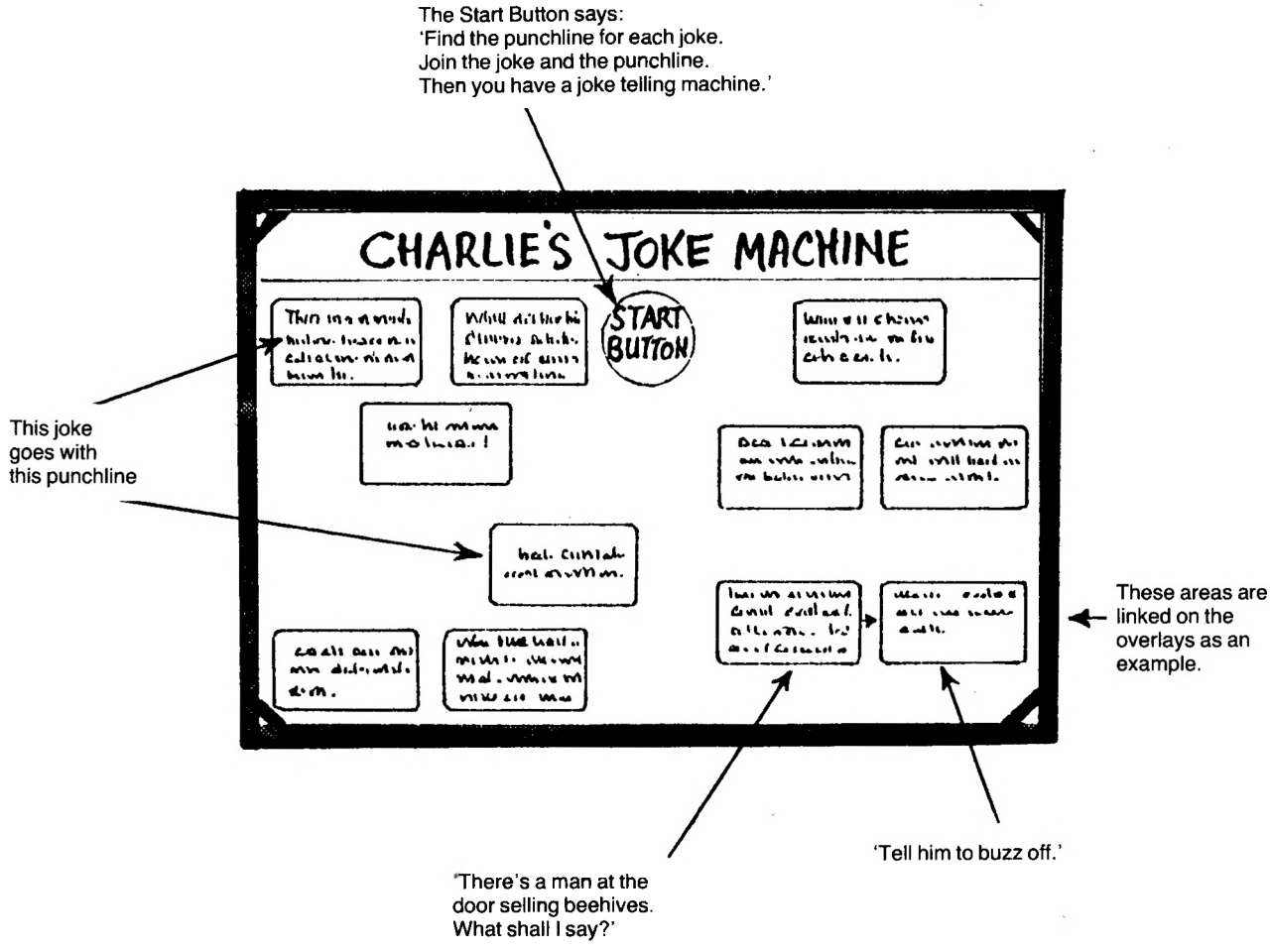
Dragon.....



Kitchen .....

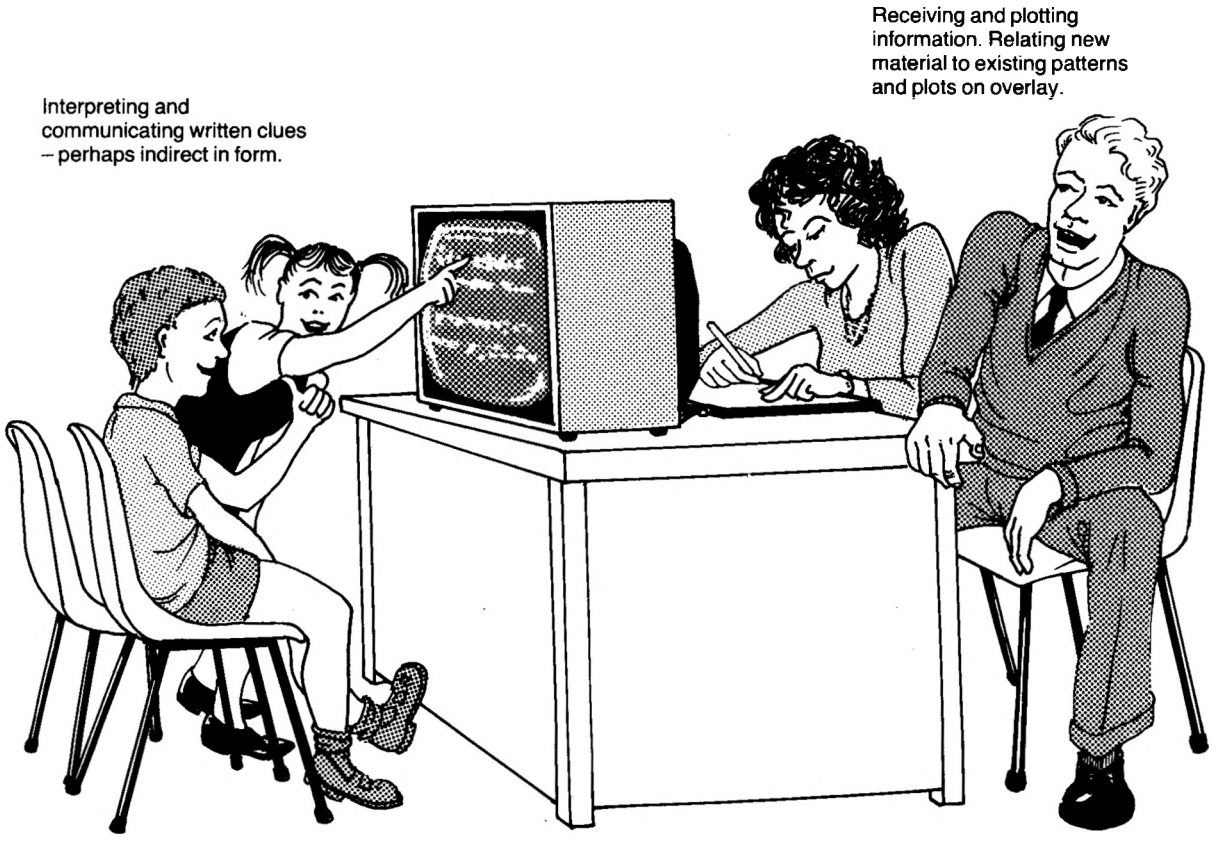
Magic Seeker is a good illustration of a 'team' approach to framework programs. In the Magic Seeker resource pack, Touch Explorer is used (sometimes with the same overlays) with the Prompt-3 word processor and with Lists, a very simple jargon-free database. The pupil is led up to a particular skill/language level for the adventure game, then guided into increasingly open-ended creative writing and discussion/research activities.

3.4.3 *Charlie's Joke Machine*



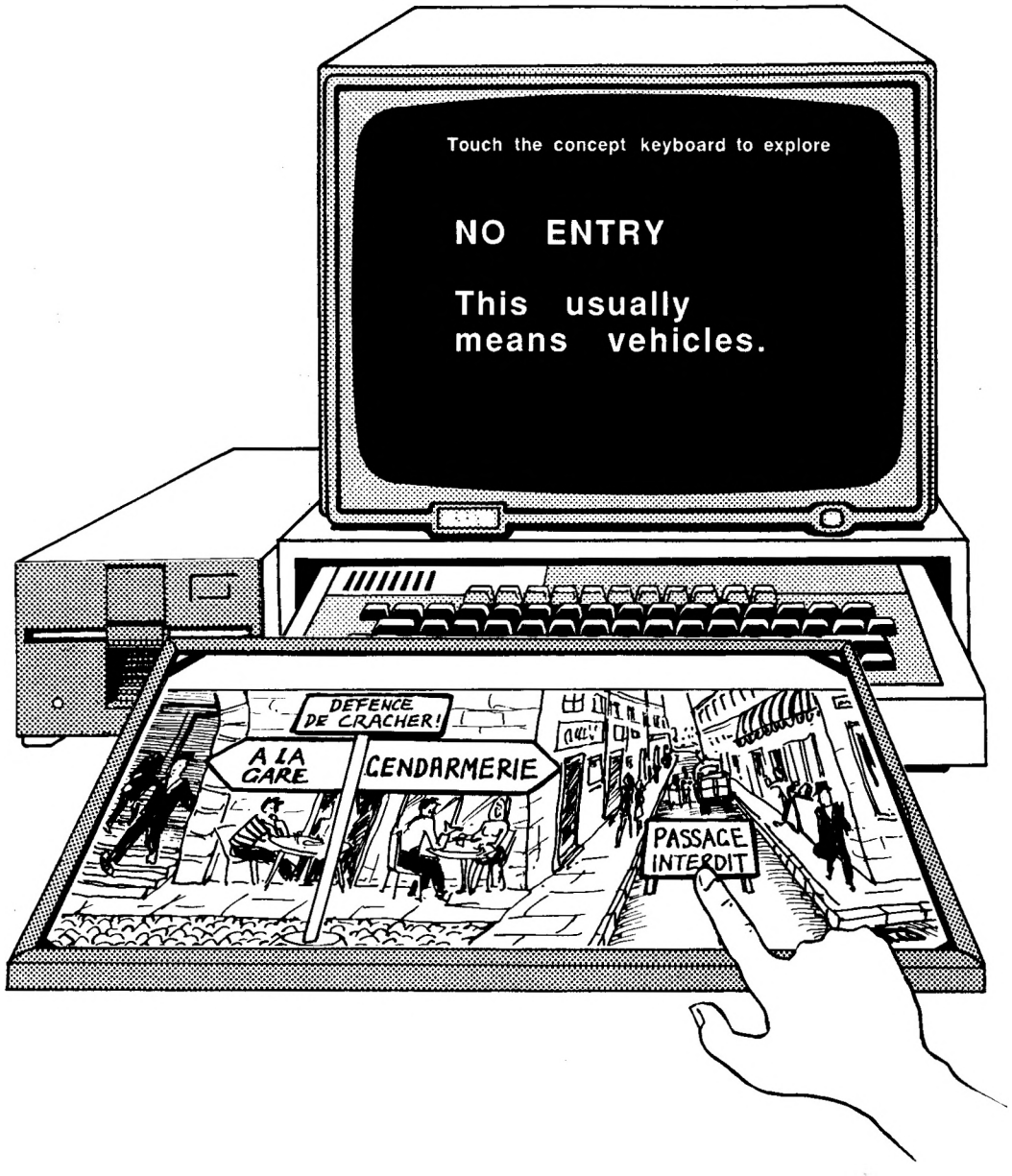
This technique uses Touch Explorer to present paired pieces of information which must be identified and then linked with an arrow or line on the overlay. Until this is one, the 'machine' will not work. This is a light-hearted example but of course the technique will work with any paired or otherwise related pieces of information. An example prepared by pupils in a health education lesson linked food types (body building, roughage, etc.) to specific foods.

3.4.4 *Team work*



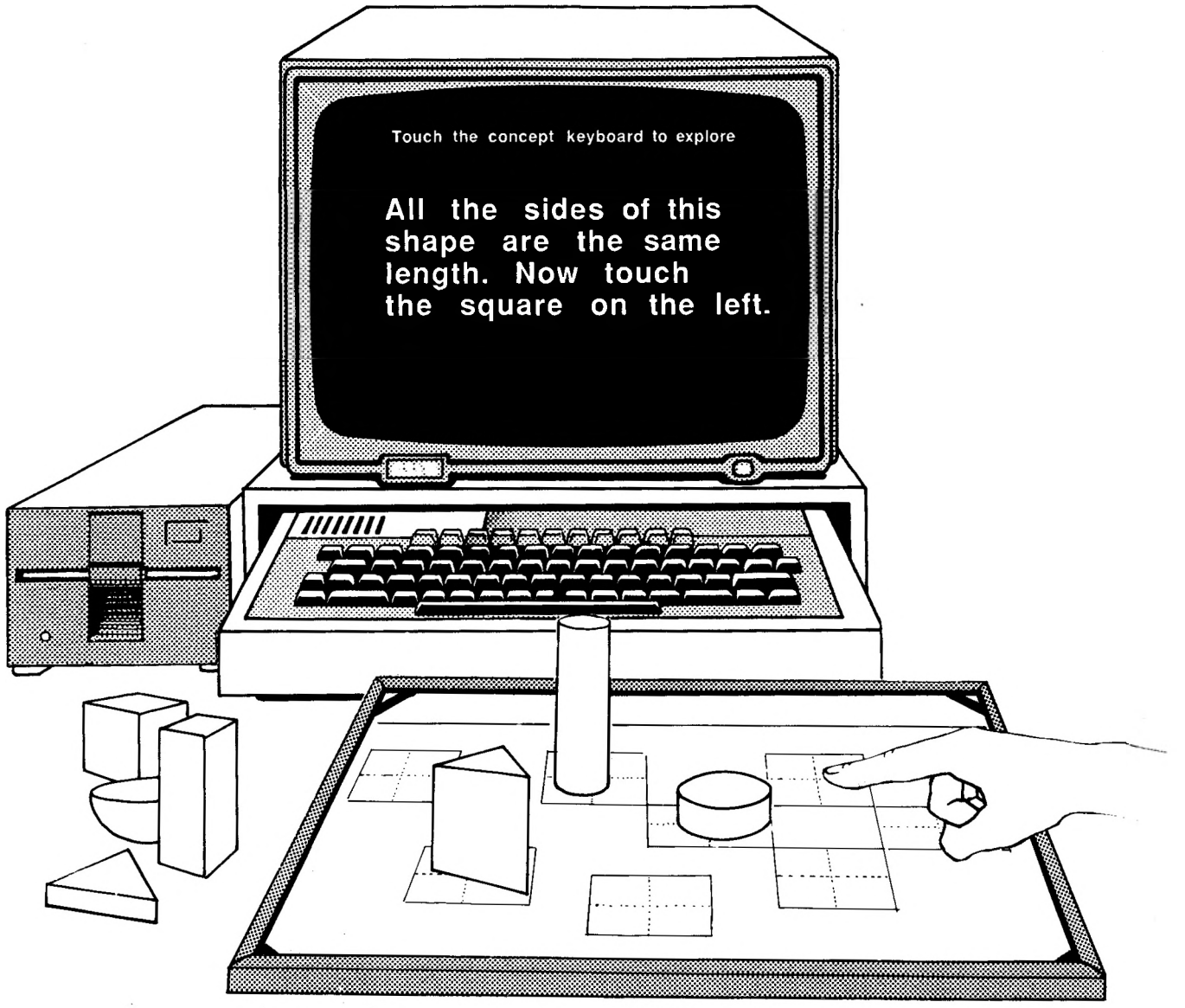
This is an exercise in communication, with one team of pupils interpreting the screen display. They are passing information to another team who are exploring on the Concept Keyboard overlay and recording information, placing picture cards, models, etc. according to comments from the reading team.

3.4.5 *Vocabulary practice*



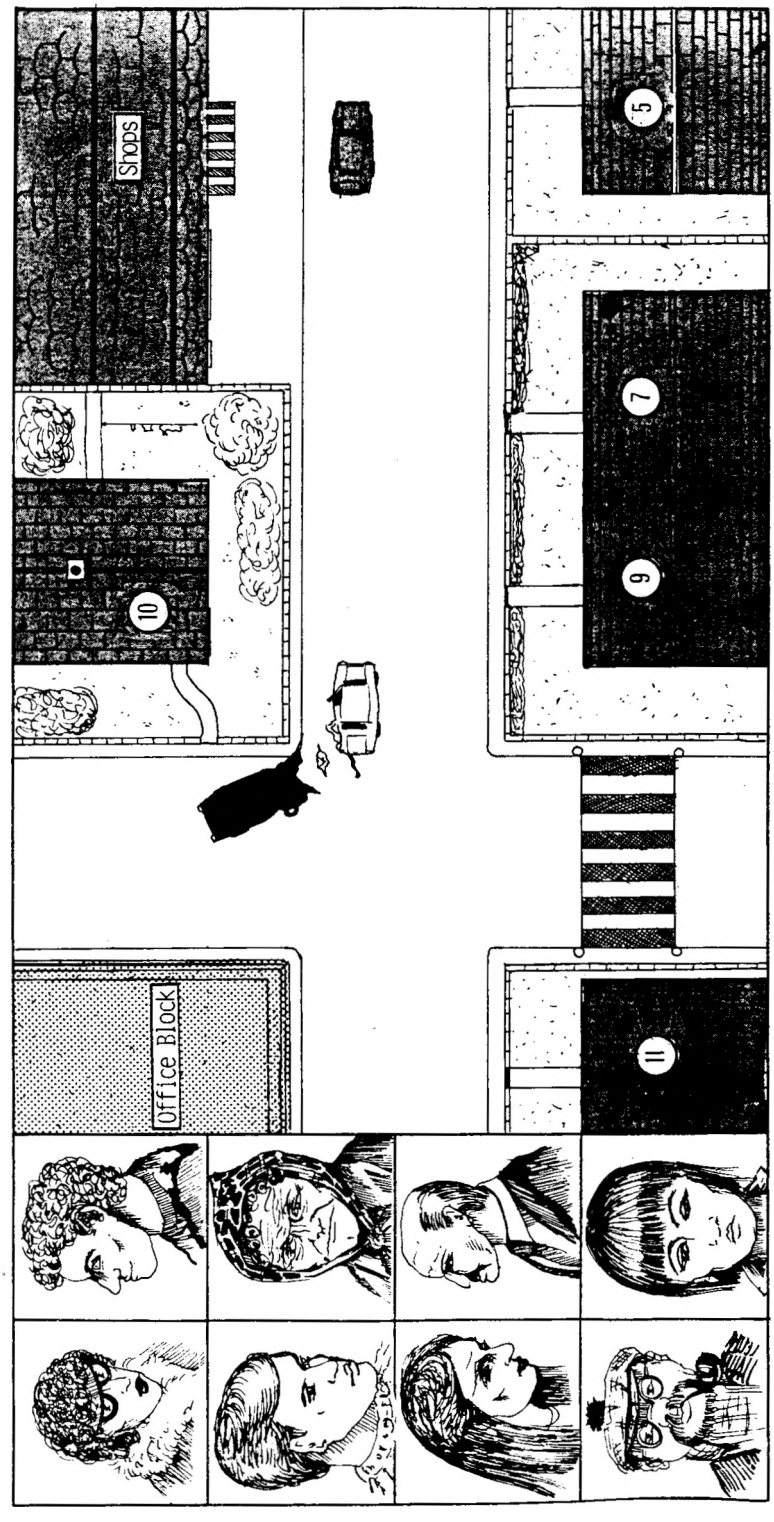
Touch Explorer can lend a new dimension to the practice of a foreign language or of social sight vocabulary. Comments on screen may lead the user to touch another particular square or may provide a short commentary, as in the illustration. If the intention is to teach social sight vocabulary to poor readers, then the Type 'n' Talk can be switched in or out as needed. The pictorial background helps in placing the words in a visual context.

3.4.6 *Combining clues*



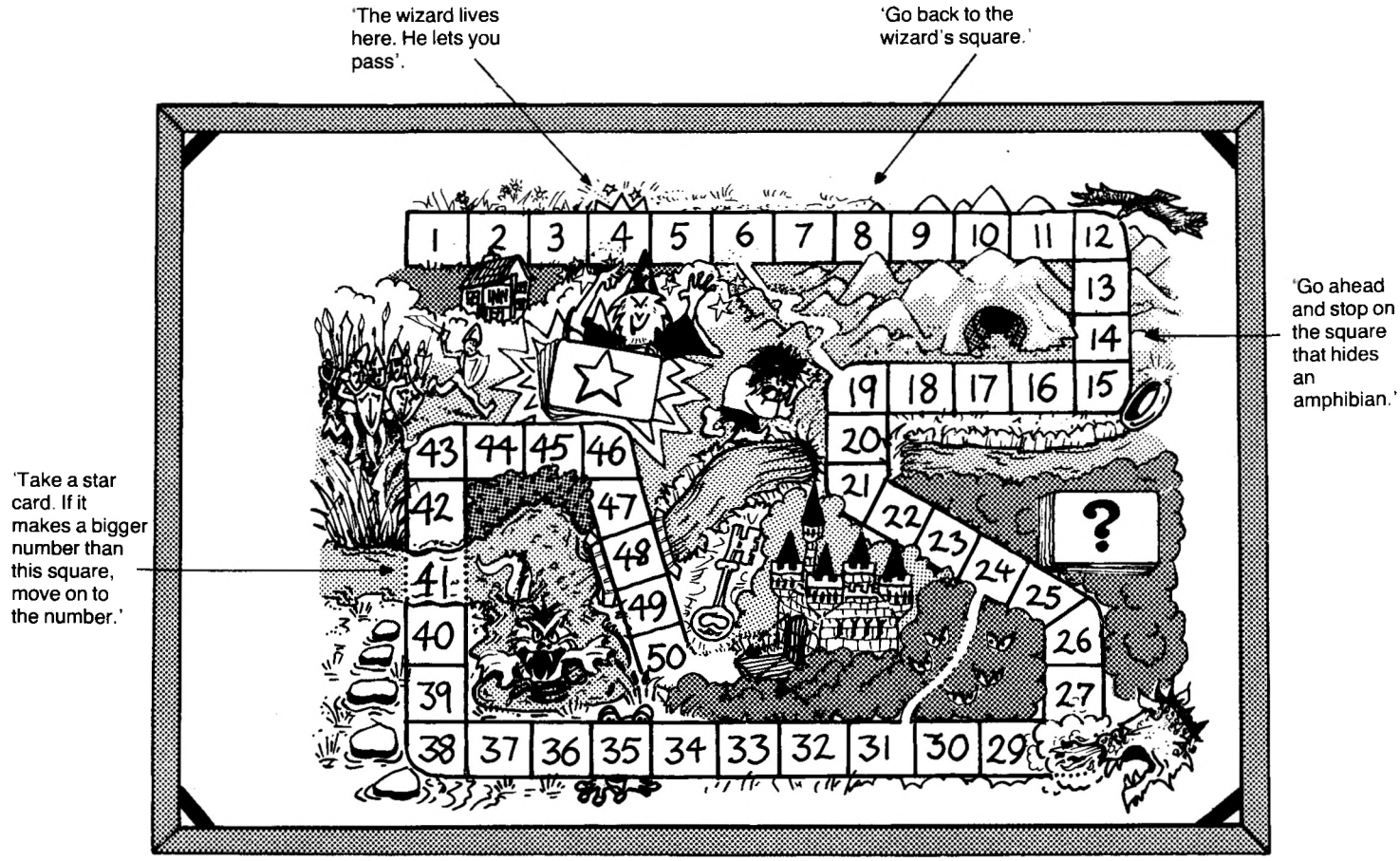
The language of a particular subject is being practised here in a very active way. Under the position for each of the items is a set of clues which must be considered together in order to identify the correct item. Unless the users exploit the benefits of written recording, a great deal of cross-referencing and comparing of comments goes on.

3.4.7 *Whodunnit?*



Each of the characters on the left of the overlay tells their version of the accident. Further information can be found by exploring the scene. A synthesis of the results will decide which of the witnesses are reliable and what really happened.

3.4.8 *Board game on a 'live' board*

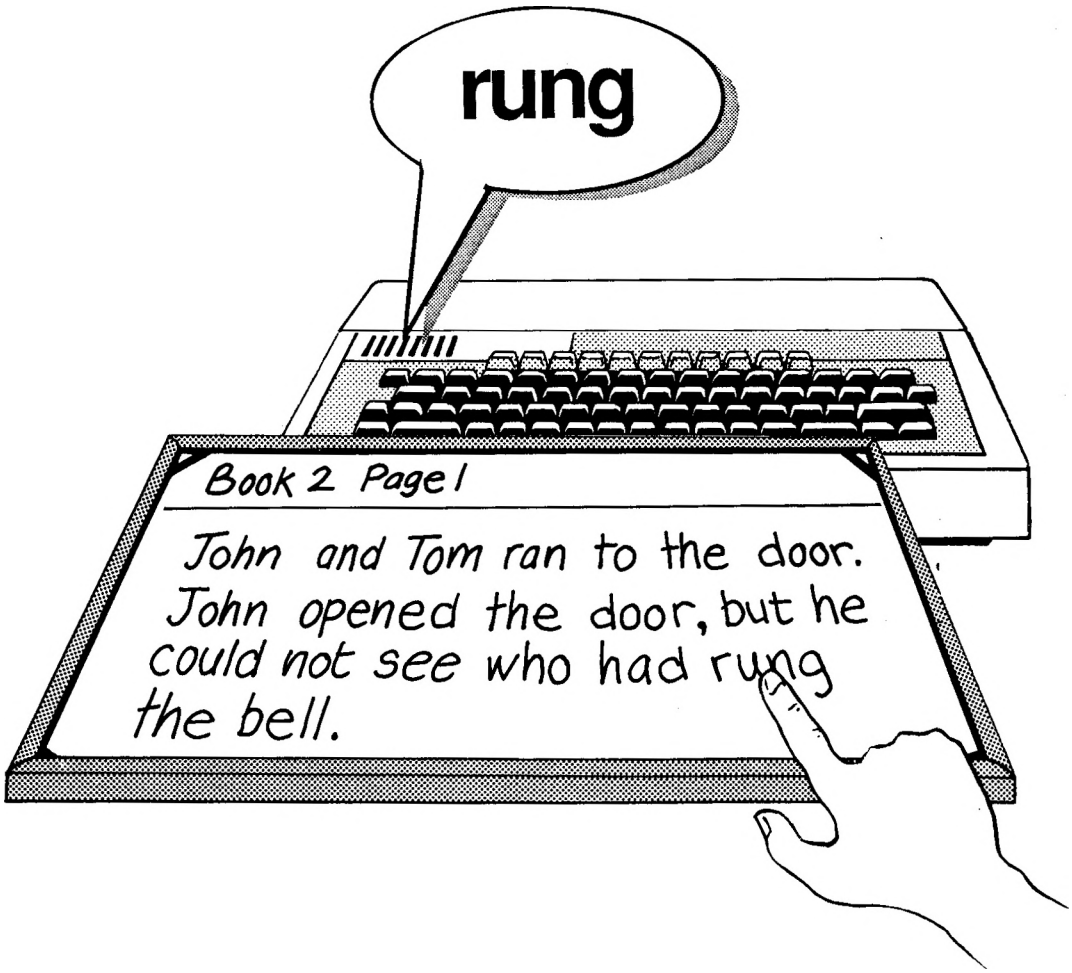


The penalties and bonuses are only revealed as the square is touched with the counter. Some of the squares instruct the player to explore surrounding squares for information. There could be additional areas off the 'track' to be explored for clues and information. There is room on the larger A3 Concept Keyboard for small stacks of forfeit/bonus cards which can extend the reading vocabulary of the game.

3.5 **Talking Touch Explorer**

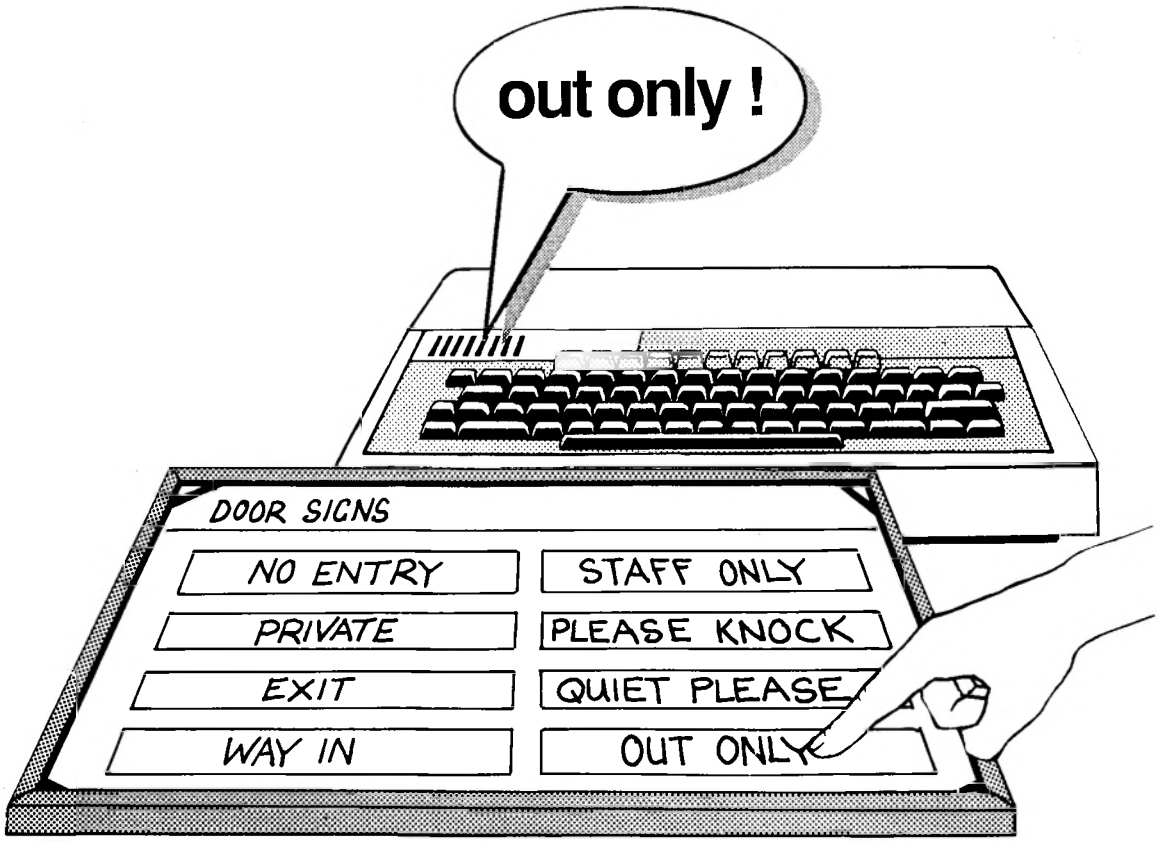
If a Type 'n' Talk speech synthesiser is plugged into the BBC Micro, Touch Explorer will say the message as well as displaying it on the screen. Pronunciation will follow a limited set of rules, so some oddities will result. However, experience has shown that pupils find the system quite usable, despite their teachers' fears. If the screen message is not needed, spellings can be phonetic to help pronunciation. Later versions of Touch Explorer may enable two sets of spellings to be stored – one for the screen and one for the speech system.

3.5.1 *Preparing reading vocabulary*



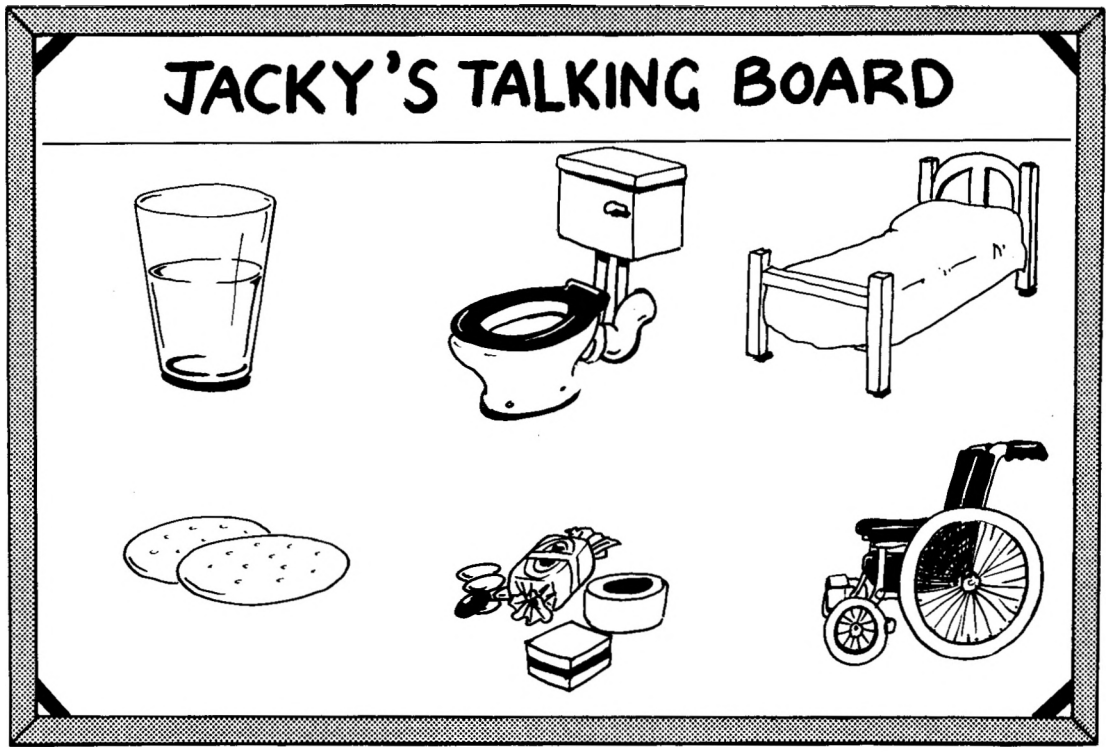
The beginning reader has the current page from the reading book on the overlay. A touch on the overlay will say the word. A variation is to have boxes drawn on the overlay, each box telling a section of a story. The student matches picture cards to these and the outcome is a pictorial story-telling system. Frequent use of materials like these provides enjoyable and effective practice of known and new vocabulary.

3.5.2 *Social sight vocabulary*



This overlay was prepared for a Further Education student with special needs. Having used the speech system to learn the words, self-testing is a natural progression.

3.5.3 *Pupils with multiple handicaps*



This same 'touch and speak' system has been useful in enabling blind pupils to practise Braille and to explore embossed diagrams prepared on a special photo-copier.

The system also provides an easily prepared and updated communicator for individuals without speech. Makaton and Bliss symbols, photos or models can be placed on the overlay and simple needs communicated. As with Braille, hearing the word spoken can be an aid to learning the meaning of symbols.

References

Touch Explorer. MEP Blue File. Freely copiable from SEMERC contact schools and software distributors.

Prompt 3. As above.

Lists. As above.

Magic Seeker. Discs as above. Document/overlays from Elm Bank Teachers Centre, Mile Lane, Coventry CV1 2LQ

Rescue. From AB Euro Marketing, Forest Farm Industrial Estate, Whitchurch, Cardiff CF4 7YS

Shops and Supermarkets. From N. Micromedia, Resources Centre, Coach Lane Campus, Coach Lane, Newcastle upon Tyne NE7 7XA

Type 'n' Talk. From Namal Associates, 153/4 East Road, Cambridge CB1 1DD

Concept Keyboard. From AB Euro Marketing, as above.

CHAPTER 4

Other Worlds – The Explorer

These notes (extracted from Bristol SEMERC Newsletter) are intended to give a brief introduction to the set of programs known as 'Other Worlds' published by Ladybird/ Longman Software, Longman Group Resources Unit, 33–35 Tanner Row, York.

Other Worlds is a suite of programs designed for children and teachers. Together they can explore or create whole worlds and, in so doing, learn about the new environment and the language to describe it. The definition of 'world' is broad and so, by using information, knowledge, discussion and applied thinking, they can create and the explore a wide variety of situations.

The new world created could be a factory, a classroom, the world of a baby, the year 2001, a new planet or a volcanic island but the imaginative teacher will think of many, many more.

The program The Explorer emphasises the physical environment of another world. You are taken to another place and, by interacting with the program, you can both create and interpret what you discover. The explorer's role is to observe, match observation with previous knowledge and interpret the unfamiliar. Your priorities are to survive and observe.

4.1 **Contents of the program**

The start	Location and name
	Physical environment – sights, sounds, smells
Preparing	Garments
	Equipment
Exploring	Plants
	Animals
	Objects
	Marking
Ending	Coping with a challenge.

Working your way through the program, you are required to answer questions, describe observations and draw conclusions on each of these topics.

The Survival Book provided in the package lists the names of many famous explorers and suggests possible reasons why people go on expeditions:

To conquer others and capture new lands.

To get rich.

To be the first to do something.

To find excitement.

To escape.
To prove it can be done.
To make scientific discoveries.
To find water, food or minerals.
This can be the starting point at which to introduce the project to the children.
Areas that are required are:
Temperature.
How to observe.
Smells.
Equipment.
Animals.
Signs and markings.
Light and dark.
Sounds.
Clothes.
Plants.
Objects.

The Survival Book also provides a very useful thesaurus to use with the project work to extend the child's language and understanding.

Finally, the children are expected to make up their own cliff-hanger endings away from the computer. This should also be a topic for discussion and experiment before they reach this stage.

4.2 **Using the program**

The program is self-explanatory throughout, although the teacher needs to be completely familiar with it before using it with children. If this is not the case, then the full potential of the program will not be realised. It is essentially a program for group discussion and participation initially but then the children can go on to develop worlds of their own related to a wide variety of projects across the curriculum.

At any time throughout the program you can leave it, saving the work done on disc. The program can then be recommenced at the same stage at a later date.

Other options that are presented on completion of the program are to do the topic again, see a summary on the screen or use a printer. A printer can be used at any stage throughout the program, so, if required, the children could have a print-out of the work done to illustrate in their own way, at intervals throughout the program or simply at the end.

The last part of the program requires the children to cope with a surprise. They can choose from a selection of happenings (related to the environment they are in) or make up their own test. After making the choice, the children are expected to complete the work away from the computer to provide an ending to the account of the exploration.

CHAPTER 5

Other Worlds – The Inhabitant

The Inhabitant concentrates on the social aspects of another world. The inhabitant is at home and his role is to explain to an interested visitor certain aspects of his society and interpret them for this stranger. Again the prompts and questions from the program indicate areas for consideration.

5.1 Contents of the program

Start	Name, title
Travel	Journeys, vehicles
Growing up	
Daily Life	Work, leisure, rest
Money	
Customs	
Food and Drink.	

Working through the program, you are required to answer questions, describe observations and give information. The responses are all prompted by a leading phrase in pink. These leading prompts start the children off and encourage writing in sentences.

The Survival Book in the package again provides a thesaurus to use with the project work, to extend the children's language and understanding. It also directs the teacher to a number of sub-projects which should be introduced at various stages during the project.

5.2 Using the program

The options available within the program are the same as for The Explorer.

Both programs offer a variety of opportunities for spoken and written language work, reading and thinking. Along the way, some basic skills associated with English can be acquired and practised. It is the process of exploration, discussion, thinking, developing and recording which is central.

The questions, comments and Survival Handbook are intended to help the children focus and control their thinking.

When introducing the program to a class, it might be worth beginning by working through as yourselves and then moving into less familiar territory.

Remind the children that there is always the opportunity to 'rub things out'. Encourage note-taking, sketching and group interaction.

The children should be encouraged to move away from the micro into other activities involving books, paints, calculators, visits, making things and so on. In fact, the program provides an opportunity to bring together other parts of the curriculum and concentrate them on a single topic.

CHAPTER 6

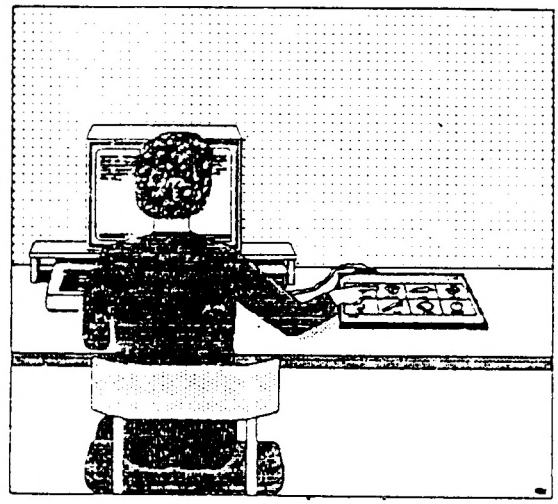
Prompt 3

The following pages 41–65 are a facsimile reproduction of an introduction to Prompt 3 with ideas for classroom use, prepared by the Special Needs Software Centre at Manchester Polytechnic.

Prompt 3

A supportive introductory word-processor

IDEAS FOR CLASSROOM USE

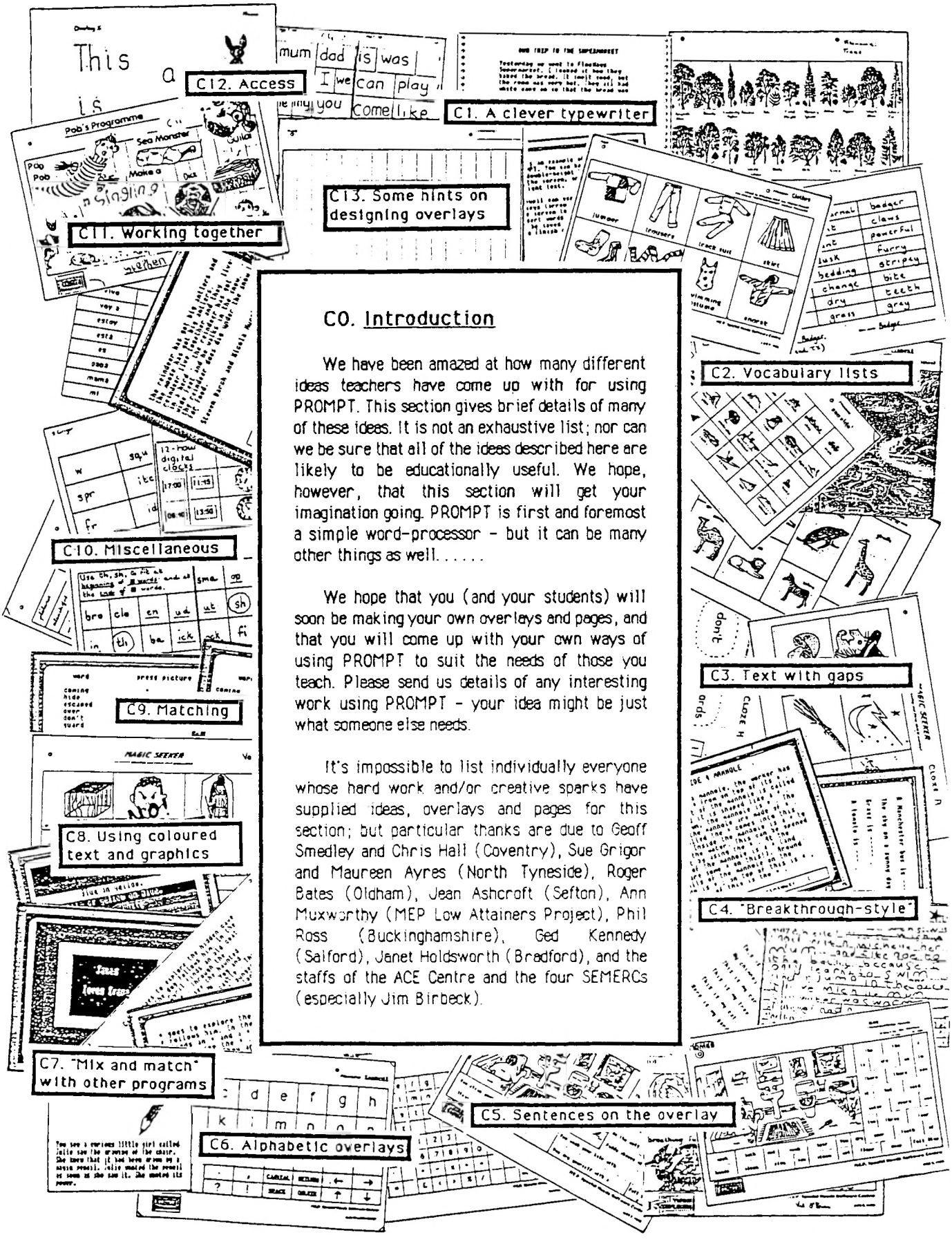


Special Needs Software Centre

Manchester Polytechnic, Hathersage Road, Manchester M13 0JA

Tel. (061) 225 9054 ext 284

C.. IDEAS SECTION – almost 101 ways of using PROMPT



C0. Introduction

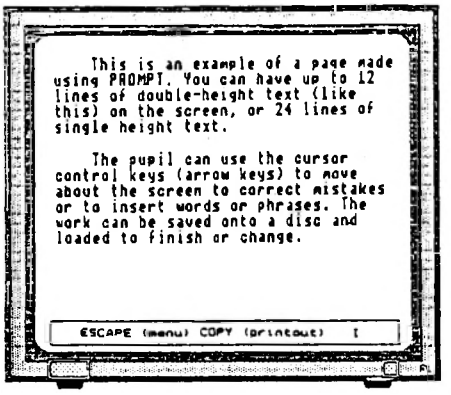
We have been amazed at how many different ideas teachers have come up with for using PROMPT. This section gives brief details of many of these ideas. It is not an exhaustive list; nor can we be sure that all of the ideas described here are likely to be educationally useful. We hope, however, that this section will get your imagination going. PROMPT is first and foremost a simple word-processor – but it can be many other things as well.....

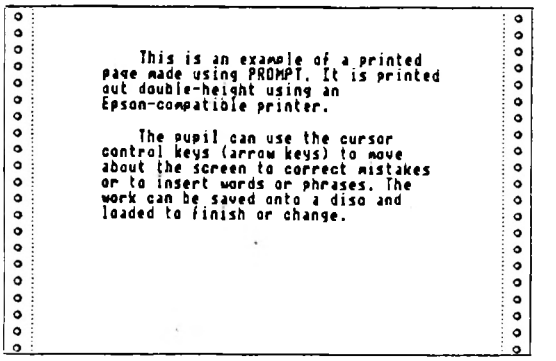
We hope that you (and your students) will soon be making your own overlays and pages, and that you will come up with your own ways of using PROMPT to suit the needs of those you teach. Please send us details of any interesting work using PROMPT – your idea might be just what someone else needs.

It's impossible to list individually everyone whose hard work and/or creative sparks have supplied ideas, overlays and pages for this section; but particular thanks are due to Geoff Smedley and Chris Hall (Coventry), Sue Grigor and Maureen Ayres (North Tyneside), Roger Bates (Oldham), Jean Ashcroft (Sefton), Ann Muxworthy (MEP Low Attainers Project), Phil Ross (Buckinghamshire), Ged Kennedy (Salford), Janet Holdsworth (Bradford), and the staffs of the ACE Centre and the four SEMERCs (especially Jim Birbeck).

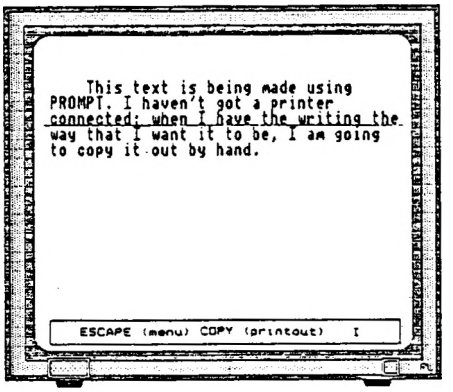
C1. A clever electric typewriter

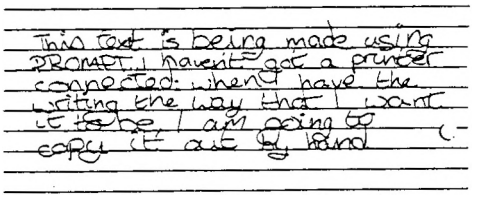
C1.1 ELECTRONIC TYPEWRITER Using only the PROMPT word-processor, to compose up to 12 lines of double-height text on the screen (or 24 lines of single-height text), making use of PROMPT's simple editing facilities, and then printing the text out on a printer. [See C1.2]. (Many teachers use PROMPT like this to prepare traditional-style worksheets for pupils to complete on paper.)





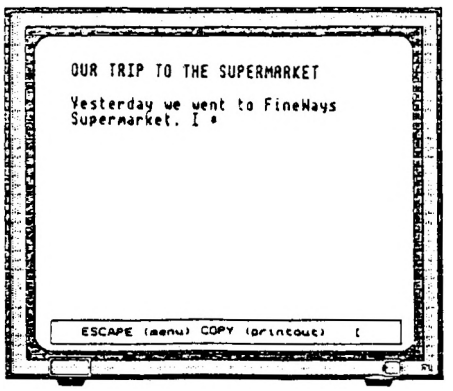
C1.2 WRITING BY HAND As above, but using the traditional method of transferring the final document onto paper (if you don't have a printer connected, or want to make sure that your pupils practise writing by hand).

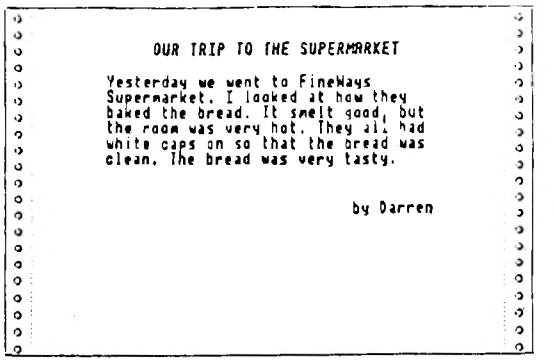




C1.3 CARRYING ON TOMORROW When work hasn't been completed, it can be saved onto disc; it can then be loaded up the next day (or when convenient) for finishing, or for the teacher and pupil to discuss it together in order to produce a good final version.

C1.4 STARTER SENTENCE You load a page which contains a "starter sentence" (or phrase; or a title), and use this as the beginning of your writing. [See C2.6, C5.7]

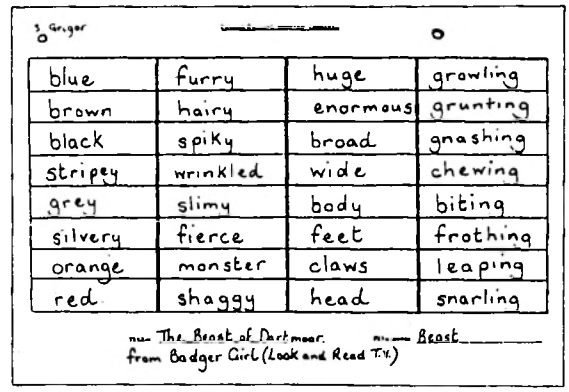




C2. Vocabulary lists

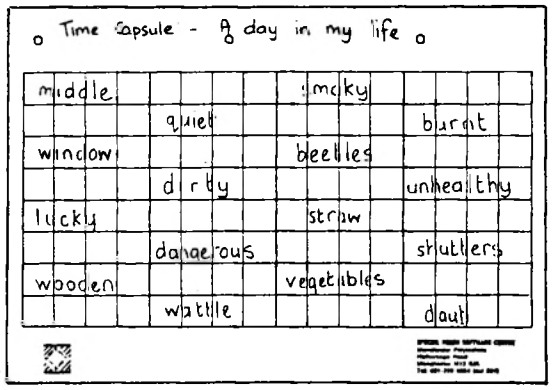
C2.1 OVERLAY SHEET WITH WORDS This is perhaps the commonest way of using PROMPT. The teacher (or the pupils, or both) make an overlay with words (or phrases) linked with a particular theme, or a TV program, or a class visit . . . . .

When pupils then write about the topic, they use the PROMPT word processor; they type in "ordinary" words using the QWERTY keyboard, and use the overlay to PROMPT them to use words they might not otherwise have incorporated, and as an easy way of getting "hard" words into their writing.



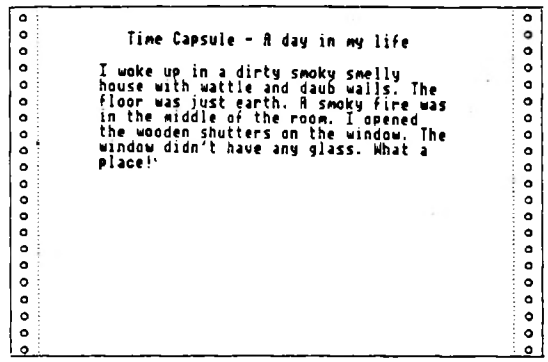
blue	furry	huge	growling
brown	hairy	enormous	grunting
black	spiky	broad	gnashing
stripey	wrinkled	wide	chewing
grey	slimy	body	biting
silvery	fierce	feet	frothing
orange	monster	claws	leaping
red	shaggy	head	snarling

from Badger Girl (Look and Read T.V.)



Time Capsule - A day in my life

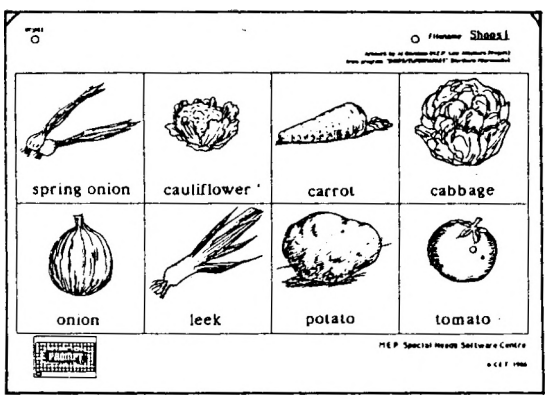
middle		smoky	
	quiet		burnt
window		beetles	
	dirty		unhealthy
lucky		straw	
	dangerous		shutters
wooden		vegetables	
	wattle		daub



Time Capsule - A day in my life

I woke up in a dirty smoky smelly house with wattle and daub walls. The floor was just earth. A smoky fire was in the middle of the room. I opened the wooden shutters on the window. The window didn't have any glass. What a place!

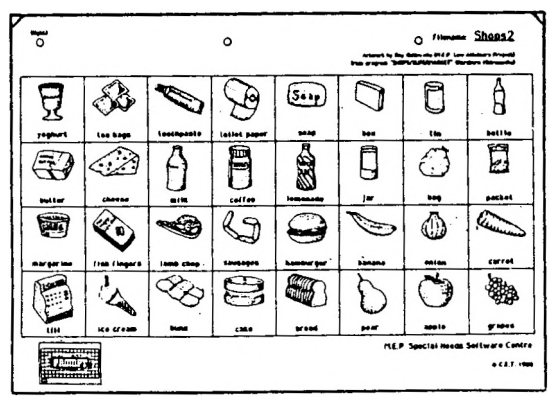
C2.2 "PICTURE DICTIONARY" - OVERLAY SHEET WITH WORDS AND SMALL PICTURES As C2.1, but each word is illustrated with a small picture.



Filename: Shops1

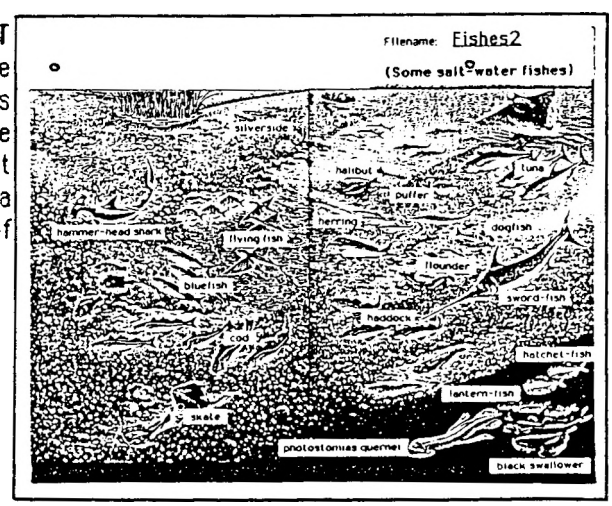
spring onion | cauliflower | carrot | cabbage

onion | leek | potato | tomato

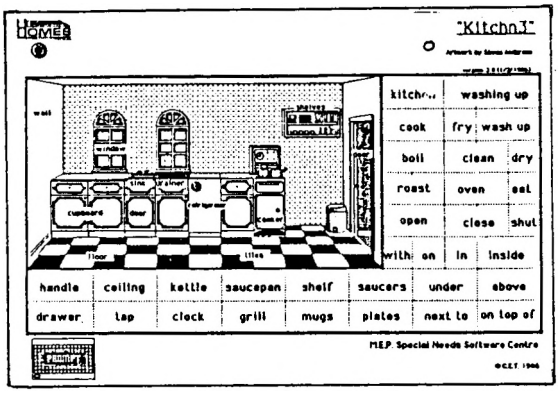


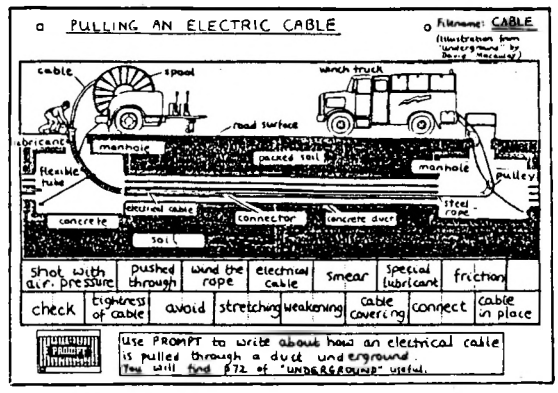
Filename: Shops2

C2.3 "PICTURE DICTIONARY" - OVERLAY SHEET WITH LARGE PICTURE As C2.1, but a large picture is used which covers the whole overlay; words or phrases on small adhesive labels can be stuck on the picture where appropriate. The picture can be in full colour, cut out from a book or a magazine. (You will probably find that a transparent grid is useful for helping design the overlay if you are using a big picture - see C13.)



C2.4 OVERLAY SHEET WITH LARGE PICTURE AND SEPARATE WORDS As C2.3, but the picture does not cover the whole overlay; the rest of the overlay contains related words and phrases.





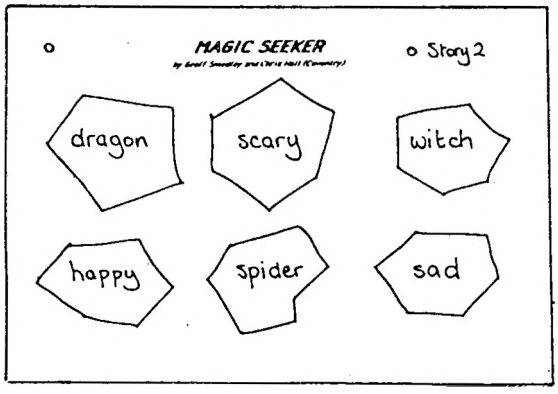
C2.5 OVERLAY SHEET WITH 3-DIMENSIONAL OBJECTS Overlays could contain pop-up card objects, or plastic figures stuck on to the overlay.

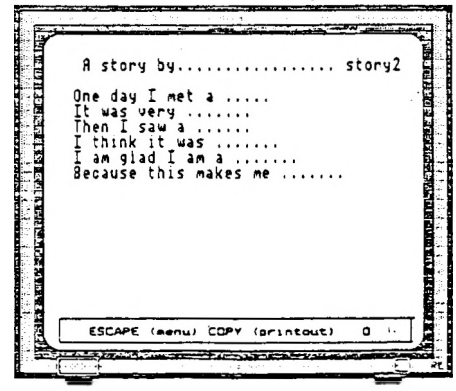
C2.6 VOCABULARY LIST WITH STARTER SENTENCE As C2.1-C2.5, but linked with a starter sentence on a page [see C1.4].

C2.7 PAGE WITH GAPS, LINKED WITH VOCABULARY LIST As C2.1-C2.5, but linked with a page containing gaps to be completed from the overlay [see C3.1-C3.3].

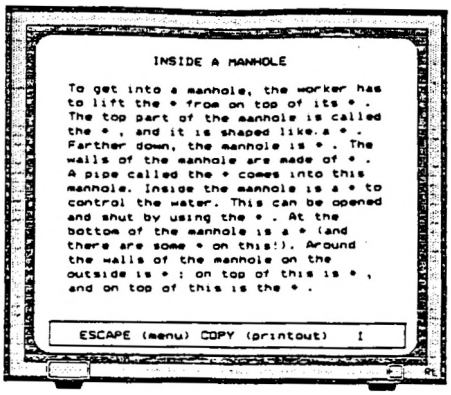
C3. Text with gaps

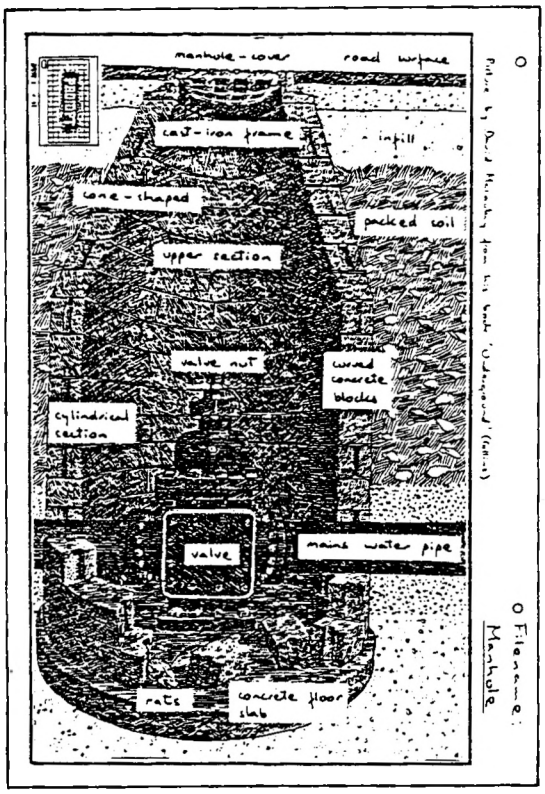
C3.1 TRUE-LENGTH GAPS Pupils load a page containing a "cloze" passage with missing words or phrases. They complete the page from a linked overlay; the length of each gap is shown on the page. (The page would need to be saved in "OVERWRITE" mode - see Reference Section D7.2. If you use phrases, don't split a phrase over the end of a line, as the words might be broken up at the end of the line.) [See C3.5, C3.6]

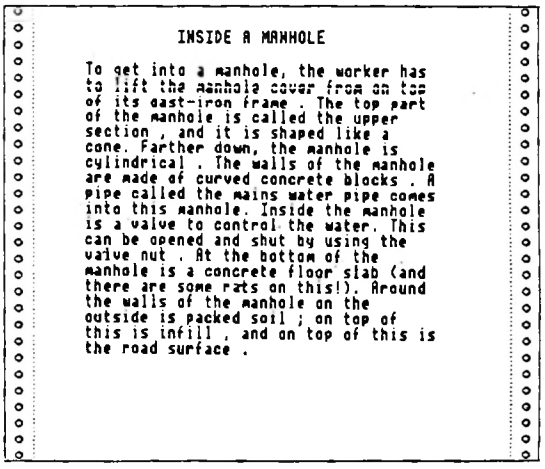




C3.2 "*" GAPS As above, but the position of each missing word is shown only by an asterisk ("*") (or some other symbol), so that pupils do not know how long each missing word is; the passage is completed from the overlay. In each case there is a single correct answer. (The page would need to be saved in "INSERT" mode - see Reference Section D7.2.) [See C3.3, C3.4, C3.7]

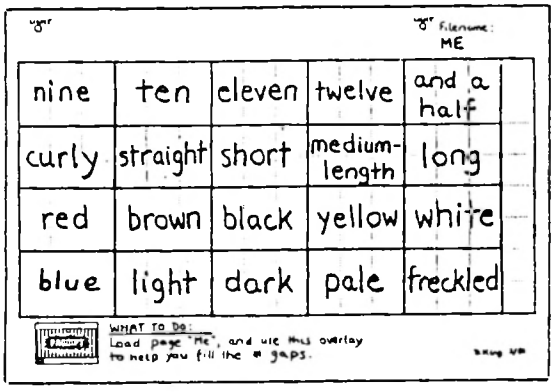


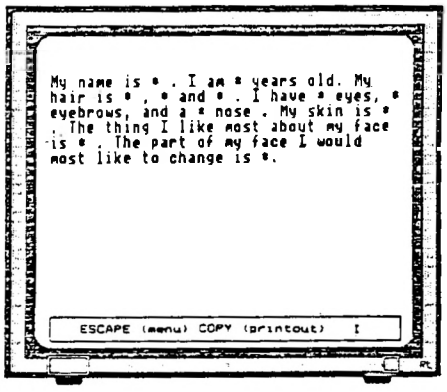




C3.3 COLOUR-CODED MISSING WORDS As C3.2, but each asterisk is a different colour, and the same colour is used for the corresponding missing word from the overlay (this will only work for 7 or fewer missing words) (See C8 on using colours, and Reference Sections D4.8 and D5.11.)

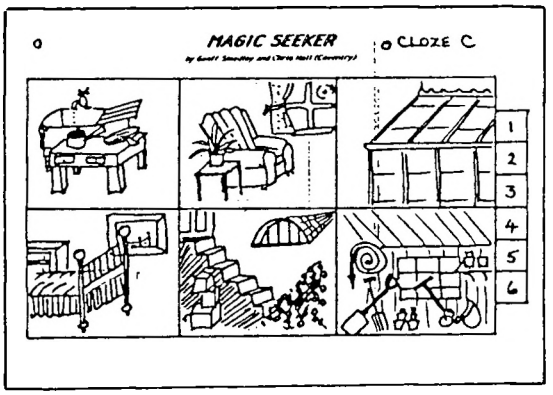
C3.4 "OPEN" GAPS As C3.2, but answers are "open", i.e. pupils can choose whichever of several alternatives they prefer to use, without there being a single correct answer in each case. In this example, pupils will need to use the QWERTY keyboard in some cases to complete the page. [See C3.2, C3.7].

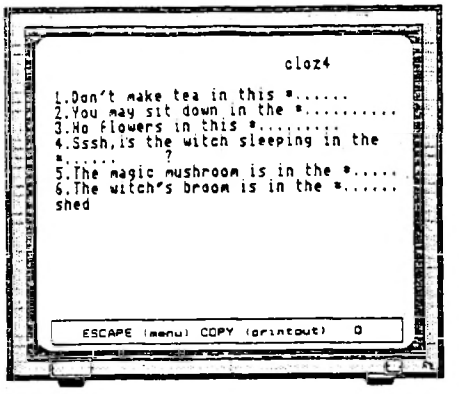


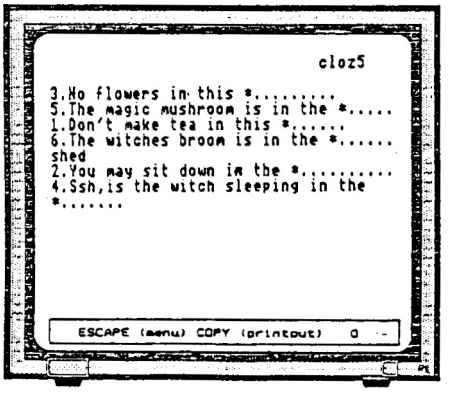


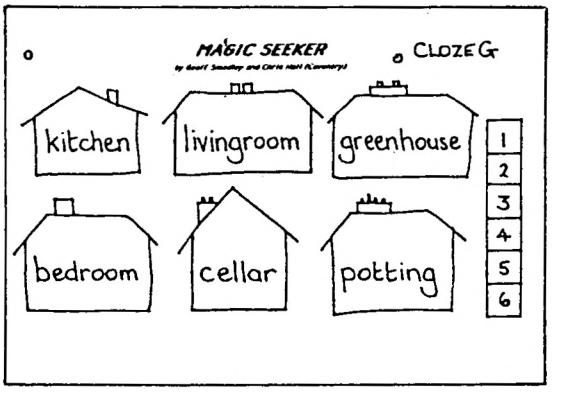
C3.5 AS IN "MAGIC SEEKER" - LINKED WITH VOCABULARY WORK The overlays and pages below are used in Geoff Smedley and Chris Hall's "MAGIC SEEKER" package (see C7.7) to reinforce vocabulary for an "adventure game" - see C9.3 for the corresponding vocabulary-building pages. The numbers on the overlay correspond to the sentence numbers on the screens; if a sentence is corrupted by pupils' entering the wrong response, the sentence can be reformed as it was by pressing the sentence number on the overlay (this rewrites the sentence).

The overlay sheet can either have pictures ("**ClozeC**") or words ("**ClozeG**") (although of course both overlay sheets use the same overlay file, and so the sheets are interchangeable). In the first page ("**Cloz4**"), the sentences are in the same order as the corresponding words on the overlay.; in the second page ("**Cloz5**") this is not the case.





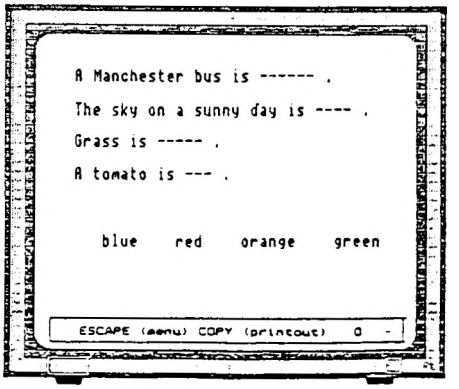




C3.6 TRUE-LENGTH GAPS - QWERTY As C3.1, but without using the Concept Keyboard: missing words are typed in from the QWERTY keyboard [see C3.7-C3.9].

C3.7 "*" GAPS - QWERTY As C3.2, but without using the Concept Keyboard: missing words are typed in from the QWERTY keyboard [see C3.6, C3.8, C3.9].

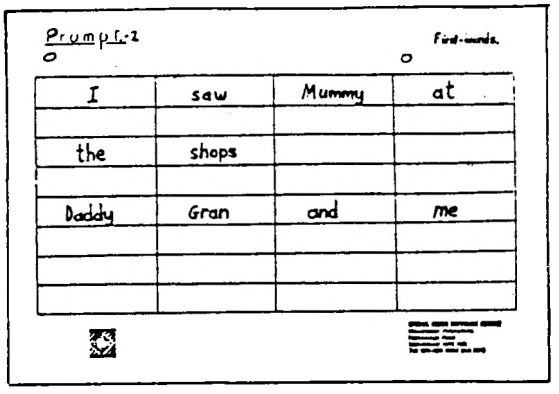
C3.8 GAPS WITH CLUES - QWERTY As C3.6 or C3.7, but with the missing words displayed at the bottom of the page for pupils to copy.

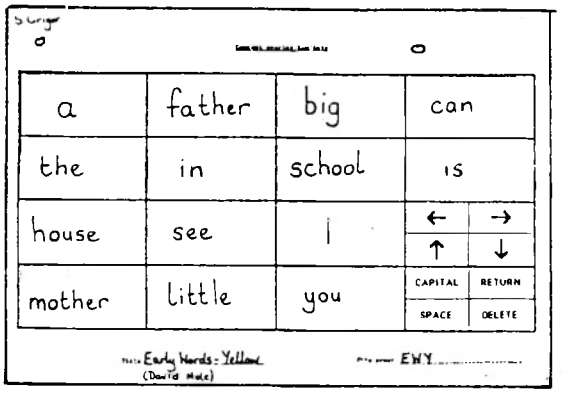


C3.9 GAPS - COMPLETION FROM ALPHABETIC OVERLAY As C3.6-C3.8, but using an alphabetic overlay [see C6] to type in the answers instead of the QWERTY keyboard.

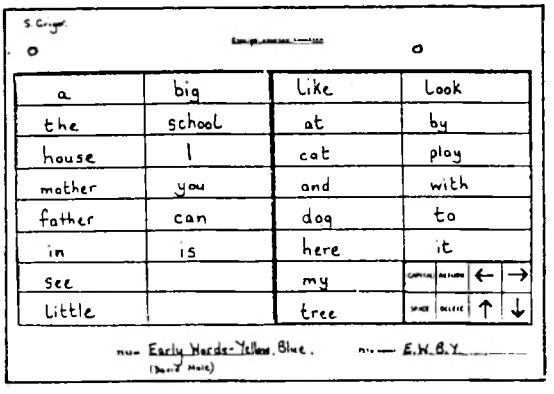
C4. "Breakthrough-style"

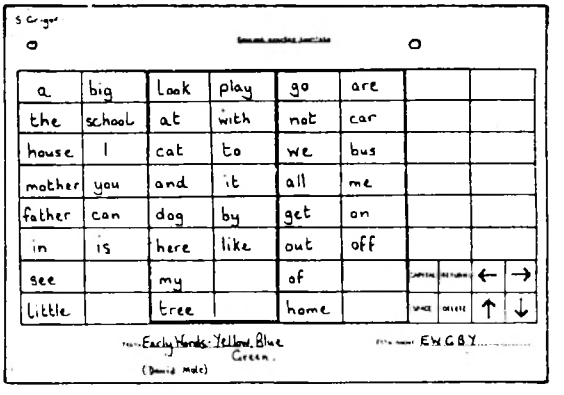
C4.1 RECOMBINING The overlay contains a small number of words or phrases which make up one or more simple sentences; the pupil uses the overlay to recombine these sentences. The overlay also contains "editor squares" (RETURN, DELETE, and ARROW KEYS, and perhaps the CAPITAL key). [See C4.2, C4.7, C5.4].

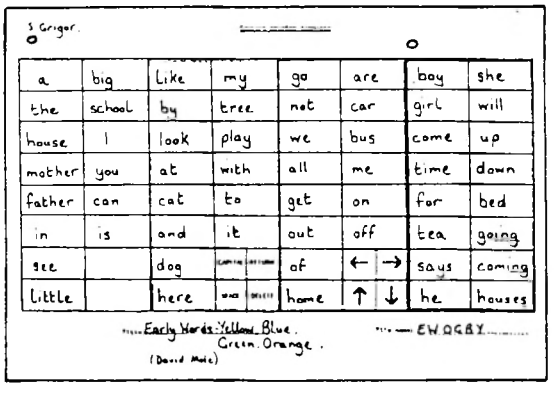


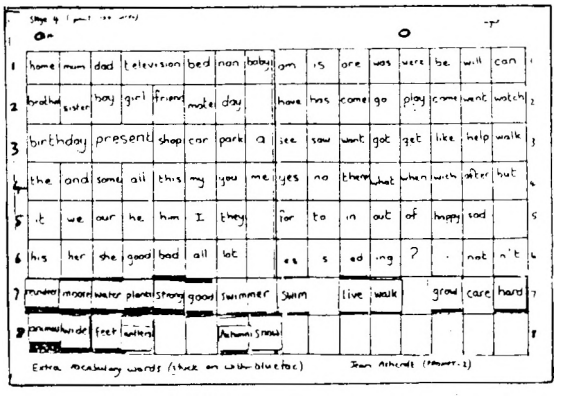


C4.2 "BREAKTHROUGH" Pupils start with C4.1, and then move up to overlay sheets containing more and more words [see C4.3, C4.5] (up to about 120 words can be used). PROMPT has been used very successfully in this way in Sefton (see T.E.S. Computers Extra of 27/10/1985); some examples of this are shown here, in C4.3, and in C11.2. The handwritten work shows typical examples of a pupil's work before and after using PROMPT.

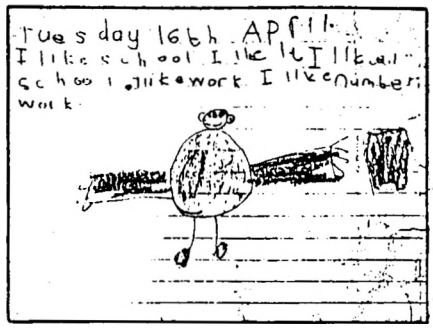


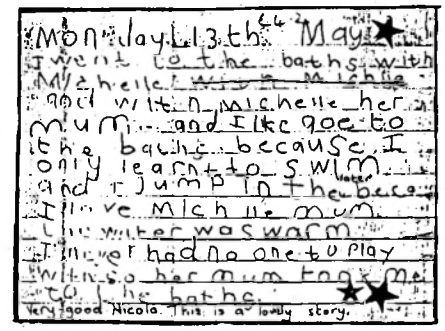


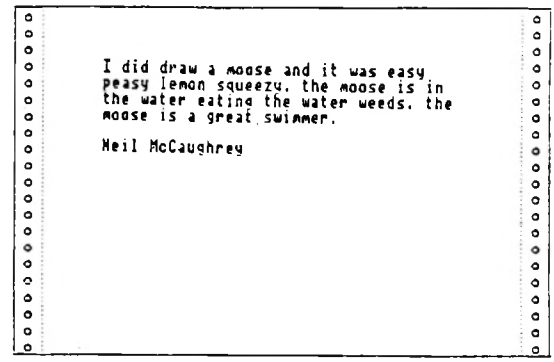




The overlay on the right has additional vocabulary words temporarily stuck onto it [see C4.3, C4.4].



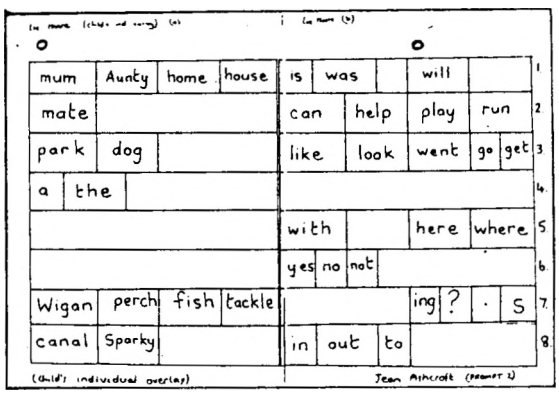


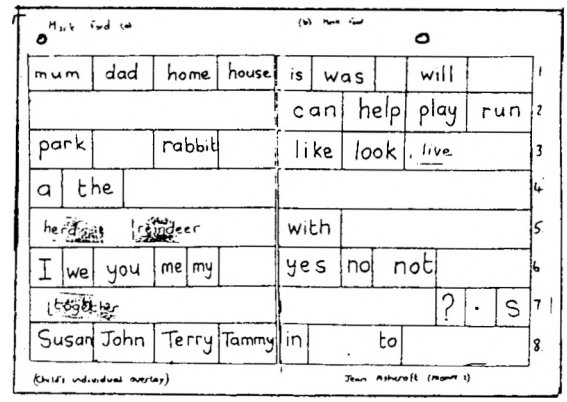


Above left:
Typical written work before using PROMPT.

Above right:
Typical written work after using PROMPT.

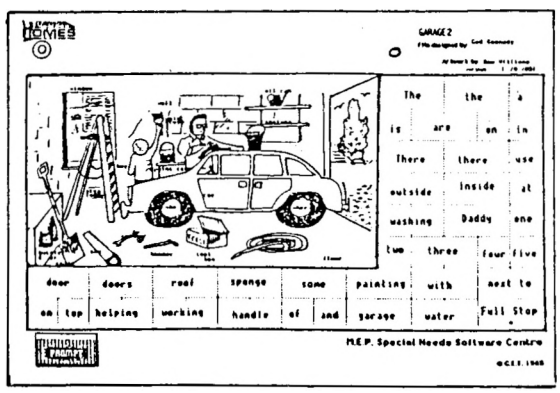
C4.3 CUSTOMISED "BREAKTHROUGH" As C4.2, but with a customised wordlist for a specific pupil [see C4.4, C4.5].

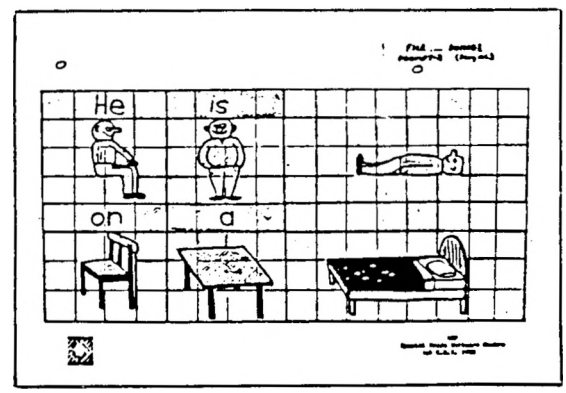




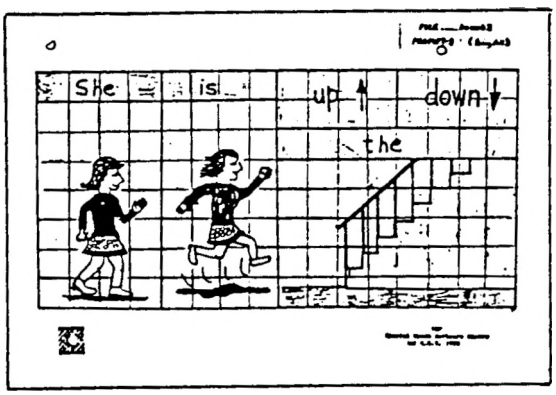
C4.4 "BREAKTHROUGH" WITH SIGHT VOCABULARY As C4.2, but with a specific sight vocabulary on the overlay as well as the basic vocabulary [see C4.5].

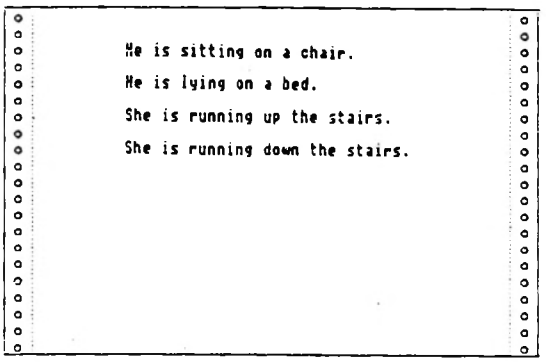
C4.5 "BREAKTHROUGH" WITH PICTURE(S) As C4.4, but with the sight vocabulary illustrated by a large picture, or by several small pictures [see C2.2, C2.4].





C4.6 "PICTURES FOR WORDS" As C4.1, with sentences built up entirely from overlay; but the overlay contains simple pictures to illustrate the words.





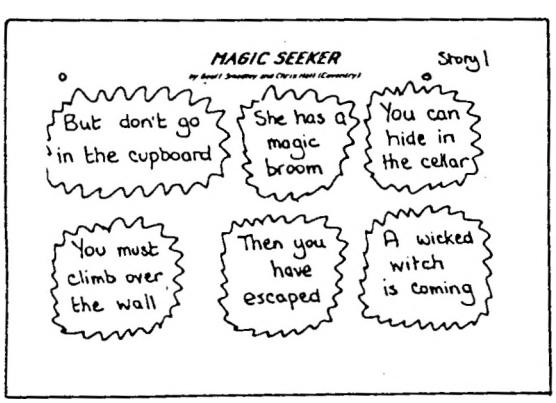
C4.7 "COPYING" The pupils load a page containing some writing, with all the words in one colour (say, light blue); the page is linked with an overlay containing the same words, but the words in the overlay file are all in a different colour (say, yellow). Pupils "copy" the page by pressing on the correct words on the overlay; the words they have entered will be shown in the second colour (see C8 for using colours). It will be easiest if there is a SPACE and then a COLOUR CODE before each word on the page. The page will need to be saved in OVERWRITE mode (see D7.2). [See C4.1]

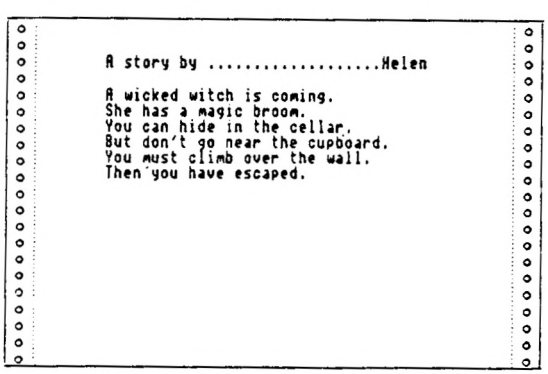
C4.8 "BREAKTHROUGH" WITH STARTER SENTENCES As C4.1-C4.6, but overlay is linked with a page containing a "starter" sentence (see C1.4).

C4.9 "BREAKTHROUGH" WITH PAGES WITH GAPS As C4.1-C4.6, but overlay is linked with a page containing a passage with missing words (see C3.1-C3.4).

C5. Sentences on the overlay

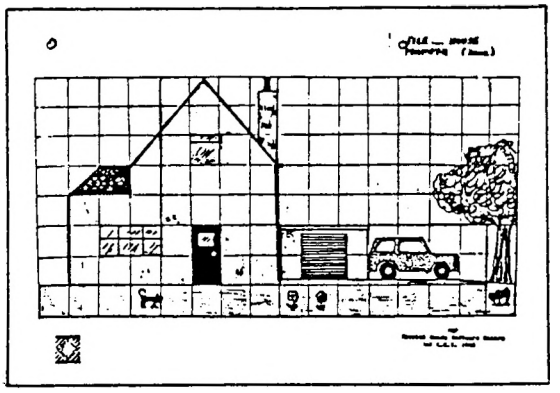
C5.1 SEQUENCING SENTENCES The sentences making up a story (or other type of passage) are put on the overlay in jumbled order. The pupil has to re-assemble the sentences in the correct sequence. [See C5.2, C5.3, C5.4]

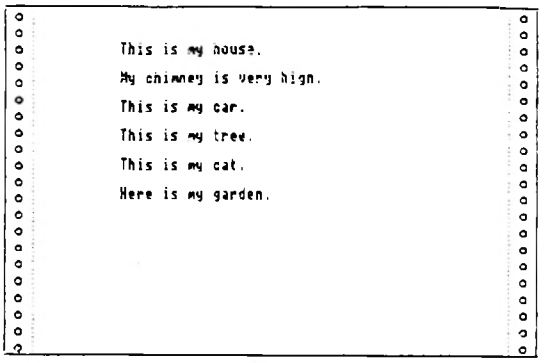




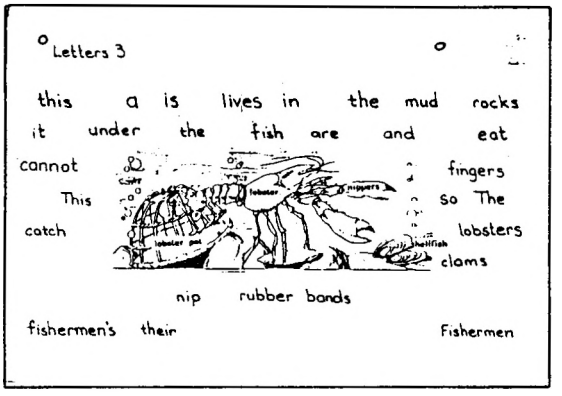
C5.2 MIX AND MATCH SENTENCES The overlay contains sentences which can be put together in several different ways. Pupils use these sentences to put together the story of their choice. [See C5.3]

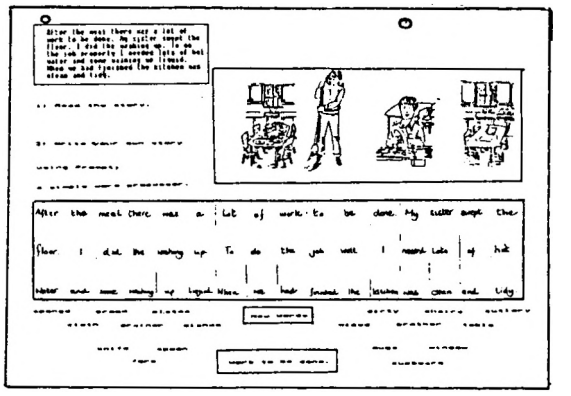
C5.3 "PICTURE SENTENCES" As C5.1 or C5.2, but the overlay contains pictures, not words; the pictures illustrate the sentences in the overlay file.



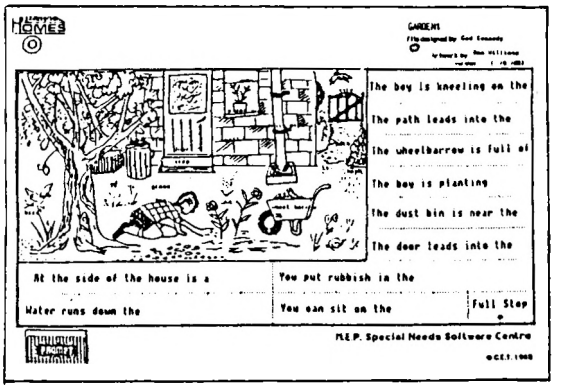


C5.4 RE-ASSEMBLING SOME WRITING The overlay contains phrases and words (some of which might be linked with a picture). Pupils try to put these together to re-assemble some writing (perhaps a page from a reading book). [See C4.1, C4.7, C5.1, C5.5]

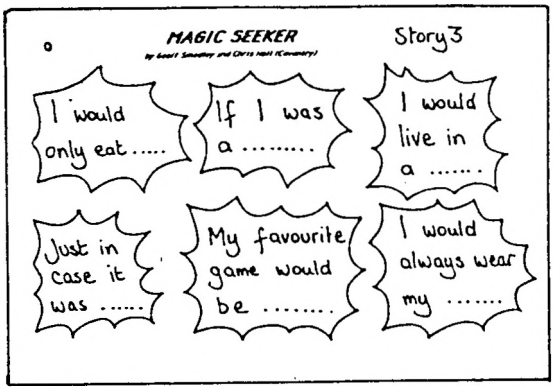


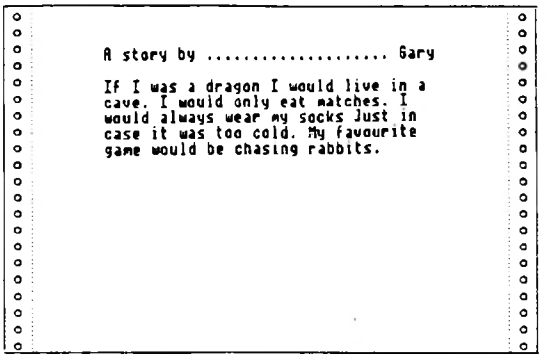


C5.5 COMPLETING SENTENCES The overlay contains incomplete sentences, and also a range of words or phrases to complete these sentences; pupils put these together as they want. In the example shown, the words to complete the sentences are to be found on the picture (incidentally, the writing on the overlay was made using PROMPT, and was then cut out and stuck on the overlay sheet). [See C5.4]

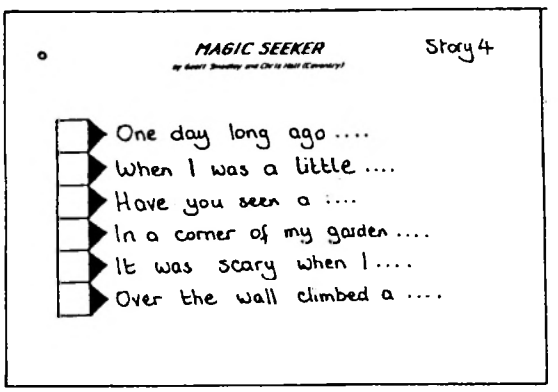


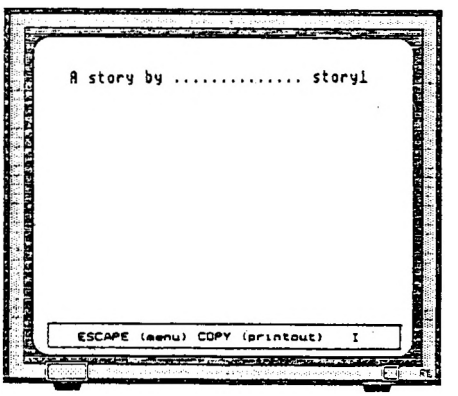
C5.6 OPEN-ENDED SEQUENCING The overlay contains a series of incomplete sentences; pupils arrange these into a suitable order, and complete them.



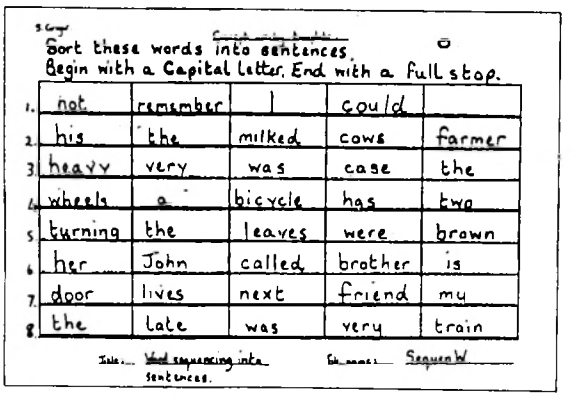


C5.7 STARTER SENTENCES The overlay contains a choice of starter sentences; pupil chooses one.



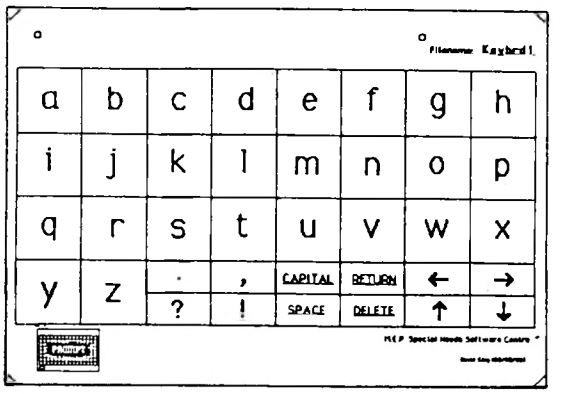


C5.8 UNJUMBLE THE SENTENCES The overlay contains several sentences; each has been broken up into its component words, and put in jumbled order on one of the rows of the overlay. Pupils try to re-assemble each sentence correctly.

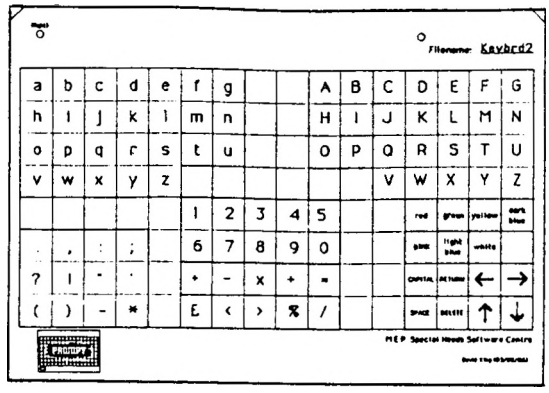


C6. Alphabetic overlays

C6.1 LOWER CASE ALPHABET The overlay contains all of the lower case letters; some punctuation marks; and editor squares (including CAPITAL); pupils use the Concept Keyboard instead of the QWERTY keyboard to make words up from individual letters. Pupils use the CAPITAL square to make upper case letters. This type of overlay can be useful if linked with a "Breakthrough-style" approach (see C4); it can also be valuable in a some cases where a user is unable to use the QWERTY keyboard for physical reasons (see C12). [See C6.2]



C6.2 UPPER AND LOWER CASE ALPHABET As C6.1, but the overlay also contains all of the upper case letters. (Note that the overlay shown here also contains colour codes - see C8.3 and Reference Section D4.8.)



C6.3 LINKED WITH STARTER PAGES As C1.4, but using an alphabetic overlay instead of the QWERTY keyboard.

C6.4 LINKED WITH PAGES WITH GAPS As C3.6-C3.8, but using an alphabetic overlay instead of the QWERTY keyboard.

C6.5 WORD PARTS As C6.1 (or C6.2), but also containing consonant clusters (e.g. "pl", "str", etc.) or common syllables (e.g. "ing", "ed", etc.). [See C10.1-C10.4]

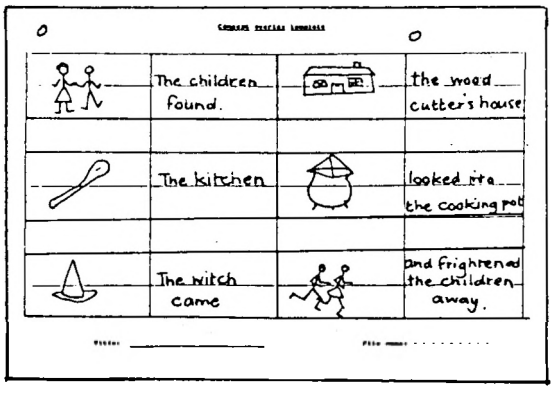
C7. "Mix and match" with other programs

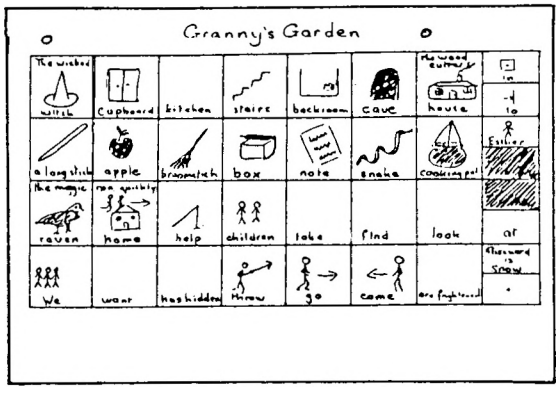
C7.0 Like all programs (and other classroom resources), PROMPT is of course most effective if it is used not in an isolated way, but together with other materials. These materials include other computer programs; here are a few suggested links. (See also Reference Section D10)

C7.1 WITH OTHER WORD PROCESSORS PROMPT cannot replace other word-processors. Sometimes PROMPT might be the appropriate program to use; often not. There is no reason why PROMPT and other, more powerful, word processors cannot be used side by side, with the pupils using whichever is most appropriate for their particular needs at any specific time. PROMPT can also be used in tandem with PICTURE WRITER (M.E.P. Blue File - due for publication May 1986); this is a simple word-processor which uses high-resolution graphics screens, and so offers a different way of prompting pupils to write.

Pupils can start a piece of writing in PROMPT, and then complete it in a more powerful word processor such as WORDWISE PLUS (see Reference Sections D10.1, D3.11).

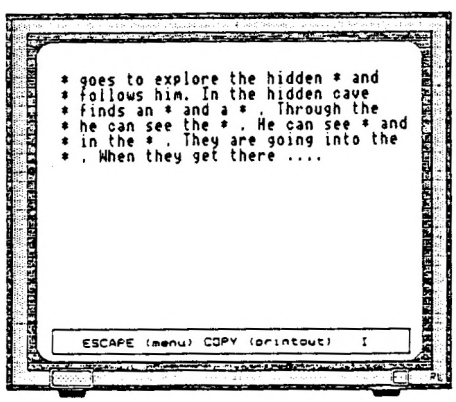
C7.2 WITH SIMULATIONS OR "ADVENTURE GAMES" Why not make an overlay file of words or phrases needed for doing some writing that has been sparked off by an adventure game or simulation? And perhaps combine this with pages with gaps [see C3.1-C3.5]? And make some overlays with jumbled sentences [see C5.1, C5.2]? (Or, better still, get the pupils to make the files!) (See MAGIC SEEKER in C7.7.)

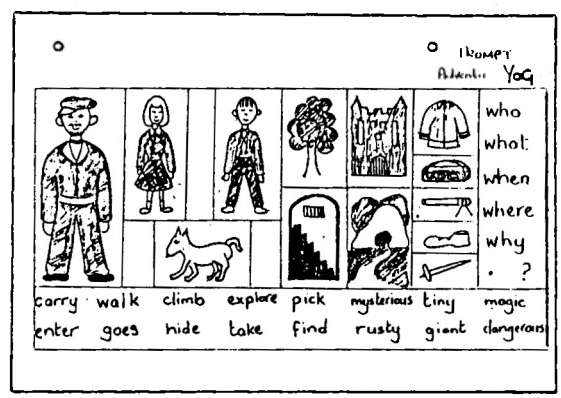




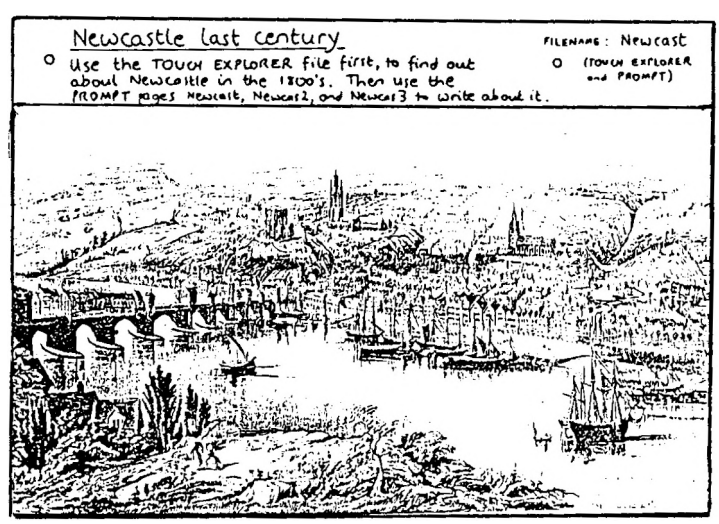
C7.3 WITH "TOUCH EXPLORER" TOUCH EXPLORER (M.E.P. Blue File) is a "framework" program which generally mixes very well with PROMPT. TOUCH EXPLORER encourages pupils to read and to extract information by pressing on squares on Concept Keyboard overlay sheets; they can then use PROMPT to write about what they have read, or the teacher can prepare suitable PROMPT overlays and/or pages.

TOUCH EXPLORER overlay sheets can also be used with PROMPT; here are two examples of this. "**YOG**" is designed to follow a similar TOUCH EXPLORER file which gives details (often amusing and/or intriguing) of the characters and places shown on the overlay; the aim is to spark off some imaginative writing by pupils. One of the linked screens and a typical page of writing are also shown. "**NEWCAST** " has an engraving is of Newcastle-upon-Tyne in the last century. The associated TOUCH EXPLORER file uses the same overlay sheet, and contains full information about the various things shown in the picture; the PROMPT overlay file contains only the names of these objects and places (e.g. "Newcastle Cathedral", "the old Tyne Bridge", "the Quayside", etc), and there are linked PROMPT pages for pupils to complete. (We are at present working on **TOUCH EXPLORER 2**, an improved version of TOUCH EXPLORER; it will be possible to load PROMPT-3 overlay files into this program, and then adapt them to contain more information as needed for TOUCH EXPLORER. This will save time when designing complicated overlay sheets which you want to use with both programs.)

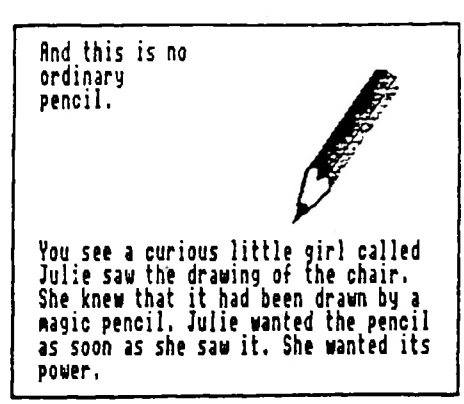




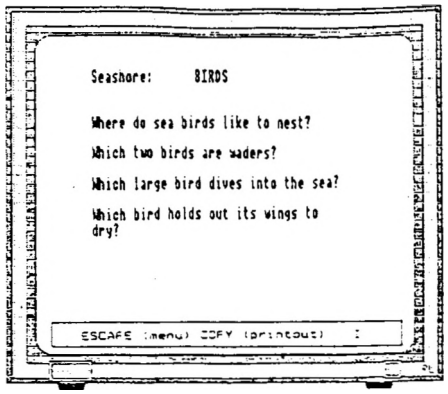
Cyril goes to explore the hidden cave and Woof the dog follows him. In the hidden cave Cyril finds an old coat and a telescope . Through the telescope he can see the haunted castle . He can see Mr. Yog and Doreen in the haunted castle . They are going into the secret dungeon . In the secret dungeon they look for the sword . The door closes behind them. They are trapped.



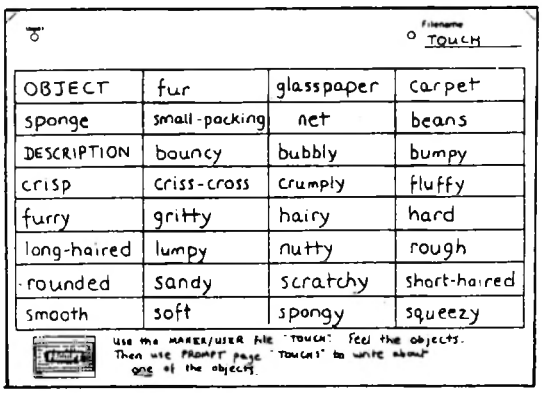
C7.4 WITH "PICTURE PLAY" PROMPT has been used successfully with PICTURE PLAY (M.E.P. Blue File) to produce customised reading books; PROMPT was used to make the text, and PICTURE PLAY to choose and printout the illustrations (see Educational Computing, Jan. 1986).



C7.5 WITH "LISTS" OR OTHER DATA BASE PROGRAMS LISTS (M.E.P. Blue File) is a simple introductory data base program. The words used for the items in a particular data base, and the different "headings" ("fields") used, could be put onto a PROMPT overlay; the teacher (or pupils) could make pages for other pupils to complete using the information in the database (e.g. linked with a database file about the pupils in a class: "Gary's favourite food is *. The other people who like the same food are *, *, and *." - where the pupils replace the asterisks with the appropriate information).

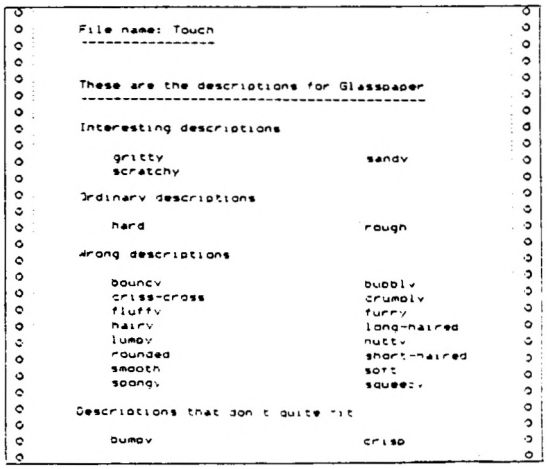


C7.6 WITH "MAKER/USER" MAKER/USER (Northern MicroMedia) is a "framework" program which is designed to encourage pupils to make their own files of descriptive words linked with a particular set of objects (e.g. pets, or flowers). These words, and the names of the objects described, would make a useful overlay file.


Filename: TOUCH

OBJECT	fur	glasspaper	carpet
sponge	small-packing	net	beans
DESCRIPTION	bouncy	bubbly	bumpy
crisp	criss-cross	crumply	fluffy
furry	gritty	hairy	hard
long-haired	lumpy	nutty	rough
rounded	sandy	scratchy	short-haired
smooth	soft	spongy	squeezy

Use the MAKER/USER file "TOUCH". Feel the objects. Then use PROMPT page "TOUCH1" to write about one of the objects.


File name: Touch

These are the descriptions for Glasspaper

Interesting descriptions

gritty	sandy
scratchy	

Ordinary descriptions

hard	rough

Wrong descriptions

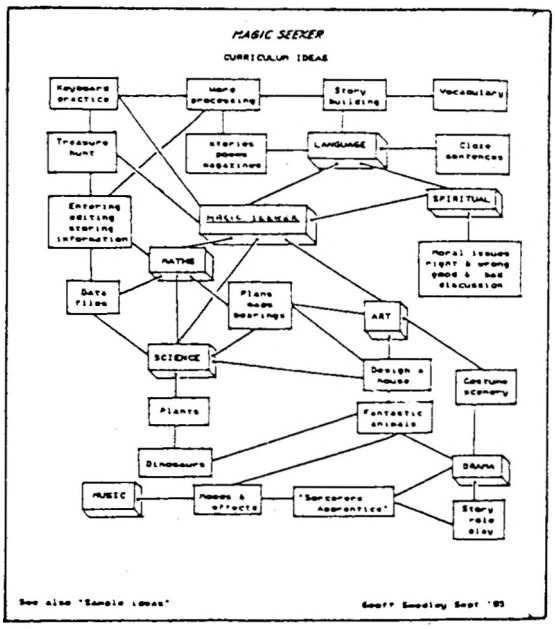
bouncy	bubbly
criss-cross	crumply
fluffy	furry
hairy	long-haired
lumpy	nutty
rounded	short-haired
smooth	soft
spongy	squeezy

Descriptions that don't quite fit

bumpy	crisp

(printout from MAKER/USER)

C7.7 IN A TOPIC, WITH SEVERAL "FRAMEWORK" PROGRAMS PROMPT can be combined with the programs mentioned above, and/or with other "framework" programs such as TRAY, to make a set of interlinked files on a particular topic. An excellent example of this is Geoff Smedley's **MAGIC SEEKER** package, which is based on a simple adventure game using TOUCH EXPLORER, and which contains a large number of files (for PROMPT, TOUCH EXPLORER, and LISTS) which provide a carefully structured set of preliminary and follow-up exercises to the "game" (see C3.5, C5.1, C5.6, C5.7, C9.3). Another example is the Special Needs Software Centre's **HOMES** theme. [The five MAGIC SEEKER discs will be available through the Blue File distribution system. The MAGIC SEEKER Pack (which includes 18 laminated overlays and full documentation, but NOT the discs) is available from Elm Bank Teachers' Centre, Mile Lane, Coventry CV1 2LQ; the price is £2.80 plus £1.10 p&p (cheque with order, for Elm Bank Teachers' Centre). The HOMES theme discs should be available through the Blue File system in Spring 1986.]



C8. Using coloured text and graphics

C8.1 COLOURED WORDS It is easy for pupils to use coloured words when they are using the PROMPT word-processor. Pressing the red "function keys" **f1 - f7** puts a "colour control code" on the screen; and any other writing on the rest of the line will be in the colour chosen; see Reference Section D4.8 for details. [See C8.2, C8.3]

C8.2 COLOURED BACKGROUNDS Different coloured backgrounds can also be used. These need 3 "control codes" on the same line: the background colour, then **f8**, and then the text colour. See Reference Section D4.8.

C8.3 COLOURED WORDS ON AN OVERLAY Coloured words (but not words on coloured backgrounds) can be put on an overlay by pressing the appropriate function key when making an overlay. This can be done for decorative purposes; but it can also be very valuable in matching exercises for up to 7 groups, one for each colour available (see section C9). It is easiest to make these overlays using an "irregular grid" so that you can see what you are doing. [See C8.4, C8.5]

C8.4 COLOUR CODES ON OVERLAY Colour codes on their own (but not background codes) can be put on an overlay by pressing the appropriate function key, and then RETURN - see overlay "Keybrd2" [C6.2]. Use an "irregular grid" (see C8.3).

C8.5 GRAPHICS FROM QWERTY KEYBOARD PROMPT can be used to give chunky "teletext" graphics; however, these are difficult to use (see Reference Section D4.9). [See C8.6, C8.7]

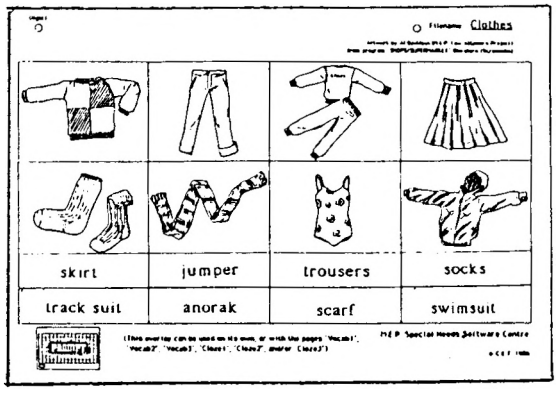
C8.6 GRAPHICS FROM AN OVERLAY Most teletext "graphics codes" (but not the codes for a new background, or for a solid block) can be put directly onto an overlay by pressing CTRL and one of the red function keys (see Reference Section D4.9). If you understand how Mode 7 Teletext graphics work, you can use an overlay similar to that in C6.2, but with graphics colour codes and the corresponding graphics shapes on the overlay instead of (or as well as) the lowercase letters, numbers, punctuation marks, etc. Pupils would need to use the red "function keys" for "background codes" and solid blocks. Use an "irregular grid" to make the overlay. See Reference Sections D4.9, D4.8, D5.5.

C8.7 MIXING GRAPHICS AND WRITING Pupils could make a page with graphics at the top, and save this; either they or other pupils could load the page and write on the rest of the page (with or without an overlay).

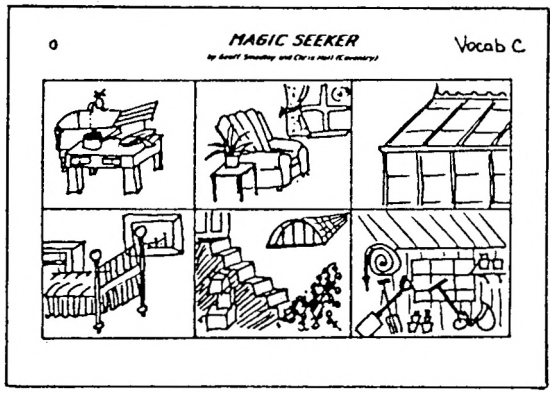
C9. Matching

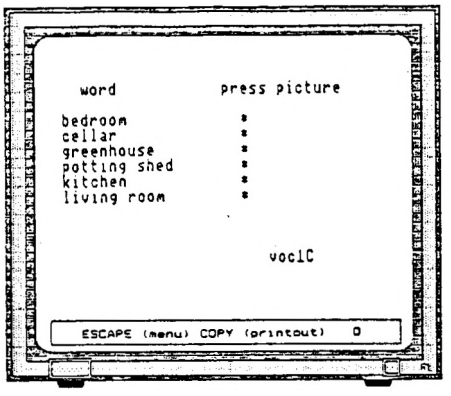
C9.1 MATCHING PICTURES ON THE OVERLAY WITH WORDS ON THE SCREEN The overlay sheet contains pictures (or numbers); pressing each picture produces the corresponding word or words. A linked page contains the same words, perhaps with an asterisk next to each; pupils move the cursor to the correct point on the page, and press what they think is the appropriate picture to produce the matching word. If they are wrong, they can delete their response and try again.[See C9.2-C9.4]. Example: see screen "**Voc1C**" and overlay "**VocabC**" in C9.3.

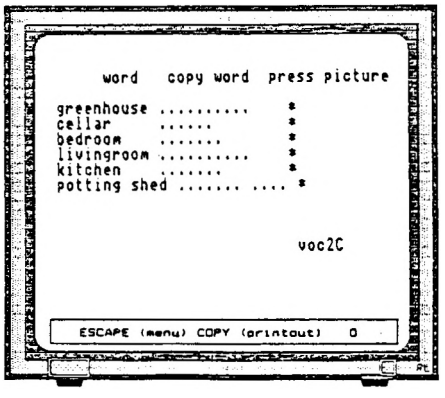
C9.2 MATCHING PICTURES AND WORDS ON THE OVERLAY The overlay sheet contains both pictures and words, but not shown in pairs; pupils find the matching pairs, and put each onto a separate line on the screen. The word "under" the picture is the same as the word shown on the overlay, so that pupils can see when they have made a correct match.

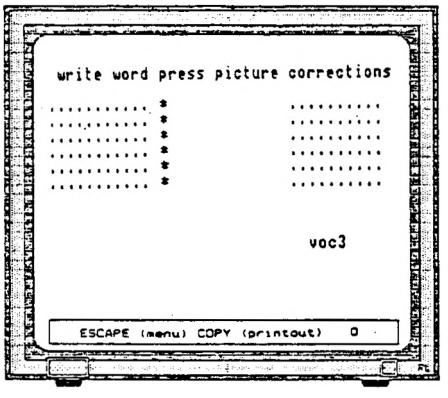


C9.3 BUILDING VOCABULARY The overlay and sequence of pages below are used in Geoff Smedley and Chris Hall's "MAGIC SEEKER" package (see C7.7) to build vocabulary needed for a particular "adventure game" - see C3.5 for the corresponding vocabulary-reinforcing pages. There are three levels, each using the same overlay ("**VocabC**"). Level 1 ("**Voc1C**") is as C9.1. In level 2 ("**Voc2C**") the pupil copies the word on the screen, and then presses the appropriate picture on the overlay. In level 3 ("**Voc3C**"), no words are shown on the screen; pupils choose one of the objects on the overlay, write on the screen how they think the word is written, and then press on the picture to see if their word is correct. If not, they copy the correct word.

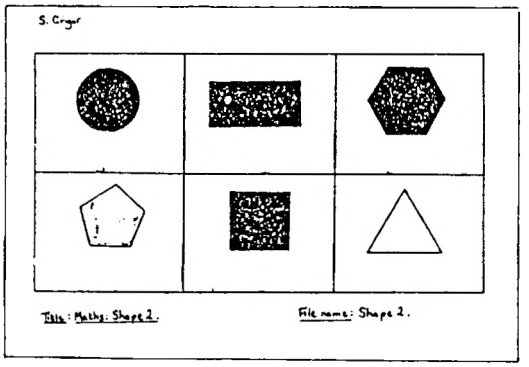


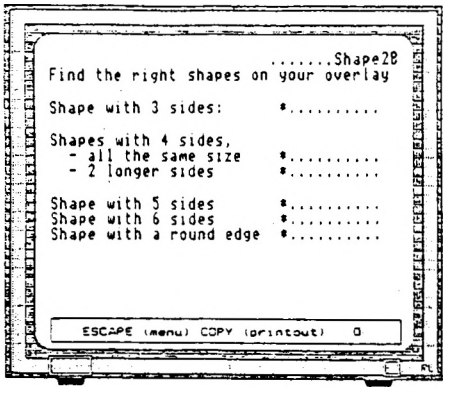


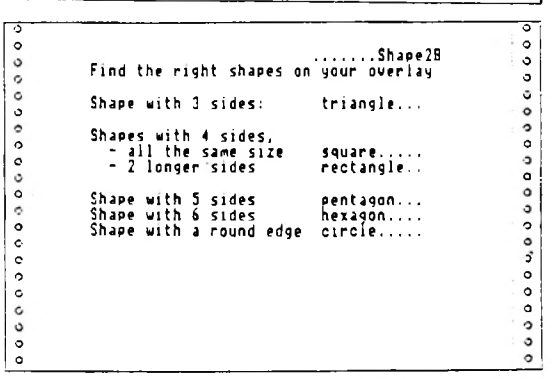




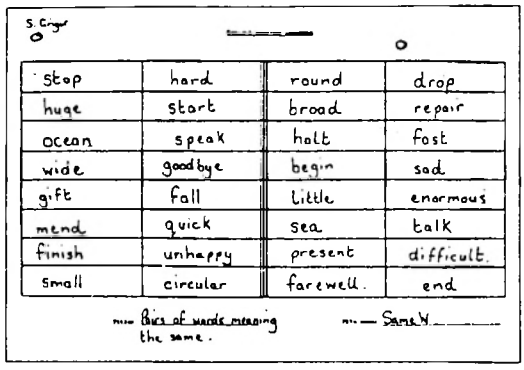
C9.4 MATCHING PICTURES AND DEFINITIONS
As C9.1, but the linked page contains definitions of the objects on the overlay; pupils press each object to put its name next to the appropriate definition on the page.





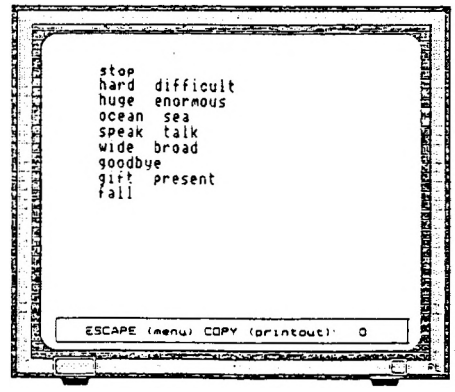


C9.5 PAIRS OF SYNONYMS The overlay contains a number of pairs of words which mean the same; pupils find each pair of synonyms, and put each pair on a separate line on the page. [See C9.6]



stop	hard	round	drop
huge	start	broad	repair
ocean	speak	halt	fast
wide	goodbye	begin	sad
gift	fall	little	enormous
mend	quick	sea	talk
finish	unhappy	present	difficult
small	circular	farewell	end

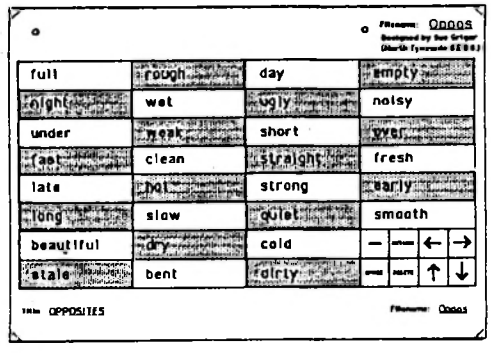
Pairs of words meaning the same.



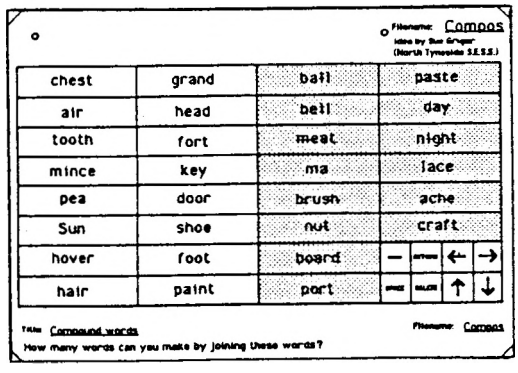
C9.6 COLOUR-CODED SYNONYMS As above, but the words in each pair have the same colour in the overlay file, so that pupils know when they have made a correct match (up to 7 pairs can be made using different colored text). [See C8.3]

C9.7 HOMOPHONES As C9.5 or C9.6, but with pairs of words that sound the same, with or without colour coding.

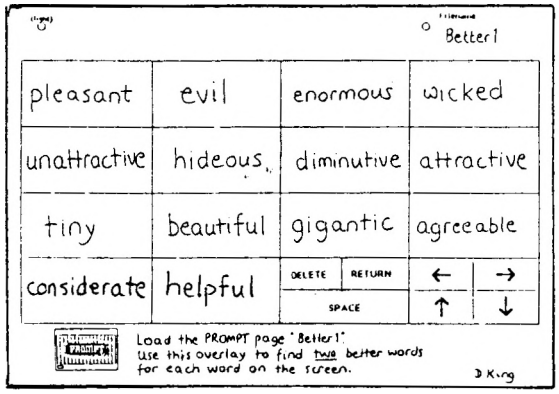
C9.8 OPPOSITES As C9.5 or C9.6, but with pairs of opposites instead of synonyms, with or without colour-coding.

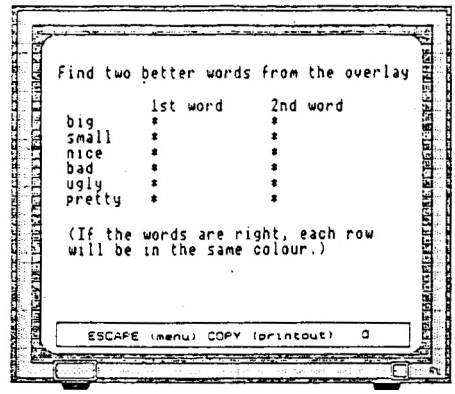


C9.9 COMPOUND WORDS As C9.5 or C9.6, but the pairs of words make up compound words (e.g. "chest" and "nut" to make "chestnut"). Can be colour-coding if wanted. The overlay file was made without "automatic spaces" (see Reference Section D5.4). The words that make up the first halves of the compound words have no space after them; the second-half words could have a space if wanted.

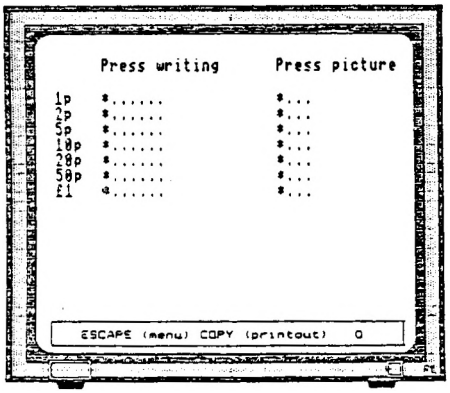


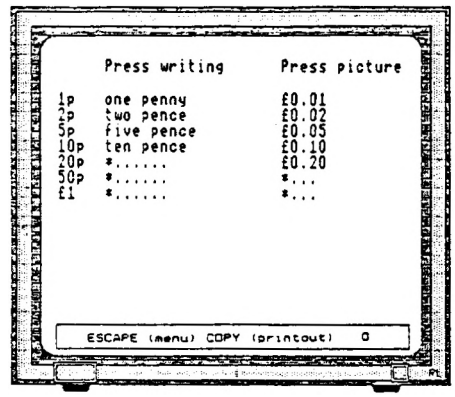
C9.10 THREE-WAY MATCHING - SYNONYMS C9.1-C9.9 are different forms of **two-way matching**. PROMPT can also be used for three-way matching in various ways. One of the most useful approaches is of the type illustrated here. On the screen is a list of over-used words; two alternatives for each are shown on the overlay. Each set is colour-coded (see C8.4). Pupils try to find the sets of alternative words. (Of course, you could have any number of words(or phrases) in each set.) [See C9.11 - C9.13]

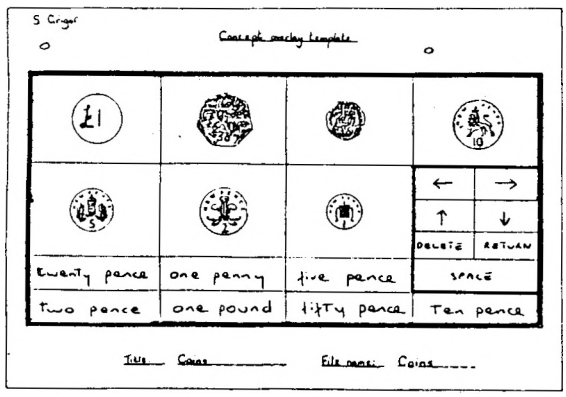


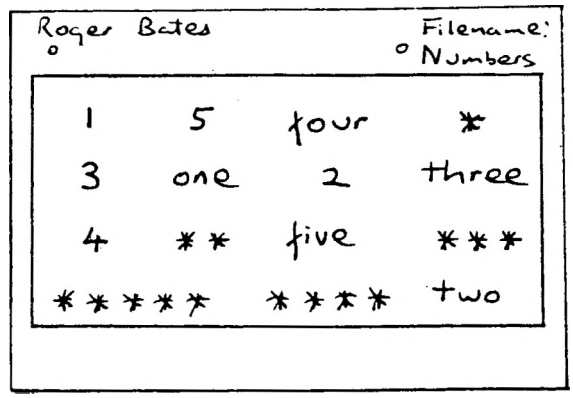


C9.11 THREE-WAY MATCHING - NUMBERS, WORDS AND PICTURES A combination of C9.1 and C9.5:. The overlay contains both pictures of coins and their value in words; a linked screen contains the corresponding values in figures. The pupil completes the screen by moving the cursor to theappropriate place and pressing the correct words and coin. When a coin is pressed, its value in decimal notation (or alternatively in words) is shown. Colour-coding can be used to show pupils whether they have made the match correctly; in this case, there can be up to 7 "three-way matches". (Pictures could be used in a similar way with other word pairs that could be linked with illustrations.) [See C9.13 for a different type of three-way matching].





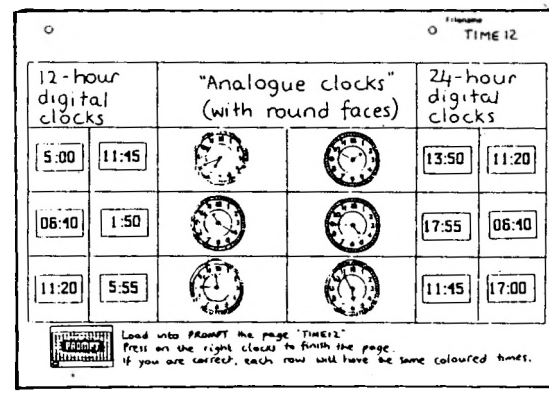


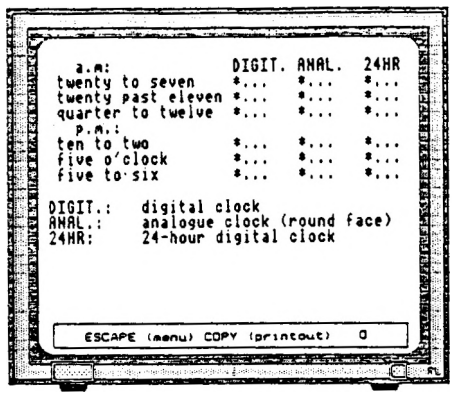


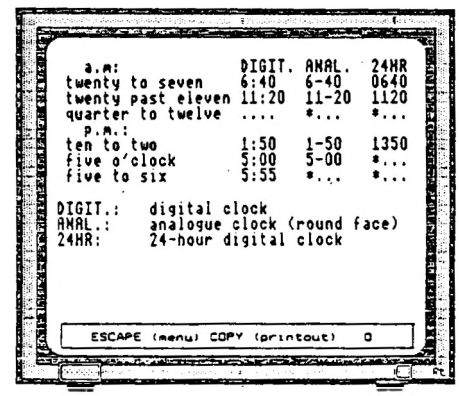
C9.12 SIMPLE NUMBER BONDS In a sense, different ways of expressing a number are equivalent to synonyms; so the approach of C9.1, C9.2, or C9.4 can be used in simple number work. You can also do multiple matching of equivalent number bonds using colour-coding; the overlay could contain various ways of expressing several numbers (e.g. "1+3", "2+2", "3+1", all in yellow; and "5+2", "4+3", "1+6", all in green; etc); pupils try to find as many matching bonds as possible. (This is only one of the many approaches that could be tried.)

NOTE: we have heard very little about the use of PROMPT in number work. Perhaps it isn't useful at all (after all, it is a word-processor!). If you try PROMPT out in this way, do let us know what you find; please let us know what seems to work and what doesn't.

C9.13 TIME As C9.1, C9.2, C9.4, C9.5 or C9.6, but using various combinations as required of pictures of analogue clock faces, the time in words, and/or the time in 12-hour or 24-hour digital form; or as in C9.11-C9.12, with three-way matching (or more). If there are seven or fewer different times, a different colour can be used for each set of ways of expressing the same time, so that the pupils know when they have made a correct match.







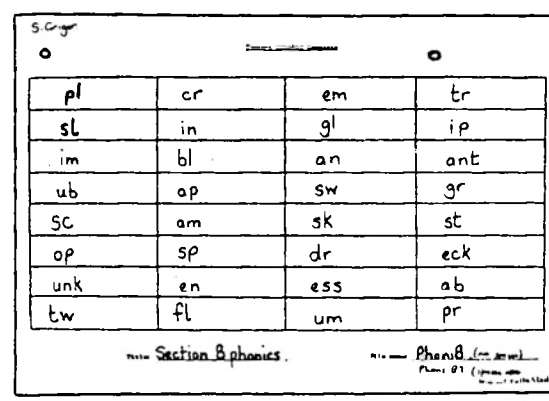
C9.14 OTHER LANGUAGES As in C9.1 or C9.2, but with the words in another language; or as in C9.5 - C9.9, but using pairs of words in two different languages, e.g. English and Welsh, colour coded if desired [see C10.9-C10.14].

C10. Miscellaneous

C10.1 PAGE WITH MISSING WORD PARTS Word parts (e.g. "br", "ing", etc) on overlay; a linked page has words with missing parts. Pupils complete the passage from the overlay. [See C3.6-C3.8, C6.5]

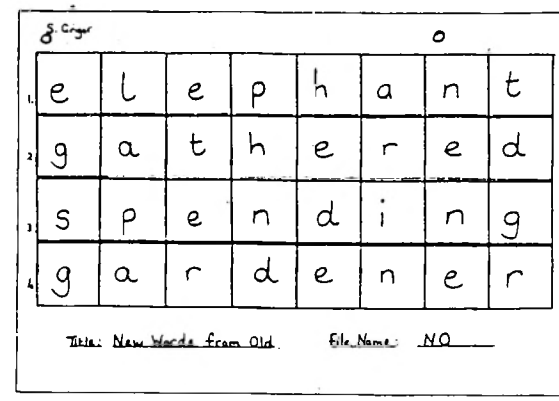
C10.2 WORD PARTS WITH DEFINITIONS: As C10.1, but the linked page has a list of definitions; pupils assemble appropriate words from the word parts on the overlay.

C10.3 WORD PARTS As C10.1, but without a linked page; pupils make as many complete words as they can from the word parts on the overlay.



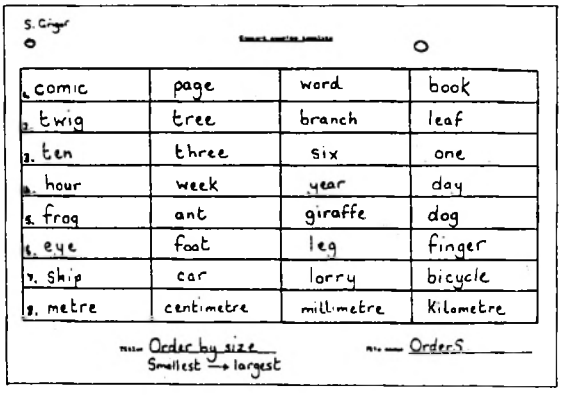
C10.4 SOUNDS As C10.1-C10.3, but using only phonemes.

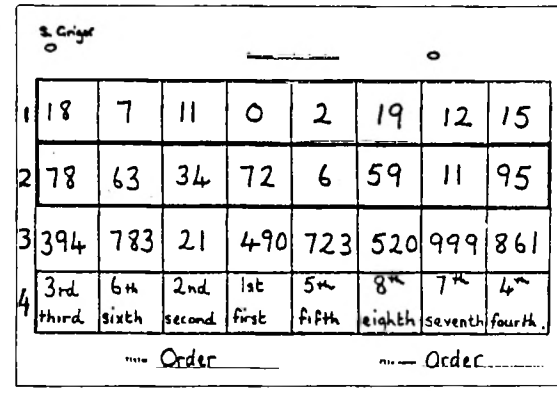
C10.5 "NEW WORDS FROM OLD" Several words written on the overlay (each word on a separate row); each letter of each word is on a separate block. Pupils try to make as many new words as they can from the letters of each of the old words.



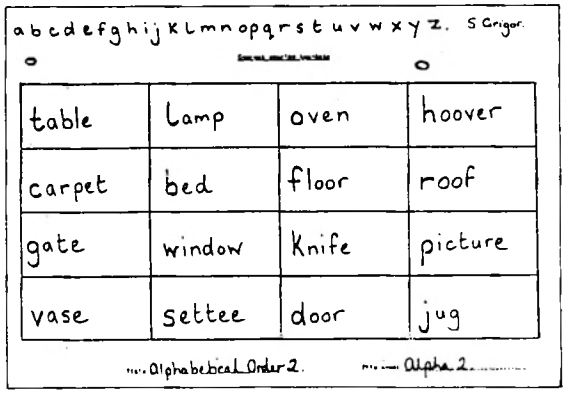
C10.6 ORDER BY SIZE - WORDS Overlay contains names of various objects etc. in rows; pupils rewrite each row in order of size on the screen. [See C10.7]

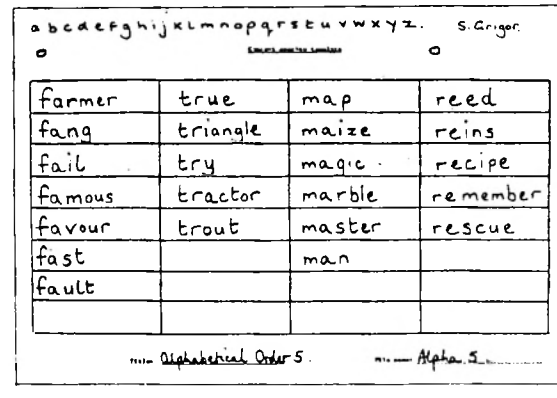
C10.7 ORDER BY SIZE - NUMBERS As above, but using numbers instead of words (a simpler screen could be linked with a page containing the same numbers in the right order, and written out as full words: see C9.1).

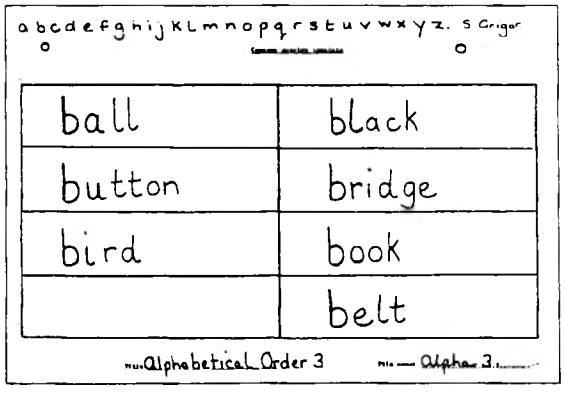


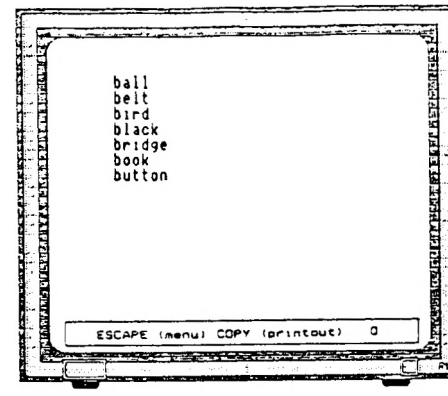


C10.8 ALPHABETICAL ORDER Students put the words on an overlay into alphabetical order on the screen.

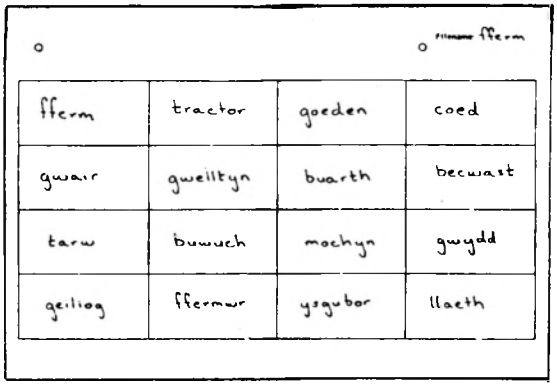


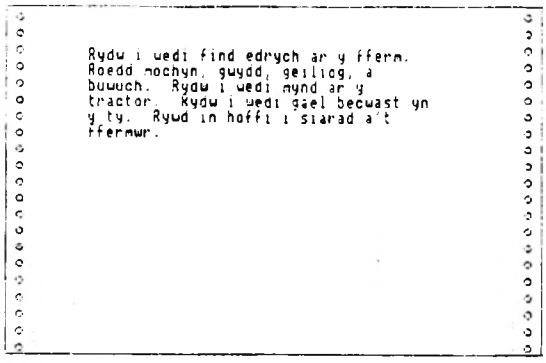




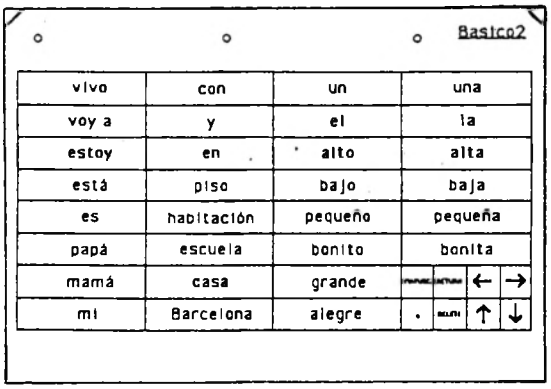


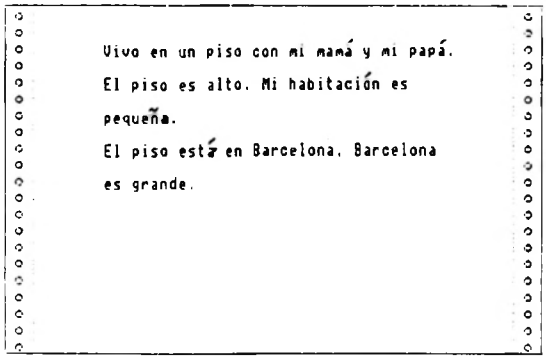
C10.9 NON-ENGLISH WORD-PROCESSING (WITHOUT ACCENTS) PROMPT can, of course, be used (either by a native speaker or by a learner) to do word-processing in a language other than English. Where the language seldom or never uses accents, this is straightforward; PROMPT overlays and pages in (say) Welsh can be made and used in any of the ways possible with English. The examples are in Welsh (in which accents can nearly always be avoided).



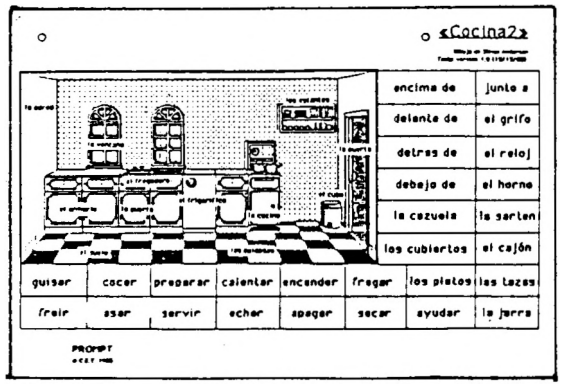


C10.10 NON-ENGLISH WORD-PROCESSING (WITH ACCENTS) PROMPT cannot reproduce accents. It can, however, be used with languages that use accents; pupils will have to add accents and other non-English orthographic symbols by hand after they have printed out their work. The correct forms of the words can, of course, be shown on overlays.





C10.11 A PICTURE DICTIONARY As C2.2-C2.4, but with the words on the overlay in another language, e.g. Spanish. **NOTE**: TOUCH EXPLORER is in many ways more appropriate than PROMPT for this type of usage; the main exceptions to this are perhaps if you want to do "matching" exercises (see C9) or sequencing or sentence completion (see C5).

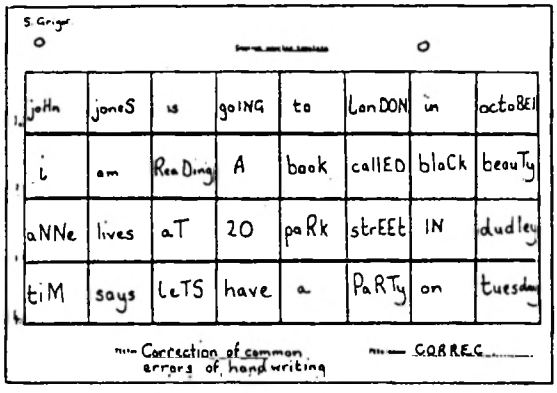


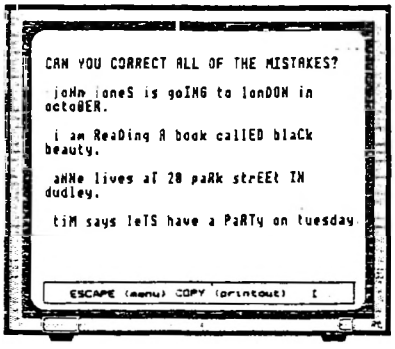
C10.12 "TRANSLATION" INTO ENGLISH The overlay could contain sentences in e.g. German, or a language which has a non-Romanic script such as Bangla or Chinese; when the pupil presses on the overlay, the English equivalent is put on the screen. **NOTE**: this usage will almost always be better with TOUCH EXPLORER. See C10.13 and C10.14.

C10.13 "TRANSLATION" FROM ENGLISH As above, but in reverse: sentences on the overlay in English (usually better with TOUCH EXPLORER.)

C10.14 BILINGUAL OVERLAYS As C10.12, but with the sentences on the overlay in both English and the other language (TOUCH EXPLORER will almost always be better than PROMPT for this usage).

C10.15 CORRECT THE MISTAKES The teacher makes and saves a page of writing in which there are deliberate errors; pupils load the page, and correct the mistakes. Alternatively, the overlay sheet contains incorrectly written words and phrases; the pupils press on these and then correct them.



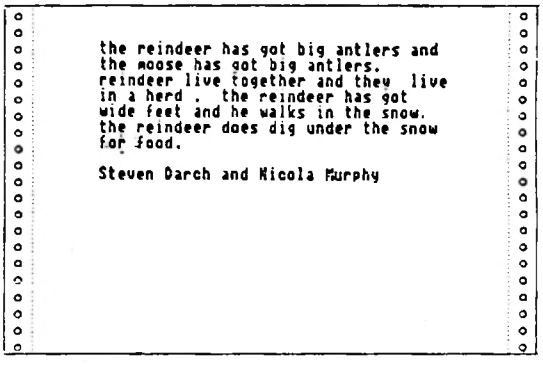


C10.16 "REGISTER" The overlay contains the names of the pupils in the class, in the form which the pupils prefer (including abbreviations, etc); when each pupil arrives, s/he presses his or her name, and the same name is then displayed on the screen. [See C10.17]

C10.17 "REGISTER" WITH FULL NAMES As C10.16, with the same overlay sheet; but the pupils' full names are displayed, whether or not this is the form in which the names are written on the overlay sheet.

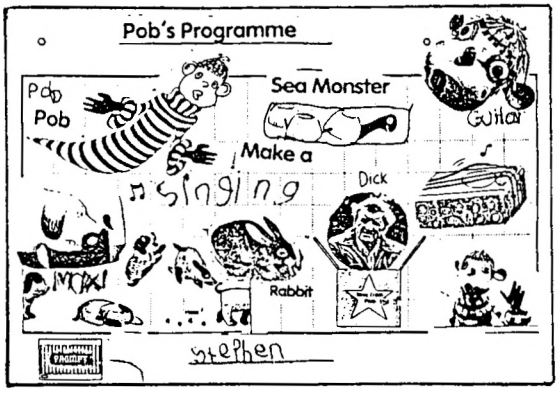
C11. Working together

C11.1 PUPILS WRITING IN A GROUP Like all word-processors, PROMPT can be used to encourage group writing. The way in which PROMPT uses the Concept Keyboard often helps in this.



C11.2 MAKING FILES AS A GROUP A group of pupils can make overlay files, starter pages, etc. about items of mutual interest; the files can be either for their own use or for other groups in the class. This approach has been used very successfully with pupils in many different types of schools; it can be remarkably effective in encouraging co-operative work and discussion about language. [See also C11.3]

C11.3 INDIVIDUAL PUPIL MAKING FILES FOR OTHER PUPILS As C11.2, but with the files made by an individual pupil for other pupils to use.

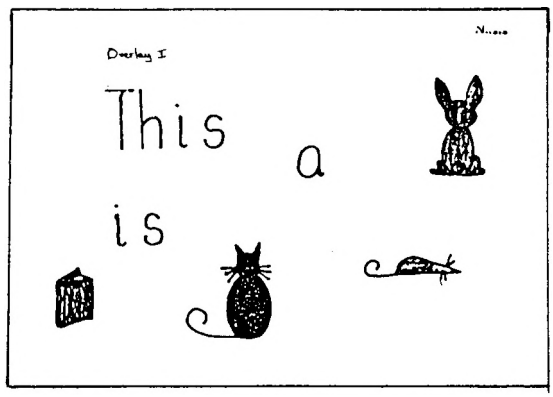


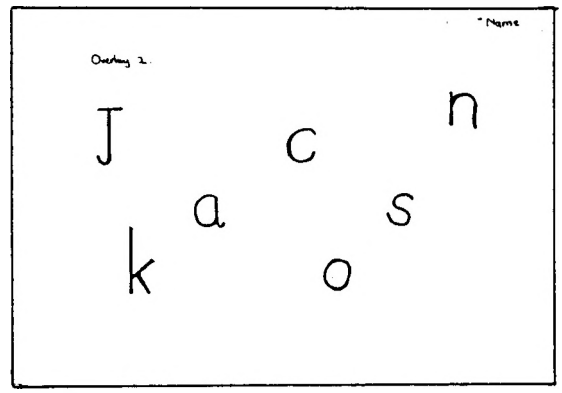
C11.4 PUPILS WRITING ABOUT ONE ANOTHER One of the many possibilities is described by Janet Holdsworth: a young profoundly deaf child "has built up a sheet and file of words . . . about drinks. On the concept keyboard sheet, she has a list of different drinks - tea, coffee, orange, etc. - plus the names of children in the class and **likes** and **doesn't like**. . . . She asks the children what they think and builds the page of writing from their answers." *(Learning to Cope 1985)*

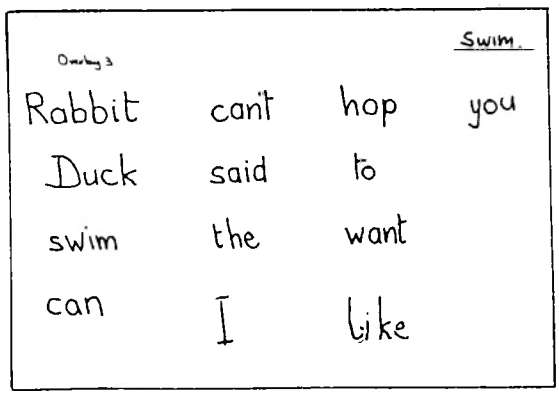
C12. Access

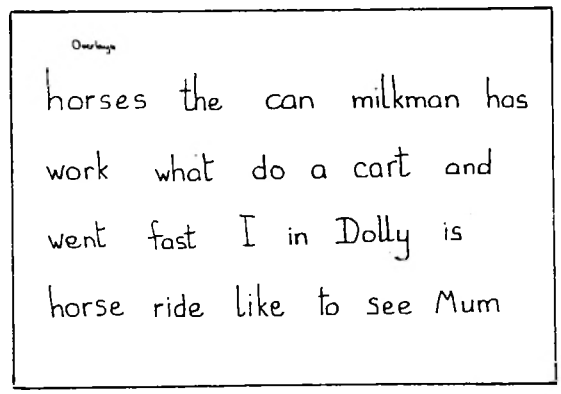
C12.1 PUPILS WITH LIMITED MOTOR CONTROL Physically-handicapped pupils with limited motor control who are able to use Concept Keyboard can use PROMPT to bypass QWERTY keyboard [see sections C6, C4, C5, C9]. **NOTE**: for many such pupils, it may be preferable to use a **keyboard emulator** running a more advanced word-processor.

C12.2 PUPILS WITH LIMITED VISION Visually-handicapped pupils with some vision can use an overlay sheet containing large words or letters (or perhaps braille). The examples shown here are of overlays prepared for, and work done by, a 9-year old pupil with very limited vision and poor motor control, as a result of cerebral palsy; she had never expressed herself in writing before. **NOTE**: for many visually handicapped pupils, it will be better to use a word processor which uses even larger text on the screen, such as Paul Blenkhorn's programs from the **R.C.E.V.H.** at Birmingham University.



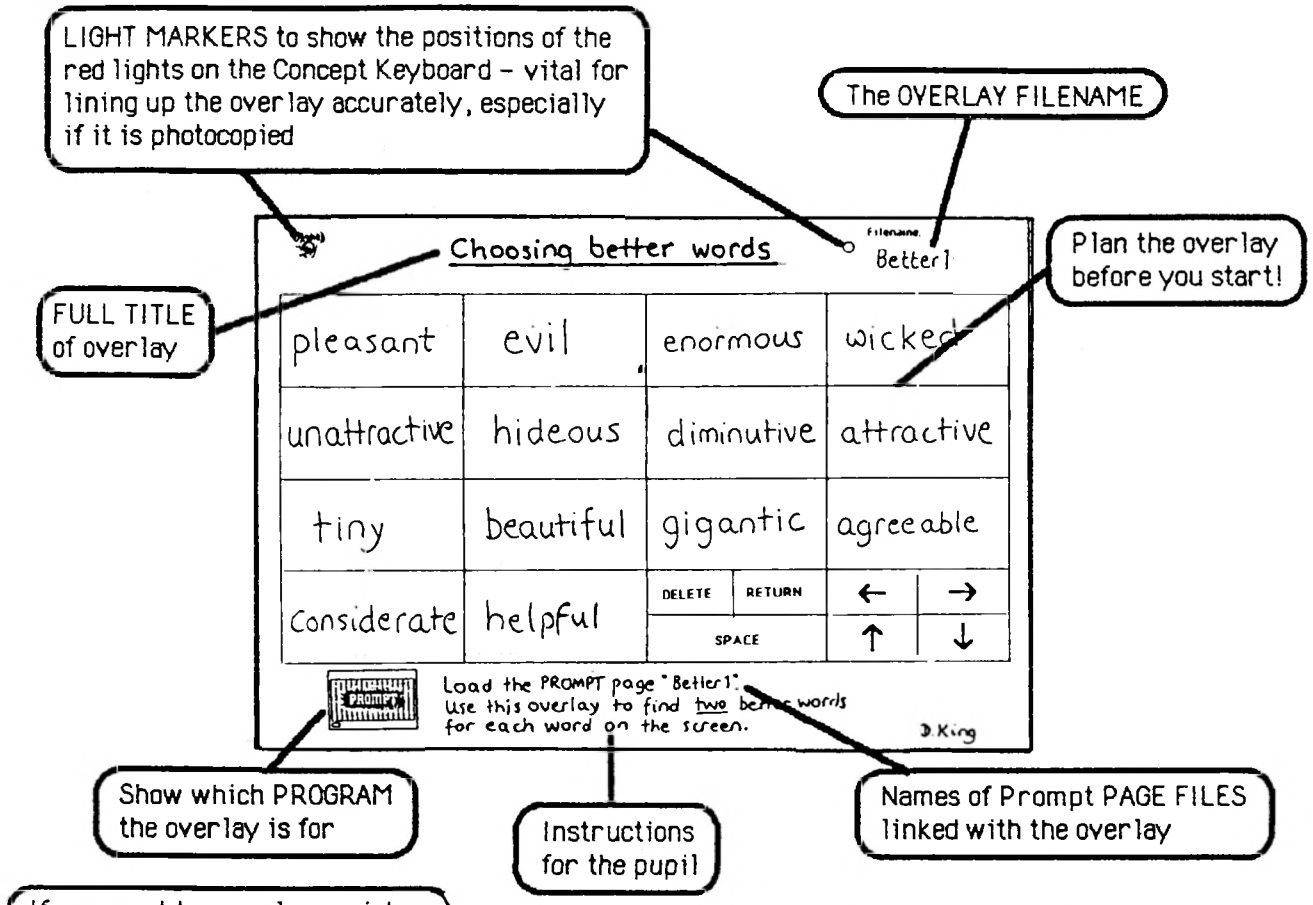


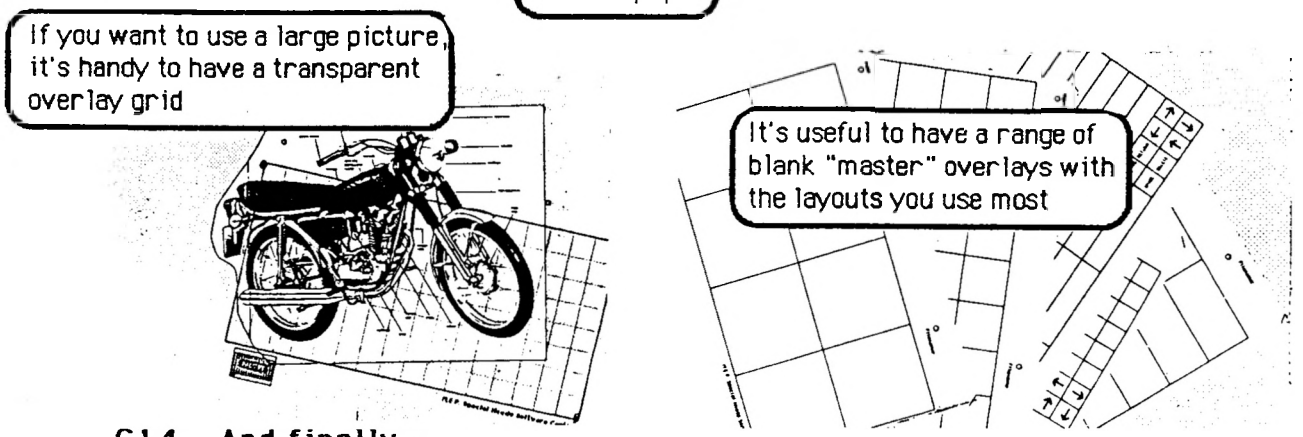




C12.3 "SPEAKING PROMPT" PROMPT-3 can "speak" a passage of writing, using either the VOTRAX or NAMAL speech synthesiser. It is not, however, yet possible for PROMPT to use these synthesisers to "speak" as you are writing or as you enter a word from the Concept Keyboard. (See Reference Section D2.8.)

C13. Some hints on designing overlays





C14. And finally . . .

PROMPT is a program which is always springing surprises. You or your pupils or your colleagues are bound to come up with an original set of files or an interesting and successful way of using PROMPT to get across some difficult point. If you do, please write to us at the Special Needs Software Centre. Tell us what you did and why: send us copies of the overlay(s), printouts of any pages you used, printouts of some typical work by children, and anything else that you think is interesting about the work done. We'll be delighted to hear from you; and there are bound to be other teachers who will find your work valuable.

David King
(February 1986)

And in the meantime, **enjoy PROMPT!**

Special Needs Software Centre
Manchester Polytechnic, Hathersage Road, Manchester M13 0JA.
Tel. (061) 225 9054 ext 284

CHAPTER 7

Suppliers of software and peripherals

ABC Primary Software, 19 Crumstone Court, Killingworth, Tyne and Wear NE12 0SZ (091 2682627).

A B Euro Marketing, Forest Farm Industrial Estate, Whitchurch, Cardiff CF4 7YS (0222 618336).

Ace Centre, Ormerod School, Waynflete Road, Headington, Oxford CF4 7YS (0865 63508).

Acornsoft Ltd, Newmarket Road, Cambridge CB2 3JN (0223 3160390).

Addison–Wesley Publishing Company, Finchampstead Road, Wokingham, Berks. RG11 2NZ (01 631 1636).

AMS Ltd, Green Lane, Appleton, Warrington, Ches. (0925 62907).

E. J. Arnold, Parkside Lane, Dewsbury Road, Leeds LS11 5TD (0532 772112).

Arnold–Wheaton Software, c/o E. J. Arnold (see above).

ASK, Duke Street, Wisbech, Cambs. PE13 2AE (0945 63441).

A2B, Castle Donington Community College, Mount Pleasant, Castle Donington, Derby.

AUCBE, Endymion Road, Hatfield AL10 8AU (07072 65443).

Beebugsoft, Dept 16, PO Box 109, High Wycombe, Bucks. HP10 8HQ. (0727 40303).

BIMH (British Institute of Mental Handicap), Wolverhampton Road, Kidderminster, Worcs. DY10 3PP (0526 850251).

Blue File (MEP). These programs may be freely copied for non-profit making educational purposes from LEA computer centres, special education/ microelectronics support teachers, MEP Regional Information Centres and SEMERCs. Their copyright is held by CET. They can also be purchased at low cost from BIMH (see above). Overseas purchases from Capital Media, c/o ILECC (see below – detailed prices on application).

Bourne Educational Software, Bourne House, The Hundred, Romsey, Hants. SO5 8BY (0794 523301).

Bradford Activity Toys, 103 Dockfield Road, Shipley, Bradford, W. Yorks. BD17 2AR (0274 596030).

Cambridge Language Arts Software Service, 2 Howard Court, Howard Road, Cambridge CB5 8RB.

Cambridge Software House, Town Hall, St Ives, Huntingdon, Cambs. (0480 66805).

Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU.

Centec Electronic Systems Ltd, 47 Spur Road, Orpington, Kent (0689 35353).

Chalksoft Ltd, PO Box 49, Spalding, Lincs. PE11 1NZ (0775 69518).

Chandler, Daniel, see Cambridge Language Arts Software Service.

Clare's, 98 Middlewich Road, Rudheath, Northwich, Ches. CW9 7DA (0606 48511).
Clatterway Toys, The Cottage, Allotment Lane, West Beckham, Holt, Norfolk NR23 6PJ (0263 824310).
Clwyd Technics, Antelope Industrial Estate, Rhydymwyn, Mold, Clwyd CH7 5JH (035283 751).
COIC (Careers and Occupational Information Centre), Moorfoot, Sheffield S1 4PQ (0742 703226).
Collins Educational/Hill MacGibbon, 8 Grafton Street, London W1X 3LA (01 493 7070).
Computer Aids (George Derby), The Fox Covert, Fox Covert Lane, Picton Gorse, Chester (0244 300363).
Computer Concepts, Gaddesden Place, Hemel Hempstead, Herts. HP2 6EX (0442 63933).
CTE Supplies Ltd, 28 Blackwell Hill Road, Bristol BS19 3PL (027583 2631).
Cyber Robotics Ltd, Tilling Drive, Walton, Stone, Staffs. ST15 0SA (0785 812121).
Daco Software, 59 Mackenzie Road, Moseley, Birmingham B11 4EP (021 449 2253).
Database Publications, Europa House, 68 Chester Road, Hazel Grove, Stockport SK7 5NY (061 456 8500).
D E Systems, 44 Cross Street, Widnes, Ches. (051 420 1885).
Deltronics Ltd, Heol-y-Parc, Cefnelthin, Llanelli, SA14 7DL (0269 843728).
Delves School, Hayes Lane, Swanwick, Derbys. (0773 602198).
Duckworth & Co Ltd, The Old Piano Factory, 43 Gloucester Crescent, London NW1 7DY (01 485 3484).
Ebury, National Magazine House, 72 Broadwick Street, London W1V 2BP.
ECL, Woodstock Centre, Marwood Road, Leicester LE4 2EL (0533 350355).
Economatics Education Ltd, Epic House, 9 Orgreave Road, Handsworth, Sheffield S13 9LQ (074 690801).
Educational Software Company, 108 Parthenon Drive, Liverpool L11 7AQ (051 226 1214).
esm, Duke Street, Wisbech, Cambs. PE13 2AE (045 63444).
Fernleaf Educational Software, Fernleaf House, 31 Old Road West, Gravesend, Kent DA11 0LH (0474 359037).
4Mation Educational Software, 'Linden Lea', Rock Park, Barnstaple, Devon EX32 9AQ (0271 45566).
Foundation for Communication for the Disabled, 25 High Street, Woking, Surrey GU21 1BW (04862 27848).
GED Educational Software, 70 Stoke Road, Bletchley, Milton Keynes MK2 3AD (0908 64368).
Ginn Microsoft, Prebendal House, Parson's Fee, Aylesbury, Bucks. HP20 2QZ (0926 88411).
Goldstar, Dorling Kindersley Software, 1–2 Henrietta Street, London WC2E 8PS.
Golem Ltd, 77 Qualitas, Bracknell, Berks. RG12 4QG (0344 50720).
Griffin & George Ltd, 285 Ealing Road, Alperton, Wembley, Middx. HA0 1HJ (01 997 3344).
H & H Software, 53 Holloway, Runcorn, Ches. WA7 4TJ (09285 65566).
Heinemann Educational, 22 Bedford Square, London WC1B 3HH (01 637 3311).
Highlight Software, 36 Sherbourne Close, Barry, South Glamorgan CF6 5AQ (0446 74582).
Homerton College Software, Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 0PQ.
ILECC, John Ruskin Street, London SE5 0PQ (01 735 9123).

Interface Designs, 12 East Meads, Onslow Village, Guildford, Surrey GU2 55P (0483 571281).

Jessop–Ralph Ltd, Unit 5, 7 Long Street, London EC2 8HN (01 739 3232).

Ladybird/Longman, Micro Software, Longman Group Resources Unit, 33–35 Tanner Row, York YO1 1JP (0904 20801).

Mr P. Lees, School of Education Research Unit, Bristol University, 22 Berkeley Square, Bristol BS8 1HP (0272 303030).

Logotron Ltd, 5 Granby Street, Loughborough LE11 3DU (0509 320248).

Longman Group Ltd, Longman House, Burnt Mill, Harlow, Essex CM20 2JE (0279 26721).

LSL (Logo Software Ltd), 316a Richmond Road, Twickenham, Middx. TW1 2PD (01 891 0989).

LTS, Haydon House, Alcester Road, Warks. B80 7AP (0386 79217).

Macmillan Education Ltd, Houndsmills, Basingstoke, Hants.

Magpie Systems (John Tabberer), 45 Runcorn Road, Moore, Nr Warrington (0925 74707).

MAPE Administration, 76 Sudbrooke Holme Drive, Sudbrooke, Lincs. LN2 2SF (0522 754408).

Marconi Electronic Devices, Power Division, Carholme Road, Lincoln LN1 1SG (0522 29992).

McEwen, Ian, 6 Terterfield House, London Road, Welwyn, Herts. AL6 2HZ (043871 5851).

MEP Primary Project, via LEAs, SEMERCs or RICs.

Micrex, 7 Laverock Lea, Portchester, Hants PO16 8DA (0705 374036).

Micro Express Ltd, Silicon House, Fowke Street, Rothley, Leics. LE7 7PJ (0533 375757).

Micro Special Pack – see Collins Educational/Hill MacGibbon.

Microvitec, Futures Way, Bolling Road, Bradford, W. Yorks BD4 7TU (0274 390011).

MRH Systems and Software, 20 Highfield Road, Kidderminster, Worcs. DY10 2TL (0562 60037).

Namal Associates, 153/4 East Road, Cambridge CB1 1DD (0223 355404).

New Horizon, PO Box 35, Plymouth PL1 1UZ (0752 550700).

Nidd Valley Micro Products, Stepping Stones House, Thistle Hill, Knaresborough, N. Yorks. HG5 8JW (0423 864488).

Nixon, Alan, 5 Perry Road, Banfor, Co. Down, N Ireland BT19 2UA.

Nordis Software, Cornhill Close, Lodge Farm Industrial Estate, Harlestone Road, Northampton NN5 7UB (0604 54358/9).

Northern Micromedia, NORIC Centre, Resources Centre, Newcastle Polytechnic, Coach Lane Campus, Newcastle upon Tyne NE7 7XA (091 270 0424).

Notts ITeC, 51 Glasshouse Street, Nottingham NG1 3LP (0602 584647).

Open University, Learning Materials Service, Centre for Continuing Education, PO Box 188, Milton Keynes MK3 6HW (0908 74066).

Oxfordshire LEA, Microtechnology Advisory Service, Macclesfield House, New Road, Oxford OX1 1NA (0865 722422).

Page Educational Software, 17 Pagefield Crescent, Clitheroe, Lancs. BB7 1LH (0200 26103).

Photonic Wand Co, 12 Orchard Croft, Guilden Sutton, Chester (0244 300002).

Primary Programs Ltd, Claypits, Debden Road, Saffron Walden, Essex CB11 3JS (0799 22537).

QED, 1 Prince Alfred Street, Gosport, Hants (0705 581179).

Research Machines Ltd, PO Box 75, Mill Street, Oxford OX2 0BW (0865 249866).

RESOURCE, South Yorkshire and Humberside MEP Regional Information Centre, Exeter Road, off Coventry Grove, Doncaster DN2 4PY (0302 63800).
Schofield and Sim Ltd, Dogley Mill, Fenay Bridge, Huddersfield HD8 0NQ (0484 607080).
SESS, see CTE Supplies Ltd.
Shiva Software, available from esm.
Software Production Associates, PO Box 59, Leamington Spa, Warks. CV31 3QA (0926 22959).
Solent Educational Software, 96 Coldharbour Road, Redland, Bristol BS6 7SB.
Specialsoft, West Glasdon Cottage, St Germans, Cornwall PL12 5BH.
Special Access Systems, 4 Benson Place, Oxford (0865 56154).
Special Technology Ltd, Freepost, Southport, Merseyside PR8 1BR (0704 76357).
Staffordshire Educational Computing Centre, Unity House, Hanley, Stone-on-Trent (0782 29611).
Star Devices Ltd, 22 Hyde Street, Winchester, Hants. SO23 7DR (0962 63626).
Anita Straker, Mundays, St Mary Bourne, Andover, Hants. SP11 6AY.
Suffolk Educational Software, c/o Brian Massey, County Hall, Ipswich, Suffolk (0473 55801).
Syndicate Software Ltd, 6 De Vitre Street, Lancaster LA1 1QU (0524 33498).
Technomatics, 17 Burnley Road, London NW10 1ED.
Tecmedia Ltd, 5 Granby Street, Loughborough LE11 3DU (0509 230248).
Toys for the Handicapped, 76 Barracks Road, Sandy Lane Industrial Estate, Stourport-on-Severn, Worcs. DY13 9QB (02993 78820).
Tressel Publications, Unit 3, 22 Campbell Road, Brighton BN1 4QD.
Watford Electronics, Jessa House, 250 Lower High Street, Watford, Herts. (0923 37774).
Widgit Software Ltd, 1 The Ryde, Hatfield, Herts. Al9 5DQ (070 72 64780).
Wigmore Ltd, 32 Savile Row, London NW10 0AG.

CHAPTER 8

A core library of programs for the BBC Micro

This briefing is designed to help teachers choose their own core library of software. This may be a very small number of programs – perhaps fewer than half a dozen – with a great many applications in supporting a wide range of special needs at many age and interest levels across the whole curriculum. The programs in the list are ones that we feel are worth considering but they should not be seen as a definitive list, as many useful programs have had to be omitted. The programs in each section are in alphabetical order. Fuller details of the programs are given in Briefing Sheets 4 to 10 (see Tutor's Notes, p. 55 for further details of Briefing Sheets).

The programs in this list are not drill and practice material. The teacher will need to spend a little time getting to know a few powerful (but friendly) programs. Once familiar with the material, the teacher is free to adapt content and educational strategy to the preference and needs of teacher and pupil.

Teachers may wish to exchange program content 'files' and support materials with colleagues, e.g. through user groups with a common interest. Many of the programs are sufficiently straightforward to enable pupils to generate their own material.

The programs can be used together to provide more effective support – for example Touch Explorer or Maker/User to establish the vocabulary for a topic, a simple word processor to aid written work and a database (perhaps Tree of Knowledge or Lists) to encourage assimilation and organisation of information.

On the other hand, a single program may provide support for a group across many curriculum areas (a word processor, for example) or may serve as an exciting starting point and focus for projects across the curriculum (an adventure game or simulation).
Note: Additional equipment is shown in brackets.

8.1 **Developing writing skills**

8.1.1 *For beginning writers*

Colourword. 'Micro Special Pack' from Hill McGibbon. (Concept Keyboard).
Prompt-3. Blue File. (Concept Keyboard).
Sentence Maker. Anita Straker.
Story. Daco Software.
Story. H & H Software.
Storywriter. esm.
Wordpos. Part of a package, George Derby. (Cheshire keyboard).
Write/Draw. Blue File.

8.1.2. *For established writers*

Edspell. LTS.
Edword. Clwyd Technics.
Front Page. MAPE.
Mini-Office. Database Publications.
Primary Pen. GED Educational Software.
Worddance. Daniel Chandler.
Wordwise Plus. Computer Concepts.
Write/Draw. Blue File.
Writer. Infant Pack, MEP Primary Project.

8.2 Information handling

8.2.1 *Introductory*

Animal Vegetable Mineral. Arnold Wheaton. (Cassette).
Datafile. (Micro Special Pack), Hill McGibbon.
Factfile and Picfile. Part of a package, Cambridge University Press.
Lists. Blue File.
Ourselves. Infant Pack, MEP Primary Project.
Tree of Knowledge. Acornsoft Ltd.

8.2.2 *More advanced*

Beta–Base Clare's.
Inform. Nottinghamshire Schools Computer Development Centre.
Mini-Office. Database Publications.
Quest D. AUCBE.

8.3 Links with the real world

Bank. 'Micro Special Pack' from Hill McGibbon. (Concept Keyboard).
Bike Insurance. 'Micro Special Pack'.
Eating for Health. 'Micro Special Pack'. (Concept Keyboard).
Phonin. Primary Programs Ltd.
Shops-Supermarket. Northern Micromedia. (Concept Keyboard).
Safety. 'Micro Special Pack'.
Summer Holidays. 'Micro Special Pack'.

8.4 Adventure programs and simulations

8.4.1 *Introductory*

Dragon World. 4Mation.
Granny's Garden. 4Mation.
The Last Adventure. LTS.
The Lost Frog. Part of a package, Anita Straker.
The Magic Sword. Database Publications.
Rescue. Star Devices. (Concept Keyboard.)
Treasure Hunt. Infant Pack, MEP Primary Project.
Your Adventure. LTS.

8.4.2 *More advanced*

Dinosaurs. Cambridge Software House.
Fletcher's Castle. Fernleaf Educational Software.
Flowers of Crystal. 4Mation.
Into the Unknown. Tressel.
Suburban Fox. Ginn Microsoft.
Twin Kingdom Valley. Bug-Byte.

8.5 **Logo/Turtle Graphics**

Acornsoft Logo. Acornsoft.
Dart. AUCBE.
Leicester Turtle. ECL.
Logotron. Logotron Ltd.
Oklogo. Jessops Ralph.
Open Logo. Open University.

8.6 **Art design and music**

AMX Art. AMS Ltd.
Art & Design. 'Micro Special Pack' from Hill McGibbon. (Concept Keyboard, Trackerball, joystick or Mouse).
Electronic Colouring Book. Addison–Wesley.
Grafsdisk. Clare's (joystick).
Light. Part of a package, George Derby. (Light pen).
Mister 'T' Makes Music, (cassette version). Ebury.
Note Invaders. Chalksoft.
Paintbox. Beebugsoft. (Joystick).
Painter. Part of a package, Educational Software Co. (Light pen).
Picture Builder. Hill McGibbon.
Pieman. Musicsoft.
Sketchpad. Goldstar.
Tesselations. Homerton College Software.

8.7 **General 'framework' programs**

Cloze. LTS.
Copywrite. esm.
Infant Tray. Infant Pack, MEP Primary Project.
Maker-User. Northern Micromedia.
Mallory. Language Pack, MEP Primary Project.
Other Worlds. Ladybird–Longman.
Reveal. 'Micro Special Pack' from Hill McGibbon.
Terrible Tales. Ladybird–Longman.
Tins. Language Pack, MEP Primary Project.
Touch Explorer. (Concept Keyboard). Blue File.
Tray. Language Pack, MEP Primary Project.

IMPACT

This is a new series of publications under the direction of Colin Robson of Huddersfield Polytechnic and Judy Sebba of the Hester Adrian Research Centre, Manchester.

All the titles in the **Impact** series are designed to improve the professional skills, expertise and understanding of teachers and other professionals with responsibility for children with special educational needs. Some publications in the series will also be appropriate for educational psychologists, social workers, staff of adult training centres and social education centres, staff in residential facilities, and nurses.

MICROELECTRONICS AND PUPILS WITH SPECIAL EDUCATIONAL NEEDS

John Garrett and Bob Dyke

Microelectronics and pupils with special educational needs was developed from courses organised by the Council for Educational Technology as part of the Microelectronics Education Programme. The package consists of two books: a tutor's manual and support materials, and a videotape. The tutor's manual provides starting points for courses for teachers of children and young people with special educational needs on how to use microelectronics in their teaching. Examples of support materials for use with content-free software make up the second book in the package. It is a practical guide which will help teachers make more effective use of microelectronics in their work. The videotape provides illustrative material on the use of some of the software and peripherals described in the text.

The complete package will be of particular interest to local education authority advisers responsible for in-service courses for teachers, co-ordinators of microelectronics work in special education, teachers responsible for supporting and advising teacher colleagues in their schools, leaders of special education micro-user groups and those with responsibility for staff development in the social and health services.

John Garrett is a part-time consultant in teacher training for the Council for Educational Technology.

Bob Dyke was Manager of Manchester Special Education Micro-Electronics Resource Centre.

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