# MICRO-SCOPE



MAPE CONFERENCE

DAVID BARLOW

**12**

**Newman College with MAPE**

# Contents

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# MICRO-SCOPE 12

# Editorial

**All at sea?**

Word association. MAPE, *MICRO-SCOPE*, Periscope, Marine. Big boats on small ponds. Little boats on storm-tossed seas.

There are twenty-seven thousand primary schools in England and Wales. MAPE has between three thousand and four thousand members.

When I agreed to edit *MICRO-SCOPE* my brain was buzzing with questions about the journal. Does the content suit the readers? Are there some areas which need developing? What new features would prove interesting and valuable? *MICRO-SCOPE* has evolved over a number of years. Now is an appropriate moment to take stock. Questions beget questions; I was led deeper and deeper. Who reads *MICRO-SCOPE*? Why? The ultimate questions are 'Who joins MAPE?' 'Why?'.

In concrete terms MAPE members get value for money. Three issues of *MICRO-SCOPE* a year, possibly a *MICRO-SCOPE* Special, National Newsletters, a reduced conference fee in addition to any one-off specials of which the MAPE tape is an example. There were two hundred and fifty places at the Conference this year. That's less than one for every ten members of MAPE. There is a great disparity in regional development, which may or may not reflect different regional needs. There must be many members for whom MAPE remains an entirely abstract connection.

In this issue Reg Eyre asks whether we should have had a main speaker at the Conference who did not know what MAPE was about. Ron Jones directs attention to MAPE's aim. Peter Cave states that the majority of MAPE's members were disenfranchised prior to the AGM. Barry Wake points to the growing rift between the regions and the national committee. Could we have expected Johnny Ball to know about things that, apparently, are not clear to us?

In *MICRO-SCOPE 5* Ron Jones stated that one of the main tasks for the year ahead was the establishment of an 'efficiently organised infra-structure which (would) allow for really active Area and Regional developments to take place'. Two years on, this infra-structure is in varying stages of development. The members of certain regions feel no need for an active local group. Does that fact have any repercussions upon the central organisation? Can MAPE build a sea-worthy vessel if some hull timbers are missing?

MAPE can't be all things to all men, or to all women, but if MAPE is to remain at the fore-front of the area of education and micros, and to keep a voice to which educationalists will listen, it needs to sail on with more than a subscription agency at its back.

I may have been swayed by a small number of loud voices and low rumbles. I may expect too much. I can be dismissed as a relatively new member who doesn't understand that these things take time. But why has the number of MAPE members remained almost static for a year?

There are many hard-working, enthusiastic, committed members who devote a large proportion of their 'free' time to the cause of MAPE. Let it be time well spent. Let us not join those referred to by Phil Morse as the 'self appointed elite'.

I'm not rocking the boat, I'm just checking the ballast! I would welcome responses to any of the points raised in this article.

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The copy date for *MICRO-SCOPE 13* is August 15th.

# Humpty Dumpty sat on a . . . micro?

**Anita Straker**
*Director, MEP Primary Project*

Primary schools, like primary children, come in all sorts of shapes and sizes. The largest primary school will have more children than a five-form entry comprehensive school. The smallest will have only one class, containing children of all ages from 5 to 11 years. The oldest school building will date from the beginning of the last century. In an inner city area it may be built on three or four floors, each having individual classrooms with the very high ceilings we associate with Victorian schoolrooms. The newest school will have been planned by an architect working with teachers. There may not be any classrooms in the traditional sense. Instead, there will be open areas, mostly carpeted and linked one to another.

Inside the classrooms a variety of things will be going on. There are very few primary schools nowadays which operate a formal timetable for the whole school. One of the many advantages of the class teacher system is that activities which might occupy children for any length of time from three minutes to three hours can all be fitted in. Although there are times in any primary classroom when all the children will be working at the same task, more frequently one group will be involved in some practical mathematics, a second group will be engaged in story writing, another group will be working together on a large scale model . . . and four children will be having a heated discussion sitting round a micro.
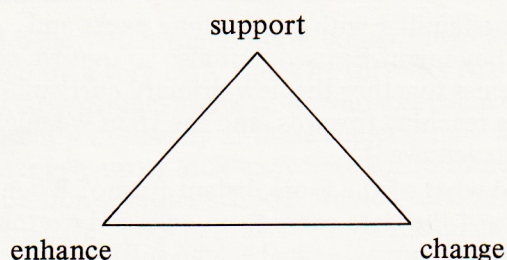
It is hard to believe that the Department of Trade and Industry scheme for primary schools was announced only in 1982, and that the first micros to be delivered under that scheme arrived in schools just over a year ago. There are approximately 27,000 primary schools in England, Wales and Northern Ireland (Scotland has its own separate but complementary scheme). By March of this year 20,250 of them had received a DTI micro, and it is likely that most of the rest will follow suit before the scheme finishes at the end of this year. Of the 155,000 primary teachers, more than 40,000 have now attended the equivalent of a two-day introductory course which local authorities were obliged to provide as part of the scheme, and are now trying to put new ideas suggested on their course into practice in their schools.

Although, in an unprecented demand for in-service training, 40,000 practising primary teachers have been attending introductory courses, 75% of the primary teaching force have not yet had such an opportunity. Some of the 75% may still feel uncertain whether or not they want the opportunity anyway! Local authorities are well aware of this problem. They are aware too that an initial two-day course can do little more than concentrate on how to make the hardware function and how to operate a few pieces of software. The real issues about possible new directions for the primary curriculum have yet to be debated on a wide scale.

The MEP Primary Project was finally set up in September last year. We were asked to try and identify the in-service and pre-service training needs which would follow the DTI scheme; to run courses and provide materials for those who would in turn run courses within their own area; and to stimulate curriculum development at the primary level.

It was soon clear that we had three different target groups of people to try and help, each group with different needs. Most primary advisers or lecturers in primary education have little experience of the use of microelectronic equipment. Most computing advisers or those who work in computing departments in higher education may well be spending most of their time at the moment helping present or future primary teachers, yet they themselves have probably never taught in a primary school. A small but growing number of people have had experience as good primary school practitioners and have, in one way or another, acquired considerable technical skill as well. Many of this third group have been seconded from their schools in order that they might help other primary teachers who are only just making a start. Our aim is to try and give equal help to all three groups.

It is already evident that computers in primary schools can be used in at least three ways: to support the curriculum which already exists; to enhance that curriculum so that what we offer children is rather better than what was offered previously; and to extend or even change that curriculum. If these three ways were to be represented on a triangular map, then the majority of primary schools would be at present somewhere near the top corner, getting started by making use of the micro to support well recognised activities.

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              support

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                /  \
               /    \
              /      \
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            /_____\
     enhance                  change
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The next step in in-service training will therefore be to help teachers explore possibilities for developing and extending the present curriculum in ways which make use of the new facilities. Later, we will need to consider the curricular changes which are becoming possible and which of these are both necessary and desirable at the primary school level.

To achieve these targets we need to encourage the development of good software (and, at the same time, we need to remember that a micro and software are not necessarily the most appropriate way of facilitating young children's learning).

Some programs for primary schools will be short, with a specific pre-determined purpose. Such programs may well involve the children in a problem-solving situation or in a mathematical investigation. Some will, through a simple simulation of a situation or a strategic game, encourage children to apply skills which they have acquired away from the computer. Some will be capable of being used as an animated blackboard to illustrate particular teaching points, or to promote whole class discussion. Each primary school needs a good library of programs of this type, selected with its own children in mind, with its library properly catalogued and linked to the school's curriculum guidelines. Discussion about the uses (and abuses) of such software needs to take place on any pre-service or in-service course for primary teachers which has a curricular theme: Environmental Studies in the Primary School, Maths for 5 to 9 year olds, Language Development in the Junior Years.

Other programs will be more complex, though still with a pre-determined content. A simulation such as *Mary Rose*, which is concerned with the raising of a Tudor warship from the bed of the Solent, or *Granny's Garden*, an adventure game which takes you into an enchanted land of magic and mystery in your search for six lost children, are both good examples of programs of this type. They are capable of promoting a wide variety of tasks over a period of weeks: craft activities, scientific experiments, creative writing, historical research, drama, and even PE. Nevertheless, they should be used judiciously. Simulated experience should stimulate, never supplant, the first-hand experience which is of paramount importance in the learning of young children.

Whether or not each primary school needs its own library of this second category of software is debatable, and may depend on the size of the school or the price of the program and its accompanying materials. After all, having raised the *Mary Rose*, it is unlikely that any primary school would want to do so again next term, or even next year! Perhaps libraries of these bigger programs need to be based with the Schools Library Service, or in a central Resources Centre, for loan to schools in the same way that other educational materials may be loaned? What is more certain is that in some cases a single program is sufficiently complex in what it offers to warrant some training sessions for teachers in its own right, although others could be discussed more generally: 'The role of Adventure Games in the Primary Classroom'.

Perhaps the most powerful type of software is quite different in that it has no prescribed content. It provides a flexible tool for children and teachers to explore new fields. It can be a fast retriever and sorter of information, allowing young children to pose hypotheses and test them, using a far greater collection of data than they would otherwise have been able to manage. It can become a word processor, so that drafts and re-drafts of writing – so often advocated but very time consuming in practice – can be refined and published. It can be a means of controlling a floor turtle, a mobile crane, or model traffic lights, so that the world of mathematical precision and logical procedures can be explored. Each of these pieces of software fulfils a necessary (perhaps sufficient?) criterion for a good piece of primary software in that it places children or teachers in the position of being able to say 'What can we discover next?' rather than saying 'What does this computer program want us to do now?'

But learning how to make use of such powerful and flexible software, which has application to children of all ages in all schools, is not easy. A week's course on the place of turtle graphics in the primary school could only make a start in the consideration of the fuller implications for both the learner and the teacher, and the primary school curriculum as a whole. And who will lead such courses? Do any of us yet have a proper understanding of all these issues?

However, we must begin somewhere. Perhaps a sensible target is to start with the use of selected small and easily-handled programs which fit comfortably into good primary practice; to move to the use of bigger packages which provide enhanced opportunities for topic work; and to aim for the applications of powerful open-ended packages which are likely to change both what children and teachers do and the way in which it happens.

The teacher training materials which the MEP Primary Project is producing have been developed with these aims in mind. A primary software catalogue has been set up, and copies have been sent out in a form which is easily copied. Packs of training materials have been produced. The first on the use of simulations, using the *Mary Rose* as an example — was distributed in March; a mathematics pack was sent out in May; and a language development pack will be ready in July. These packs contain a selection of resources: tutor guidelines, OHP transparencies, background reading, 35mm slides, audio tape or video tape, mounted photographs of children's work, resource list, software for BBC and 480Z micros with notes suggesting accompanying classroom activities, all in a form which is freely copiable. Some packs contain a commercially produced program, which is the only part of the pack which may not be copied. Future packs will include topic work, problem solving, control technology, information retrieval and word processing, and LOGO, although not necessarily with quite the same selection of contents. Two copies of all the Project's materials are being sent free to each local authority, and one or two to each teacher training institution.

We are organising and running courses and conferences for those who work in the field of teacher training, not only so that people may become familiar with our training packs and how they might be used, but also so that we can all discuss together the new primary curriculum we are reaching towards, and the steps we might take to achieve it.

And what of the more distant future? When the era of the slate came to an end, and exercise books and library books became sufficiently cheap for their presence in schools to be commonplace, teachers then must have wondered what new directions the primary school curriculum would start to take and whether they would be able to cope. Crystal ball gazing is never easy. It is hard to judge what the future effect will be of an estimated three million home computers, or of facilities like PRESTEL and VIEWDATA in homes and in schools. Talking computers, and interactive video, are both beginning to look like realistic possibilities for primary school use — although where the funds will come from in order to provide them and to train teachers in their use are going to require more than the efforts of all the King's horses and all the King's men.

All that we can be really sure about is that primary schools, like Humpty Dumpty, will never again be quite the same!

# Failures in the system

**Mike Matson**
*Advisory Teacher, Devon*

My brother was a complete failure at school — I think he managed to scrape a couple of CSE passes. At home he was always busy building radios, calculators, disco peripherals and all manner of amazing electronic gadgets. While I was sweating away at the theories of slope degradation with particular reference to the valleys of South Wales (which has never really come in useful so far but may do one day) he, before learning to drive, had bought two ancient mini-vans and, without any training, proceeded to build himself one road-worthy vehicle. He is now in a managerial position and is frequently required to fly over to Geneva to sort out bugs in the computer equipment associated with that multi-million pound international project to fire high speed particles through tunnels under mountains. As an apprentice he had to attend college on a day-release scheme. He had no difficulty calculating in binary and hexadecimal but, much to the consternation of his teacher, would insist on writing down the answers without, it would seem, having to think about it. This method of working was highly unacceptable and, in order to keep the teacher (and the system) happy, he was obliged to jot down the answer and then fabricate some 'working out'.

The artist, Rodney Matthews, whose fantastic creations are to be found on book jackets and record sleeves, was another 'failure' according to the sacred rules of the establishment. Like the central character of *Kes* he was totally bored by activities which had no relevance to his life. Honeysuckle, badgers, snowstorms and sea mists were far more important to him than nouns, acute angles and Magna Carta. This sense of failure is still with him. In his studio recently, surrounded by the sort of beautiful art work which I regard more highly than all my academic qualifications, he apologised to me for being only semi-literate. I should have been the one to apologise for once having been a part of the system which failed him! It really is quite ironic that his surrealistic visions are now used in some classrooms to stimulate imaginations.

I believe that the 'failures' know they have failed by a very early age. The three Rs rule (ask any parent) and a child who experiences difficulty or dismay at these subjects may well either give up or look elsewhere for fulfilment. I question whether schools provide sufficient alternative opportunities for such fulfilment and am surprised that more children do not become disruptive and anti-social.

Recently, of course, salvation has arrived in the form of the microcomputer. We have all read glowing reports of how even the less able children want to miss playtime, discuss plans and strategies with their colleagues, work without misbehaving and so on. Can it really be that this little machine is so wonderful? I don't think that this is the case. The reason for these miracles is that, for once, children are finding themselves in a non-teacher-centred environment which is fun, rewarding, challenging and free of the mind-crippling influence of red ink. Of course the micro can be used merely to spice up the dull, traditional fare of the primary diet but I doubt whether a simulation of Beethoven's Fifth, a twenty-one gun salute and a fly-past by the Red Arrows for scoring 1 out of 10 in *Willy Kidem Sugar-coated Software's (Widely-used in the Home) Table Tester* will really cause a revolution in the educational system. After twelve months of exposure to such initially prayer-answering material will children still want to stay on when the bell goes?

There are many teachers who have had grave misgivings about primary education for years. They have had to either toe the line (a governor or, even worse, an adviser, might be watching) or run the risk of being viewed as 'weirdo free-thinkers' who hate marking sets of English books. Using a micro with children has certainly caused many teachers to ask, 'Why are the kids enjoying this so much?' For some teachers such fun and frolics should be stamped out immediately before children start enjoying school. Others see this enthusiasm as a reason for using the micro more extensively. A third group (generally the 'weirdo free-thinkers') find that this micro enjoyment reinforces their suspicion that education is not a well-signposted, well-trodden trail with recognisable landmarks all along the way.

It has long been recognised that, when learning French, ten weeks in Paris equals ten years in French lessons. When I was fifteen I may well have learned the French for 'some insect repellent please' but if I did I soon forgot it. Twenty years later, on a beach in Brittany, my sanity was dependent upon my learning, and using, the words; and I know I'll never forget them now.

Very few adults enjoy learning for learning's sake — there has to be a reason. Children, we seem to assume, are completely different and should want to learn because we insist that it's good for them and, as a reward, we will write 'Well done' at the end of it (and it has to be on paper or else it isn't real work, is it?). When children are using a micro they are experiencing freedom from an adult-dominated world — they are in control of their own world where poor handwriting, lack of speed, wrong answers and discussion are not crimes. Why don't we allow children access to such a world when the micro is absent? Could it be that teachers believe they have to be teachers? I am quite sure that teaching is one of the most inefficient methods of causing learning. Given the right conditions learning is a natural process and the teacher's function should be to create these conditions. 'Teacher' is the wrong name. The adult responsible for a class of children should be the 'manager of a learning environment' (a MOLE?).

Children are naturally curious and imaginative. On their way to school they see the caterpillars and dragons that we adults miss. They love fantasy and most of them are truly gregarious. Schools very rarely take advantage of these attributes. 'Carry on working without talking. I have something important to discuss with Mrs Elliot'. Enthusiasm is contagious. The micro permits simulation but so does the imaginative, uninhibited teacher. It has become acceptable for children to visit other worlds through the VDU whether they be on the sea bed, in fairy tale lands or in the days of long ago. The teacher can, in fact, take these simulations a lot further than the micro and, perhaps more importantly, show an infectious enthusiasm which the computer will never match. Both teacher and child can become Prime Ministers, coal miners, Stone Age hunters or Galileos. If a child *is* a Roman soldier and the emperor is actually attending the gladiatorial activities then that child will be considerably more interested in Roman history than the child who is commanded to read chapter 6 and answer the questions at the end (without talking because that might mean you were cheating). If the computer can add another dimension then by all means let it be used but, without the stimulation of the teacher, its effectiveness is much reduced.

There are very few areas of the primary curriculum which cannot play a part in simulations of reality. If an essential part of primary education is to prepare children for the world in which they are going to find themselves then surely we should examine the real world (past, present and future), identify certain important elements and re-create them in the classroom. In language and mathematics we need to ask which skills are of true value and which ones are as relevant to reality as flint-knapping is to nuclear physics. Of course it's no use informing children that section 4D of *Sums for Young*

*Adults* will be useful in ten years' time: it has to be of use right now and that may require the creation of a situation in which it really is useful.

In addition to simulations of reality there are two other areas where children's motivation is likely to be strong. One is the fantasy simulation (the adventure), and the other is the individual child's particular interests and/or talents. Even the cynic must agree that the child who is totally uninterested in classroom activities may as well be doing something in which he/she shows some enthusiasm. Children respond enthusiastically to fantasy situations and the imaginative teacher can make use of this enthusiasm to generate a wide range of educational activities by drawing upon the parallels between the 'dream' world and the real world. The micro can certainly play a part in realising a make-believe environment but then so can posters, books, music and, most importantly, the corporate imaginings of child and teacher.

There still remain, however, many different problems if this sort of approach to education is permitted. If children are going to build their own worlds in the classroom (computer-aided or otherwise) how is the poor teacher going to decide who has failed? What comments can be written on reports and what scores can be added to those vital record cards? How does one convince a head, or governor or parent that this is real work when the child keeps reporting, 'this is much better than working'? When a class has just been defeated by the barbarian hordes it's very difficult to measure a child's empathy with a Roman orphan so I guess the answer is to finish the whole project with an assessment test. 'Come out from under your mini and do this test. Question 1. In which year did the Romans conquer our country?'

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Mike Matson is a member of the 4MAT partnership which produces educational resources. Programs available from 4MAT: *Spacex, Granny's Garden, Flowers of Crystal.* (4MAT Educational Software, Linden Lea, Rock Park, Barnstaple, Devon.)

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Micro rhymes for the young
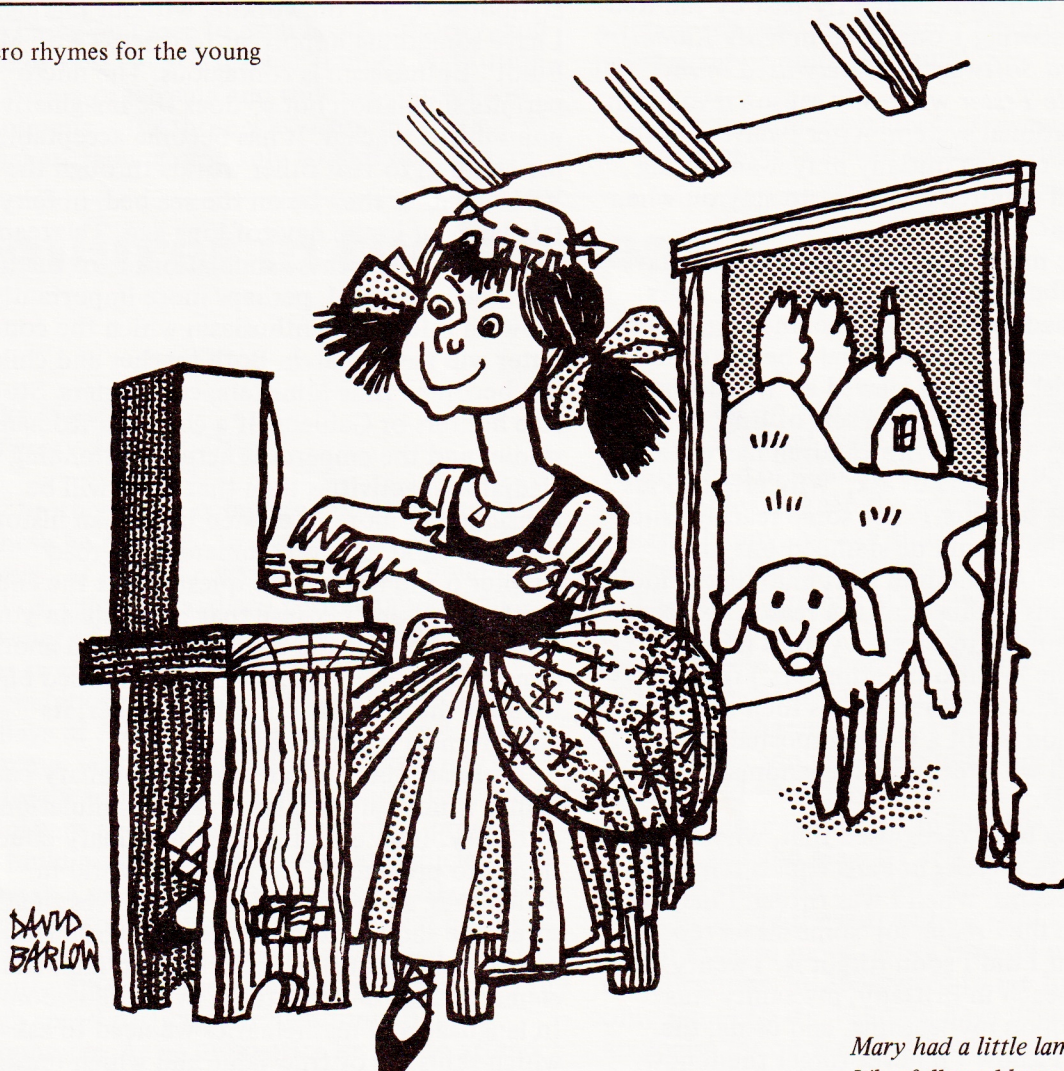


*Mary had a little lamb*
*Who followed her to school,*
*She swapped him for a micro*
*'Cause the lamb was such a fool!*

# Educating the parents

**Chris Robinson**
*Iver Heath Middle School, Bucks*

'What did you do at school today, dear?'
'Oh, we played LOGO in maths — I drew a star; and I started a story on the word processor in English this morning. Then, this afternoon I wrote a mailbox letter to Nicola to tell her about the weekend, after games.'
'Nice, dear. What did you do for games?'

The above scenario is becoming increasingly common as children use computers more and more in schools. The wording may not be 100% accurate but the situation occurred, according to the mother of one of the girls in my class. Admitting to me she felt lost, she had asked her daughter about the only subject she felt she did understand: games.

'I don't understand what she's doing, but she seems to enjoy it,' dismissed another parent.

'Aren't they just playing games?'

In an attempt to answer these questions, I have organised a series of Parents' Sessions at our school. For the first session, last June, we had only two computers in school — one bought by the school's computer club and my own. An appeal to parents resulted in my being able to borrow four more of the same model, plus portable televisions, to enable us to display six programs for an hour after school. The session was almost too successful. With four or five child volunteers playing at each machine, the dozens of parents attending hardly got a look in. However, by the time the next term started, the parents association provided us with seven more computers and seven more colour televisions.

The next four sessions were presented as a course throughout October. Each session contained about ¾ hour of formal lecture/instruction/demonstration and about 1¼ hours of practical hands-on experience. For these sessions the children were excluded, but it was hard work. Imagine trying to deal with LOGO and Information Retrieval in one session with a class of 60! Obviously, all that could be done was to provide an elementary taster. It was enough to convince the parents that we weren't just playing games. A need was felt for regular update sessions, perhaps once or twice a term.

We have just had the first of the new style update sessions. It took the form of an open evening/exhibition. (Viewers of Breakfast Time television may have seen coverage of it at half-term.) Twenty child 'experts' were on hand to provide instruction for the forty to fifty attending parents attempting to come to grips with the nine different applications we had on display. They were:

*Word processing*
The excellent *Tasword* program for Spectrum, used with microdrives.

*MAILBOX letter writing*
Some of our children record messages which are transmitted via PRESTEL to Norton Glebe School, Stockton — over 300 miles away, and had been featured on a recent radio program.

*Data processing*
Using Psion's *VU-FILE* and some 'trump cards', parents created a display card database to interrogate.

*LOGO*
The *Snail Logo* by C.P. Software we have presently isn't a true implementation and is not very user friendly but is a reasonable introduction. By the next parents' update we hope to have the full Sinclair implementation, and PROLOG too.

*Logic games*
These were represented by the program *Treasure* (available presently only from MUSE but soon to be released by Collins). It provides stimulus to solve simultaneous equations and develop a strategy.

*Simulation*
The Dudley program *Car Journey* at level 4 — 'delivery service' was available for a 'game'.

*Computer assisted design*
Psion's excellent *VU 3D* program was used to demonstrate computer assisted design.

*Control*
As an example of control application, two boys were displaying a majestic lighthouse model they had made. They had connected it to a computer which they had taught the light characteristics of a number of British coastal lighthouses so it would reproduce the 'flash code' of whichever light was requested.

*Concept keyboard*
A home-made concept keyboard in use with a simple sight-vocabulary teach and test demonstration program showed the parents how computers could be used by younger children.

Providing this sort of experience for parents is hard work but the children coped well. They enjoyed themselves immensely. Their own knowledge was reinforced as they communicated it to the others.

I think it is essential that schools should help parents in this way. Many will have bought a computer for their children to further their education. (About 50% of our children have a computer identical to the school machines at home.) They wish to know what may be done with it when the children tire of Space Invaders.

Not all schools will have the resources to mount such an exhibition. Perhaps they could arrange to borrow from children, as we did at first, or combine with other schools in the locality? This latter course of action has been successfully achieved in the Chiltern MAPE area where a 'Kids, Computers and the Classroom' exhibition was held at a school in Marlow, Bucks, in October and will be repeated in St. Albans in May.

# The day microcomputing broke out

**P J Morse**
*Downfield JMI School, Cheshunt*

How could one resist the 'challenge' of the new technology in primary schools? Sensing that all resistance was, indeed, useless, I attended an in-service course which introduced the machinery and the fundamentals of BASIC programming. Having overcome the misconception that software was the lettuce that you fed to the turtle, I decided to go right to the top and visit the 'Trail-Blazers' and soak up the heady pioneer atmosphere. Confiding to an important person that after thirty years of actively detesting mathematics (am I the person that Seymour Papert is trying to save?), first steps in BASIC were actually changing my attitude to the subject, he looked at me aghast. 'Why on earth do you want to learn to program?', he asked, 'You don't write your own textbooks. Leave programming to the experts.'

Suitably chastened, I decided to aim lower and visited a local school's Software Users Group. An individual whose dress, manner and bearing might have marked him out to be the man who had come to rectify the defective plumbing in the boys' toilets, but who was in fact the headmaster, then gave an overview of the ongoing situation at the teaching/learning interface (sorry, an introductory talk on the classroom use of microcomputers).

'I hope you don't do boring old maths in your school!', he gushed, before proceeding, by clumsy manipulation of the keyboard, to foul up 50% of his demonstrations, accompanying each mistake by charming intellectual witticisms like – 'Oh Gawd, I can't spell, ha-ha!' The talk was concluded with the encouraging exhortation to the listeners, 'We don't want any of YOUR two-bit programs.' The gentleman was obviously a committed full-time SOPI (sorry, a confident use of acronyms, preferably ones which nobody else has heard of, is essential to the primary school teacher: SOPI = Self Opinionated Pseudo-Intellectual).

How much lower can one aim? I visited a Teachers' Centre for a day's course where it became evident that it really was essential to have a disc drive in your school, and certainly a turtle, and a network would be nice, and . . . When I mentioned that I thought that the Sinclair Spectrum was great value for money for schools, the speaker's expression changed to that of an individual who has just stepped in something rather unpleasant on the pavement.

It was therefore with some relief that I read Chris Robinson's letter in *MICRO-SCOPE 10* and Judith Exley's article in *MICRO-SCOPE 11*, and found that the Sinclair user is alive and well in primary school microcomputing, and, indeed, even has the nerve to write programs. Thus emboldened by the example of other Sinclair 'outcasts', I thought that the following program might prove useful to schools which use the Sinclair Spectrum.

### Tournament

The program was originally written as an exercise in the use of the DIM statement, arrays in general, and the first tentative steps in writing a database for a specific application. In practice, it seemed obvious to use it for the recording, display and print-out of results at the annual Six-a-Side Football Tournament in the Waltham Cross and Cheshunt District.

The tournament is in two parts. The main competition is for the District Shield, and all first-match losers in this competition automatically enter a Losers' Plate competition. Two pitches are available for play. A reflection of this situation is evident from a glance at the program listing.

Essentially, the program is just a menu controlling various subroutines containing a selection of INPUT and PRINT statements.

```
100 REM    FOOTBALL TOURNAMENT
110 REM    RESULTS DISPLAY
115 REM       P.J.MORSE 1984
117 REM
140 PRINT AT 10,10; PAPER 2; INK 6; FLASH 1;"STOP THE TAPE"
145 PAUSE 200
150 BORDER 4: PAPER 7: INK 0: CLS
155 LET a$="SHIELD": LET b$="PLATE"
160 PRINT  PAPER 1; INK 7;"  FOOTBALL TOURNAMENT RESULTS    "
200 INPUT "How many matches today?";m
205 DIM t$(m,5): DIM p$(m,1): DIM k$(m,6): DIM f$(m,12): DIM s$(m,12): DIM r$(m,6)
210 PAUSE 150: BORDER 4: PAPER 7: INK 0: CLS
212 POKE 23658,8: POKE 23609,40
213 PRINT : PRINT "There are "; BRIGHT 1;m; BRIGHT 0;" matches today."''
220 PRINT TAB (11); PAPER 2; INK 7;"MENU"'
230 PRINT "Press "; PAPER 6;"P"; PAPER 7;" to INPUT pitch details"
240 PRINT "Press "; PAPER 5;"1"; PAPER 7;" to INPUT 1st team"
250 PRINT "Press "; PAPER 6;"2"; PAPER 7;" to INPUT 2nd team"
260 PRINT "Press "; PAPER 5;"R"; PAPER 7;" to INPUT results"
270 PRINT "Press "; PAPER 6;"D"; PAPER 7;" for RESULTS display"
280 PRINT "Press "; PAPER 5;"C"; PAPER 7;" for RESULTS print-out"
285 PRINT "Press "; PAPER 6;"S"; PAPER 7;" to SAVE DATA"
300 INPUT "Menu choice?",c$
310 IF c$="P" THEN  GO SUB 1000: PRINT ''': GO TO 220
320 IF c$="1" THEN  GO SUB 1200: PRINT ''': GO TO 220
330 IF c$="2" THEN  GO SUB 1300: PRINT ''': GO TO 220
340 IF c$="R" THEN  GO SUB 1400: PRINT ''': GO TO 220
350 IF c$="D" THEN  GO SUB 1500: PRINT ''': GO TO 220
360 IF c$="C" THEN  GO SUB 1600: PRINT ''': GO TO 220
362 IF c$="S" THEN  GO SUB 1700: GO TO 300
370 GO TO 300
1000 REM TIME/PITCH/COMP INPUT
1010 CLS
1015 PRINT  PAPER 1; INK 5;"PITCH DETAILS INPUT"
1020 INPUT "Match number?",g
1030 PRINT
1040 PRINT "Match number",g
1050 INPUT "K.O. time?",t$(g)
1060 PRINT "K.O. time",t$(g)
1070 INPUT "Which competition?(S or P)";d$
1080 IF d$="S" THEN  LET k$(g)=a$: GO TO 1120
1090 IF d$="P" THEN  LET k$(g)=b$: GO TO 1120
1100 GO TO 1070
1120 PRINT "Competition",k$(g)
1122 INPUT "Which pitch?(A or B)";p$(g)
1124 PRINT "Pitch",p$(g)
1130 PRINT : PRINT
1140 INPUT "Any more?(Y/N)",j$
1150 IF j$="Y" THEN  GO TO 1020
1160 RETURN
1200 REM FIRST TEAM INPUT
1205 CLS
1210 PRINT  PAPER 2; INK 6;"TEAM INPUT / 1"
1220 PRINT
1230 INPUT "Match number?",g
1240 PRINT "Match number",g
1250 INPUT "Team?",f$(g)
1260 PRINT "Team 1",f$(g)
1265 PRINT : PRINT
1270 INPUT "Any more?(Y/N)",j$
1280 IF j$="Y" THEN  GO TO 1230
1290 RETURN
1300 REM SECOND TEAM INPUT
1305 CLS
1310 PRINT  PAPER 5; INK 2;"TEAM INPUT / 2"
1315 PRINT
1320 INPUT "Match number?",g
1330 PRINT "Match number",g
1340 INPUT "Team?",s$(g)
1350 PRINT "Team 2",s$(g)
1360 PRINT : PRINT
1370 INPUT "Any more?",j$
1380 IF j$="Y" THEN  GO TO 1320
1390 RETURN
1400 REM RESULTS INPUT
1405 CLS
1410 PRINT  PAPER 6; INK 1;"RESULTS INPUT"
1415 PRINT
1420 PRINT "Enter results decided on goals  only thus:-  3-0"''
1425 PRINT "Matches decided by corners       should record the corner       difference.              If the game score was 2-2 and    the first team won by 3 corners to 1, then you should record thescore thus:- 2+2c-2      If the second team had won by 1 corner to 0 then the score wouldbe recorded:- 2-2+1c"
1430 PRINT : PRINT
1435 INPUT "Match number?",g
1440 PRINT "Match number",g
1445 INPUT "Result?",r$(g)
1450 PRINT "Result",r$(g)
1460 PRINT : PRINT
1470 INPUT "Any more?",j$
1480 IF j$="Y" THEN  GO TO 1435
1490 RETURN
1500 REM RESULTS SCREEN DISPLAY
1505 CLS
1510 PRINT  PAPER 6; INK 1;"TOURNAMENT FIXTURES AND RESULTS "
1515 PRINT
1520 FOR o=1 TO m
1525 PRINT  PAPER 6; INK 0;"Match "; BRIGHT 1;o; BRIGHT 0; PAPER 5; INK 1;"K.O."; BRIGHT 1;t$(o); BRIGHT 0; PAPER 2; INK 7; BRIGHT 1;" ";k$(o); BRIGHT 0;" Pitch "; BRIGHT 1;p$(o); BRIGHT 0
1530 PRINT  BRIGHT 1;f$(o);" "; PAPER 6; INK 1;;r$(o); PAPER 7; INK 0;" ";s$(o)
1535 NEXT o
1536 PRINT : PRINT
1537 PRINT  PAPER 5; INK 1; FLASH 1;"TOURNAMENT RESULTS"; FLASH 0;" P.MORSE 1984"
1538 PRINT "PRESS ANY KEY FOR "; PAPER 2; INK 6; FLASH 1;"MENU"
1539 PAUSE 0: CLS
1540 RETURN
1600 REM PRINT-OUT
1610 LPRINT  INVERSE 1;"       TOURNAMENT RESULTS       "
1620 LPRINT
1630 FOR o=1 TO m
1640 LPRINT "Match ";o,k$(o)
1650 LPRINT f$(o);r$(o);s$(o)
1660 LPRINT
1670 NEXT o
1680 RETURN
1700 REM SAVE DATA
1710 SAVE "tournDATA" LINE 210
1720 RETURN
1999 SAVE "tourn" LINE 1
```

*Tournament: Spectrum program listing*

Having typed in the program and then SAVEd it by typing GOTO 1999, on subsequent LOADing, the program will auto-RUN in an 'empty' format. The main problem in writing the program was to get it to store information (e.g. time and pitch details) that could be saved for future use. I first experimented with saving DATA as character arrays, but this proved unsatisfactory. Line 1710 seems to provide a solution, as choosing this option from the menu saves the program complete with any DATA, and when re-LOADed (type LOAD""), starts the program from line 210, thus leaving all the variables intact. It might be an idea to save an 'empty' version on one side of a cassette and punch out the record/protect tag, and reserve the opposite side of the tape for recording programs with DATA.

## Conversion

It would be extremely easy to convert the program for any other football tournament with a slightly different format (line 155, lines 1070–1122, lines 1420, 1425). Indeed, it could be used for a netball or rounders rally just as easily. With only minor modifications to the graphics/display statements, it could be used on the ZX81. The POKE statements in line 212 merely set the CAPS LOCK and give the keyboard response as a sharp beep rather than a muted click.

Children at my school have already taken copies of the program for use on their home Spectrums where they record the results of table-top football games or the results of their weekend football team. If I were a SOPI, I would maintain that I have made a break-through in football-orientated database experience for primary school children. As I am not, then you and I can share the secret that the program is merely a simple opportunity for children to learn by having fun. I hope it will be of some use for your school and that your children will have fun using it.

# MAPE Conference

As this year's Conference organiser I feel absolutely unqualified to report on the actual Conference. I was undoubtedly there — I've got a folder, but the fact that I was the organiser tended to alter my perception.

I was pleased that the number of delegates reached the maximum we could accommodate. I was sorry that so many applications had to be returned. (Book early for MAPE!) Sessions seemed to run smoothly and to time. The college catering and domestic staff did us proud. I was enormously grateful for all the help and support I received.

The problems seem to be constant. Should everyone be given and be made to wear a badge? Should we divide the delegates into ability levels so that interest group audiences are no longer of mixed ability? How much are people prepared to pay? I think that the price for this year's Conference was a bargain, but there is a correlation between what delegates are prepared to pay and what they will get for their money. Should attendance at interest groups not be preselected? A large number of delegates go where the force takes them. (I was there while the attempt was made on the record for the greatest number of people in the lecture room.) The Conference organisation needs to adapt to the needs of the delegates; I would appreciate any constructive comments towards next year.

We are always at the mercy of mechanical failure and biorhythms. The video projector faltered during one session. One or two main speakers were obviously at a low ebb. Overall, I think the Conference was a success. I hope that those who attended felt it was a worthwhile experience. I learnt a lot!

*Senga Whiteman*
*Newman College*

# Impressions . . .

Yet another conference . . . Does setting off to a conference bring to others the same sort of apprehension and anticipation? The first really fine weekend, and passing through the beautiful countryside reinforced the thought that it would really be much nicer to stay at home.

The conference programme looked interesting and MAPE conferences have a great reputation. The informal demonstrations at the start were spread around the Science Block and enabled a quick tour to be made of new software, numerous peripherals (did you know that the BBC Buggy is not as accurate as the turtle and does not use LOGO?) and the opportunity to find out about Telesoftware.

After Ron Jones's introductory address and a visit to the commercial exhibition with its numerous publishers demonstrating software, we were able to get together and embark on the main activity of the Conference which undoubtedly was . . . discussion! Rarely can there have been so much talk from a limited number of people, so much excitment, so much stimulation.

John Coll's address on the first evening certainly set the tone. He suggested that the primary school market (if 25,000 schools spend an average of £100 per annum this is only £2,500,000) was too small to support provision of educational programs for schools; with the result that educational software would have to be aimed at the large domestic market; so that schools would have to take software originally written for the home. This produced such shock in some teachers that the interest group session on 'Home Education and School — Complement or Conflict?' was unable to get down to discussing its subject for some time.

Mention of the interest groups leads to general conference problems. There were three one-and-a-quarter hour interest group sessions, during each of which eight parallel interest groups were available. How can you choose between, for instance, 'BBC Buggy and the Primary School'; 'Word Processing'; 'Beyond Turtle Graphics'; 'Adventure Games'; and another four of equal interest taking place at the same time? But this results from compressing into two and a half days a programme which could easily have filled four or five days. And who are we to complain?

# 1984 — Newman College

The conference rolled on; with its full large-screen demonstration of David Jackson's *Suburban Fox* (leading to the affectionate description of Roger Keeling at the last session as 'Foxy' Keeling) and a foretaste of *Pipistrelle* to come; with the 'fringe', where the writer visited no less than six of the available offerings within a period of an hour; with Bryan Spielman who brought on paroxysms of laughter with a lecture entitled 'Realities of Educational Software'; and finally with Anita Straker pouring out information in a lecture theatre in total darkness so that nobody could see what they were writing down.

The conference ran beautifully. It ran to time. The food was good. The company was excellent. The technical content and presentation was first rate. And yet it left me with some worries. Were we just a small band of converts — 250 for the 27,000 primary schools? Why has MAPE still got no regional representation in some areas? And where were the parents? — I met one— and where were the overseas visitors?

*A. J. Obrist*

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I am a MAPE member of long standing, but this was my first Conference.

The first main lecture, by John Coll, certainly posed some futuristic questions. John implied that much of the future development will be aimed at the secondary sector. I would like to suggest that the MEP concentrate their attentions on primary education, where they are likely to meet with more success than they have met with in the secondary sector. Alternatively, would it be wiser to encourage the enthusiasts from both sectors to explore the possibilities and limitations of future developments? Then those who already feel that they have enough to cope with would not be overburdened or frightened off.

Saturday started for me with Jim Flood's session on 'Micros and Control'. It was an interesting session in which technology was demystified. Many ideas were provided for classroom practical sessions including the making of a beer-can buggy for less than £1.

The main lecture and demonstration of *Suburban Fox* by Dave Jackson was superb, entertaining and informative; support was given by Roger Keeling. Surely *Suburban Fox* will oust *Mary Rose* from the top spot in the simulation rating?

The session on adventure games was an adventure in itself. Would it be possible to accommodate the fifty people who hoped to attend? It's good to see the way educational adventure games are developing. The latest from 4MAT, a clever piece of software entitled *Flowers of Crystal*, includes an audio cassette, story book and line drawings, and perhaps will be the first adventure game that I would use in my classroom.

On Saturday afternoon the MAPE AGM revealed some tensions about regional versus central organisation. If regional development is to work we need many more committed volunteers. I'm not sure that there are enough enthusiasts to make each region viable.

Johnny Ball was received politely but is it a good idea to have a main speaker who doesn't know what we are about?

Sunday opened with Heather Govier's session on problem solving. This included demonstrations of programs which allow children to hypothesise and test their ideas in a reasonably flexible way. The *Bees* program proved to me that clever programming of the micro is very close to the reality of VCR films.

Bryan Spielman's lecture on programming inexorably middle-muddled my piddle-puddled thinking. I think I will stick to teaching kids TRAGIC or is it PLOGIOC?

The final lecture, by Anita Straker, again emphasised the total difference in attitude and work rate between the primary and secondary sectors. I would dare to predict that the challenging effects and changes in the primary curriculum, aided by the National Primary Project team, will stun the central MEP team to such an extent that they will be forced to provide leadership for the secondary sector, or resign! How will secondary schools respond to the arrival of enthusiastic, technologically aware, ex-primary pupils?

It was an enjoyable but exhausting Conference.

*Reg Eyre*
*College of St Paul and St Mary, Cheltenham*

# ...more impressions, Conference 1984

I enjoyed the Conference for a variety of reasons. There was, on the one hand, the reunion with old friends from the dim and not-so-dim past. On the other hand, there was the making of many new friends. Everywhere you could sense that all-pervading atmosphere of excitement of explorers or at least of early settlers, on the very frontiers of education, ready to press any key to boldly continue where no micro had gone before. The latest programs, ideas and vistas were opened up to our eager eyes and ears, wrapped in the newest jargon.

The main lectures themselves were generally well received even if occasionally, apparently, ill-prepared and wrongly titled. John Coll, as is his wont, threw out some challenging and stimulating ideas about the future commercial development of software and communications. Johnny Ball entertained us with some interesting anecdotes and asked some pertinent, crucial questions about the educational use of micros. Anita Straker unravelled some of the mysteries of the MEP, and proffered the hope that others too may soon be informed of what is happening. (Incidentally, there is no truth whatsoever in the rumour that the MEP is being revamped as the Anita Straker BBC Primary Project.) Undoubtedly the highlights were the triumphant triple act of Jackson, Keeling and Whiteman — with whose unerring help no simulated *Suburban Fox* could ever fail — and the brilliant and perceptive one-man band of Bryan Spielman who took us so admirably through the considerable confusion of 'The Realities of Educational Software', from amateur ULPs ('useful little programs') to the standards of professional software, with such great insight and wit.

Looking back, there were one or two buts. There was, for instance, little or no time to ask questions of the main speakers. What is this 'properly confident child' we are supposed to be aiming at? What will the role of the MEP's Primary Co-ordinator be, exactly? And how would a Software Library be financed? How long would education as we know it survive in a world of totally commercialised software? And on the other hand, why this dichotomy between education and commerce, why this anathema of the market-place? Perhaps that 'social facilitator' role of the micro has affected us so much that we now presume we are demo-

cratically agreed on everything. What on earth happened to that good old-fashioned, verbal ding-dong, the witty thrust and parry? I don't remember even one 'I beg to differ'!

There were times, too, when the auditorium lights were out in order to see the large screen better, which meant it was nigh impossible to write down any pithy pearls of wisdom in the ensuing darkness. (This could never have happened, to use Bryan Spielman's words, in the 'dark ages of Blackboard Assisted Learning'.)

Some conferences have been known to have official 'recorders' of lectures and of the consequent question and answer sessions, for publication or distribution in some form. Perhaps, MAPE could look into the possibility. Or what about a *MICRO-SCOPE* 'Conference Special' instead of a second MAPE Tape? (That should put another cat among the proverbial pigeons.)

More opportunity to see the 'interest groups' and 'Fringe activities' would have been greatly appreciated. Obviously there are organisational difficulties, but perhaps some of the most popular sessions could be repeated — I seemed to have missed out on so much. Or, what about extending Conference by a day or two?

MAPE continues to expand in numbers and influence, but can it cope with its own rapid growth? There seemed to be quite a groundswell of opinion that the rank and file members are having very little chance to have any impact on national policy whatsoever. Statements like 'Thank you, we will take note of the points you raised', and apologies for cutting short the agenda of the AGM because 'They're now serving dinner' do little to mend the growing rift between the regions and the national committee. Perhaps the healing balm of time will help.

Finally, the facilities offered by the Newman hostelry were well organised and well run; they easily coped with the hungry hordes. In fact the Conference went remarkably smoothly. At the final session Chairman Ron Jones brought things to a climactic close, firing us with burning enthusiasm to be ready, micros to the fore, to face Monday morning, and indeed the next 51 Monday mornings — at least until MAPE Conference 85 comes round! I, for one, can't wait.

*Barry Wake*
*Primary Support Team, Birmingham*

# Computers and literacy

**Roger Keeling**
*Newman College*

No sooner had I got my breath back after the MAPE Conference than I found myself on the following day heading north to attend the International Commission on Computers and Literacy as part of the 21st NATE Conference (National Association of Teachers of English). The Commission consisted of almost 100 delegates, including a number of visitors from America. My aim was to examine the role of the micro through the eyes of the language teacher and not the 'computer expert'. What I saw was encouraging. A pattern is emerging of sensible ways in which the micro can be used in language teaching, and that excludes all references to programs that supposedly assist spelling, punctuation and parts of speech.

Word processing is very much a driving force, and our attention was drawn to the QUINKEY system which allows four hand-held devices (simplified microwriters) to be linked to one BBC/Acorn micro. The software then enables the screen to be divided into four horizontal bands, each one representing a simplified word processor and displaying four scrolling lines, thus enabling four children to word process simultaneously. A further extension of this split screen will be demonstrated by Acornsoft's *Spooky Manor*. This will be an adventure game allowing four players, each with a QUINKEY device, to explore the same scene simultaneously, but independently. The exciting part is that the children, while on their travels, can discover each other. The use of a split screen may require completely new reading skills. Screen presentation in general is making new demands on experienced readers, largely because the screen and not the reader is dictating the rate at which information is presented.

It was interesting to learn of other imaginative uses of word processing. For example, give pupils a pre-prepared text (perhaps a famous poem in either the correct or incorrect order) and allow them to juggle the position of the lines. How does their final poem compare with the original? Has the meaning been altered or the emphasis changed?

Amongst English teachers there is general agreement on the value of adventure games, but adventure game generators have still more
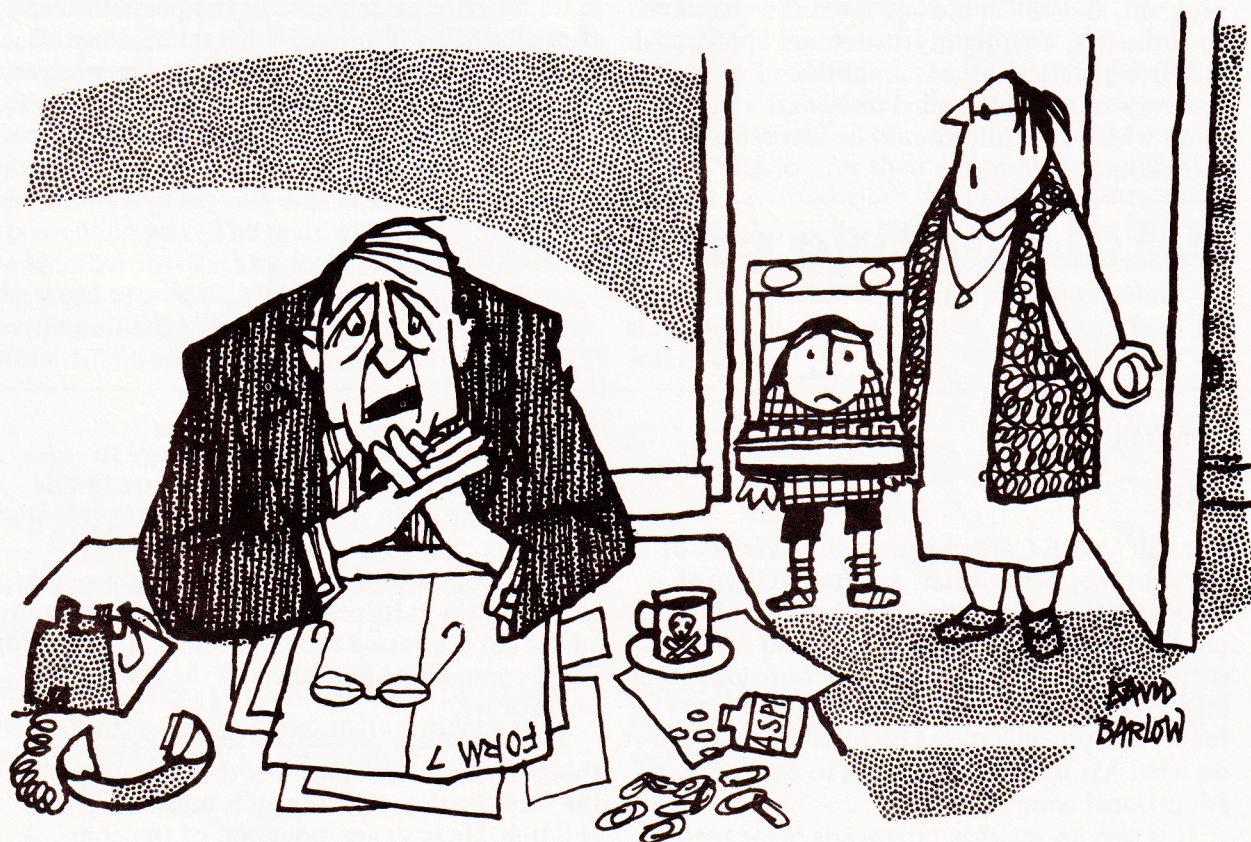


*'What is it now, Miss Obligato?'*

to offer. The language section of Chelsea College Computers in the Curriculum Project is currently working on one such program. It allows users to describe their own environment; to determine their set of characters; and to specify what responses are acceptable. Children can invent their own adventures which they can subsequently get their peers to solve. Many interesting discussions will undoubtedly arise when the player uses strategies that the game 'setter' has not allowed for.

A third interesting idea to emerge from the Conference was that of kinetic poetry. This is basically an extension to shape poetry in which words are given a degree of movement. For example, a poem that ends with the line: 'As the day ends, the setting sun sinks lower' could be illustrated with simple animation of the form:

```
    s
    et          s
    tin         et          s
    gsun        tin         et          s
```

The child must be able to concentrate on the poetry. Any program which allows the creation of kinetic poetry must, therefore, be easy to use. *Add-verse* and *Word-dance*, two programs on view at NATE, would need modifying and re-designing before they could be used with primary-age children. *Add-verse* in particular requires a set of instructions which are in effect a mini-program, and which include reference to screen co-ordinates. This tightly-structured approach includes a mathematical emphasis and seems contrary to the openended imaginative poetry upon which the child should be focussing attention.

For some time English teachers have debated the merits of Cloze procedure programs; and *Developing Tray* has caught the interest of many. A teacher can input a passage of text — prose or poetry. The screen displays a 'blank passage', showing only the punctuation. The teacher leads the children in class discussion, in trying to rebuild the text by using their knowledge of language and the rules of inference. It is possible, for example, to ask for all the occurrences of the letter 'e' to be revealed, and then the letter 't'. The missing letter in 't—e' may be predicted to be 'h'. If the prediction is successful, all the other occurrences of 'h' can be uncovered. As further letters, words or complete sentences are identified, the original text is rebuilt.

In an age of information processing and electronic communication transmitting the information may be expensive. One skill which will be essential in the future is the ability to express an idea or thought clearly and concisely; every word will carry far more weight. It is only a matter of time before we communicate with machines through the medium of speech, but dialect will remain a problem. Perhaps language teachers will then have to teach oracy. We may have to become bi-dialectal, retaining our original dialect but being able to speak in a more uniform way in order to communicate with a machine.

No doubt it is time that our current teachers in training are made aware of the possibilities; after all, they will probably herald in many of these new ideas. Overall the Conference was very stimulating and thanks must go to Daniel Chandler for bringing together so many teachers with imaginative ideas.

# A tale of two conferences

**Don Walton**

**MAPE**

The 4th MAPE Conference meant a variety of roles for me, as a teacher, a representative of a commercial organisation, and also as MAPE publicity officer. I suppose you could say I was sitting on a three-sided fence, or four-sided if my MEP experience is counted. Sitting on this fence, it is possible to see on all sides, and reflect on what has passed and what is to come in educational computing.

It is easy to see that progress is being made by the best practitioners in the classroom, but the Conference highlighted the problems of

teachers in applying micro technology to education and the key role of software in this process. The main speakers reflected on this problem.

John Coll, who has vast experience in micro technology and its presentation to students and adults alike, stressed the importance, for good or ill, of commercial publishers in the production of software.

Johnny Ball, a powerful media messenger on things mathematical, has yet to catch up with the way the new technology is being used with children. He is aware, however, of the commercial pitfalls awaiting teachers and parents as publishers struggle, sometimes with indecent

haste, for a slice of the big cake said to be just around the corner.

Anita Straker gave a lucid account of the aims and objectives of the second phase of the primary school training scheme and whetted our appetites with a few examples of the software which is to be included in the pack. Anita and her team of two recognise the need to supply simple but powerful software for those teachers who are getting to grips with the technology, as well as providing some more complex packages like *Mary Rose* for those who wish to try something more ambitious.

Bryan Spielman, an elder statesman of micro-computing in education, presented a lecture which can only be described as delicious, in which he explained clearly the levels of sophistication in software available to the teacher. He gave new hope to those teachers who enjoy doing a little programming in his section on 'homebrewed software', but warned against being too ambitious. He gave us stern but hilarious warnings about 'quasi-professional' software, and explained how real professional programs must reach very high standards and overcome many hidden problems of which the user should remain blissfully unaware.

## NATE

My second conference was NATE. For the first time at a NATE conference, a group considered the use of microcomputers in the teaching of literacy. I think the title, 'Who's in charge here?' — a key lecture by Dr David Dillon (University of Alberta) — summed up the general theme of the conference. The emphasis was on the use of computers as tools for children to use in a creative, exciting and open-ended way. The main question seems to be whether there is any software, other than the word processor, which can provide such a learning situation in literacy. There is some interesting work being done in this field, but I suspect that most of it succeeds because of the enthusiasm of the originator and would not transfer happily to another situation with a less committed teacher. In the area of reading and oral discussion, most work seemed to be concentrated on exploring and developing the adventure program.

The overall picture, from my position on the four fences, is fascinating but worrying. We see enormous amounts of money being spent on hardware and software. This burst of activity has produced large libraries of books on computers and education, books about computers themselves, listings which can trace their history back for years and a lot of very mediocre software. It has generated courses and conferences at an unprecedented rate in all corners of the world, and yet the really creative educational software designers can be counted on the fingers of one or two hands. It is their lot in life to provide the coconuts to be knocked down if they are found wanting. None of us seems to be short of missiles to aim at these coconuts and they are important as these missiles represent a test from which all software publishers must learn. At the moment it does seem to be rather one sided, lots of missiles and too few coconuts. It might be a good idea if the publishers refused to published a book on educational computing unless it was accompanied by a good piece of software. I am sure this would boost sales, provide an opportunity for all the authors to contribute positively to the debate, and increase the credibility of both author and publisher alike. At least one college of education has taken a major step forward by allowing students to submit software and documentation for their assignment instead of the usual written work. Perhaps the motto for this year should be, 'Actions speak louder than words'. I hope that the 'actions' will be well considered and will represent a genuine step forward in the design of educational software.

## SNIPPETS

**originated or compiled by Bill Bailey**

'We are in danger of using the latest twentieth-century technology to automate a nineteenth-century philosophy of education'

'On paper we set down our *thoughts*, on the computer we set down our *thinking*'

'There'll be enough good software in homes in five years' time to make truancy educationally worthwhile'

'Any teacher who can be replaced by a machine should be'

# Didacta 1984

**Margaret Barfield**
*Heinemann Computers in Education*

'Lucky you! A week in Switzerland . . .' This was the usual response to my telling people I was going to Basel to show Heinemann software at Didacta, the international education exhibition. But, having attended Didacta in Hanover two years ago, I knew I had ahead of me ten days' hard work to compensate for any supposed glamour — two weekends travelling, and a week 'on the stand'.

If you want to show software abroad, it usually means taking your own hardware with you by car. Becoming a travelling micro show involves a large amount of paperwork. Of our party of three, I got landed with coping with customs formalities, owing to the dubious qualification of having managed it last time! I thought my secretary had a hard time typing out 18 copies of our list of ten pieces of equipment for the LCC ATA Carnet, a document which facilitates customs formalities when one is temporarily exporting equipment. But fellow exhibitors Economatics (of Buggy fame) had a Carnet detailing 129 separate pieces of equipment! I wonder whether each item was checked in and out of the UK?

The exhibition was vast, but not too difficult to get around as most of the halls being used were in the same block, on different floors. I came back with the usual regrets that I didn't manage to make time to visit more of the stands. As well as masses of books, the exhibition had everything from building bricks to computers, and musical instruments to laboratory equipment — including a lot of skeletons!

The British contingent at Didacta had three elements — The Publishers Association group (which Heinemann was part of), the British Educational Equipment Association, and, on the floor below us, the Great British Micro Show.

The Great British Micro Show first came together for ASEAN Didacta, in Singapore last year. It is a collection of companies whose aim is to put across the MEP approach to promoting educational computing. At Basel those taking part included the MEP, and firms such as Acorn, Research Machines, Jessop, Five Ways Software, etc, etc. 'Great' applied very much to the quality of exhibits, rather than to the size of stand on which they were being shown. I hope the average visitor realised what a wealth of innovation was contained in this small area — for example, superb MEP developments were on show, in a fraction of the space that the German Apple company were using to demonstrate the MacIntosh.

In comparison with the Hanover Didacta two years ago (Heinemann Computers in Education's first overseas exhibition) the most significant developments were the level of knowledge amongst visitors to the stand; and the greatly increased number of titles we had on show. Our display was mainly software: The Five Ways Software series, SMDP Software, The Dudley Programs, plus *Learn About Computers*, and the books we publish jointly with Ellis Horwood. The most recent of these, *LOGO: a guide to learning through programming*, excited a great deal of interest, in particular from Scandinavian publishers — we had altogether 7 Norwegian publishing firms enquiring about rights! Visitors to our stand included publishers, retailers, teachers, and a few parents and children.

Very few non-UK publishers were showing educational software. Amongst the exceptions were Ernst Klett Verlag (Germany), whose software display included some of the Five Ways titles they have taken from us. (We first made contact with them at the Hanover exhibition, and a very successful partnership has resulted: Five Ways undertake reprogramming based on Klett's translation of the program text — Klett translate and produce the documentation.)

We made the most of opportunities to ask people about the state of educational computing in their own country. Our general impression was that the UK is still way ahead of the rest of Europe; no other country has a project on the same scale as the MEP. Foreign publishers obviously feel that we in the UK are fortunate: if we produce software in versions for the BBC and RML micros, that wraps up the majority of the school market, and by doing a Spectrum version as well one can cater for a few more schools, and make an entry in the 'home' market.

My impressions of availability of micros in Europe are that Spectrums are quite widespread; quite a few people mentioned the Commodore 64 and IBM PC. Someone compared the Apple to the VW Beetle — 'solid and reliable and likely to last for ever'. As yet the BBC micro is not making much impact, but as Acorn overseas dealer networks expand, we hope this will change.

And I did manage to play the tourist for a couple of hours — I escaped to the Kunstmuseum on the last afternoon and did a whistlestop tour of this superb art gallery!

# MAPE matters

**Ron Jones**
*Chairman of MAPE*

Children are central to all our work within MAPE. The use of the new technology is, perhaps, the most powerful tool ever presented to a generation of children; they will be able to build up a whole new world. As teachers, our greatest contribution is to free our own imaginations and to escape from the constraints of an outdated curriculum so that we are able actively to encourage our children to take the real chances offered to them for an autonomy over their own learning.

## Conference '84

It was the theme of the excitement of moving into the unknown, along paths as yet unexplored, that I chose to follow in my Chairman's address to Conference '84. A great many of the interest groups and 'the fringe' reflected the diversity of direction in which a pioneer teacher might wish to go. Would it be towards the use of word processing, control technology, or speech synthesis? Would teachers choose to enter the imaginary worlds created through adventure games and through the creative use of simulations? The excellent lecture and demonstration of *Suburban Fox*, presented by its author Dave Jackson, stimulated the 250 delegates to use their imaginations for well over an hour — no mean achievement!

I must use this opportunity to thank Senga Whiteman and her hard-working Conference '84 committee for creating the right atmosphere for a very successful Conference. She managed through good housekeeping to keep the cost to a reasonable level so that we were able to attract a very high proportion of classroom teachers. The convivial atmosphere helped delegates from all over the United Kingdom to come together, and move several steps forward in their thinking and in their use of new technology. On Senga's behalf I would like to thank all those teachers/ lecturers who contributed to the workshops, interest groups and fringe events. We are also grateful to the many publishers and manufacturers who exhibited their wares at the conference; I know that delegates found it extremely useful to be able to 'browse'. The exhibitors had a valuable opportunity to take soundings of the directions being taken by the new technology in our schools. I returned from Conference with my batteries fully recharged, thanks to the delegates I met and to the thought-provoking experiences of the interest groups in which I participated.

However, in this fast changing world, Conference '84 is now dead, long live Conference '85! This major event will take place at the College of St Paul and St Mary, Cheltenham, from 29th to 31st March 1985. Reg Eyre has 'volunteered' to head the Conference committee; no doubt Reg will be recruiting helpers from the West Country to help him in his task. Dates for your next year's diary are 29th to 31st March 1985 — pre-Easter in Cheltenham should be quite an experience!

## Second Schools Computer Fair

Especially useful dates for this year's diary are those of the Second Schools Computer Fair organised by the Educational Publishers Council. The fair is being held in London, at the Bloomsbury Crest Hotel, Coram Street, London WC1 on Tuesday 6th and Wednesday 7th November 1984; and in Manchester at the Pembroke Halls, The Precinct, Worsley, Manchester on Wednesday 14th and Thursday 15th November 1984.

## The Sinclair solution

Several letters I have received recently from Sinclair owners reflect the sentiments expressed in letters published in *MICRO-SCOPE* 10 and 11. If Sinclair users feel that MAPE reflects only the needs of BBC and RML users in schools the remedy lies in their own hands. Resist the temptation to write more complaining letters on the subject — be more positive and write a case study on the use of the Sinclair machines in schools. *MICRO-SCOPE* can only reflect the interest of those members who contribute to it. If nothing is received from a Sinclair owner/ user then nothing can be printed. This journal is as much yours as it is any other member's; I urge you to contribute. Having said that, I would like to sound a warning note: we in MAPE do not wish to focus too closely on the technology used within schools. The curriculum issues and their implications should rise above the controversy about the type of hardware used. *MICRO-SCOPE* is a serious educational journal; it must not degenerate into a computer-speak magazine.

## MEP Primary Project

Those who attended Conference '84 will have been made aware of the progress being made by the MEP Primary Project team under its Director Anita Straker. Two members of the team were present throughout the Conference and every delegate received a copy of their very useful document *Microcomputers in Primary Schools* which lay between the covers of a MUSE Report. The four articles on language, mathematics, science and topic work contain very helpful material for teachers; the list of software referred to in the articles is especially useful. MAPE members will be pleased to learn that the project team has agreed to create a *MICRO-SCOPE Special* which should be available towards the end of this year.

## MICRO-SCOPE matters

For the past eleven issues, the person at the very heart of *MICRO-SCOPE* has been its Editor, John Lane. Unfortunately, through pressure of work, John put his editor's pen to rest when he put *MICRO-SCOPE 11* to bed. I am sure that I express the feelings of all MAPE members when I thank him for all his hard work. It was John's generosity and flexibility of mind that allowed MAPE to join with the already successful Newman College Computer Magazine to create our in-house journal. As a token of our gratitude we have arranged to have a specially bound volume of *MICRO-SCOPE* 1–11 presented to him. I hope that, although his editor's pen might be laid aside, he will now take up his contributor's pen — *MICRO-SCOPE* needs to reflect his thoughts on the many curriculum issues now facing us.

Senga Whiteman, who showed such flair as Conference '84 organiser, has 'volunteered' to take on the duties of Editor. *MICRO-SCOPE 12* is her first venture, although she has been a member of the editorial board for some time. I urge as many members as possible to support Senga by sending in contributions. Write that article now — it need not be long — it could be a snippet of information about how you have used a particular piece of software or hardware. If you are a member of a curriculum development group, use *MICRO-SCOPE* to launch your ideas, to fly kites, to exchange views.

## End piece

The annual Conference and AGM is followed by a period which renews our strength. Regional activities are beginning to blossom. The organisation at the centre is settling down with BKT subscription agency.

By December of this year all primary schools throughout the country will have received at least one micro under the DTI/DES Micros in Schools Scheme. Two teachers will have received some basic training. According to the MEP Primary Project Team's survey of the national scene, some 25% of primary teachers will have been trained. Looking at it from the other point of view, there remain 75% of teachers who still require training. It is becoming obvious that one computer system per school is inadequate for the task in hand, software is too expensive, and software of the 'curriculum change' type is in short supply. There is a danger of a technological gap growing between the teachers who know and the teachers who wish to know; and there is the need to bring the systems supplied to primary schools up to the same standard as those supplied to the secondary sector, i.e. a disc drive and a printer.

MAPE should support and encourage both those teachers with the pioneering spirit burning strongly within them and the majority of teachers who are only just beginning to reach out for help. To do this job satisfactorily we need to recruit many more members. We are organised and ready to expand. If MAPE membership increases we will be able to ensure that children can benefit from the introduction of the new technology as a serious aid to learning. We have a long way to go to achieve our stated aim:

> 'To promote and develop the awareness and effective use of microelectronics as an integral part of the philosophy and practice of primary education'.

I hope that you will do your best to persuade other colleagues to join us on our exciting journey.

## STOP PRESS

**Council meeting -- Newman College, 8th/9th June**

As this was the first Council meeting after the Annual Conference, a new executive was duly elected. The new Chairman of MAPE is Brian Weaver, an Inspector for Educational Computing with ILEA. Roger Keeling was elected Vice-Chairman with Anne Liddle as Secretary and Ron Gatfield as Treasurer.

I'm sure I speak on behalf of all MAPE members in thanking Ron Jones for the unstinting effort he has put in over the past three

years in establishing MAPE as a leading organisation in the promotion of the micro in primary education. It was Ron's initial foresight that led to the creation of MAPE at the Exeter conference in 1981 and he must take a lot of the credit for the achievements of the last three years. Hopefully we can co-opt Ron for a further twelve months so that his experience is not lost to the new committee.

The Council also welcomed David Whitehead as the representative of Greater Manchester and Lancashire, and Marjorie Briggs as the representative of West and North Yorkshire. Both would be interested in hearing from MAPE members in their areas, particularly those willing to assist in the organisation of regional activities.

Following the points raised at the AGM, the Council agreed to raise the financial support to regions from £100 to £250. This will give regions more flexibility in getting local events off the ground.

Next term should see members receiving *MICRO-SCOPE 13*, a 'special' on Information Retrieval and MAPE Tape 2. The standard of the software on the new tape promises to be an improvement on MAPE Tape 1, and we have now ironed out the tape duplication problems, so this should cause less frustration all round.

Questions relating to the constitution have certainly been noted and are on the Agenda for the next Council meeting. Do remember that the next Annual Conference is at Cheltenham from 29th to 31st March 1985, and the 1986 Conference will be back at Newman during Easter 1986.

The three new addresses to note are:

Anne Liddle,
MAPE Secretary,
Pentland Primary School,
Pentland Avenue,
Billingham,
Cleveland.

David Whitehead,
550 Whitworth Road,
Rochdale,
Lancs.,
OL12 0SW.

Marjorie Briggs,
Flat 3,
67 Leylands Lane,
Bradford,
BD9 5QT.

*Roger Keeling*
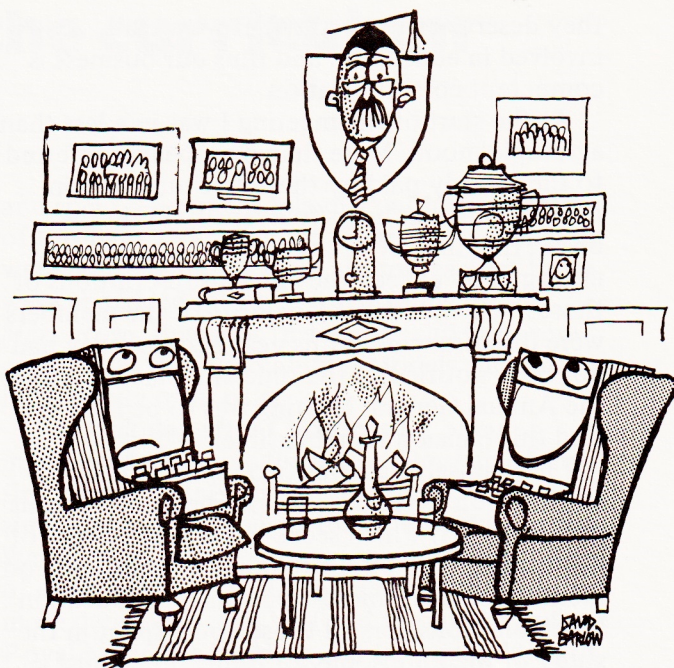


'*That one was teaching maths for forty years, but I got him in the end!*'

# Constitutional concerns

*Editor's note:*

In a letter to Ron Jones the author made the following comment about this article: 'Although I feel strongly about some of the topics raised, there are some areas in which I have been deliberately provocative; I'll leave you to work out which is which'.

**Peter Cave**

I've just returned from the 1984 Annual General meeting held at Newman College where the new MAPE constitution was adopted. The majority of those present at the meeting were in favour of the move, the number of abstentions is unknown as nobody was asked, and mine was the solitary vote against. As there was obviously no time for any discussion (the meeting failed to cover the agenda adequately), I would like to take this opportunity to present my case.

Let me say at the outset that I have every respect and admiration for those who have got MAPE off the ground and running so well; such a period of rapid growth must have placed an extraordinary burden on those involved and

they deserve every credit. Yet we are all involved in education, and thus our business is competent communication.

At the start of the meeting I was in a less than agreeable mood. More than one speaker referred to the subsidy paid by the active members in the Regions that helps to keep MAPE in the black; the time, effort and petrol so dedicated must greatly exceed the annual subscriptions of those members. Yet the majority of the members were disenfranchised this year because they had not been notified of the time and place at which the Annual General Meeting was to be held. I find this omision reprehensible.

I have misgivings over two aspects of the constitution as it now stands. The first concerns paragraph 2(i) which seeks to further the aim of the organisation by 'Developing a philosophy on methods of using micro-electronics in education'. When one considers all those hours spent in the study of the Philosophy of Education whilst training, it seems ill-considered and arrogant of MAPE to suppose that this object can be achieved. As an example, how can this putative philosophy relate to the current simplistic dichotomous description of primary education? Perhaps the majority of MAPE members deprecate the use of drill and practice programs, but the decision to use this sort of material must be left to each school, perhaps to each teacher. Should this deprecation become part of an official policy, however thinly veiled by an abstract philosophy, MAPE risks alienating significant potential support and leaves itself open to accusations of solipsism.

My second concern relates to the ambiguities inherent in those parts of the constitution that define the composition and structure of the Council. I have attempted to highlight some of the weaknesses through a series of questions.

## Paragraph 8

'Regions will elect a representative to serve on the National Council; they will also elect a second member to deputise for their representative should the need arise.'

This section (which, logically, should precede paragraphs 6 and 7) implies a set of rules for the government of the Regions, yet only partially supplies one.

1. Is each Region to hold an annual meeting in order to elect the representatives, or is a postal vote sufficient?

2. Is the election to take place before or after the MAPE Annual General Meeting?

3. Within how long a period before or after the Annual General Meeting would a Regional election be acceptable?

4. Our Region has been unable to hold an election as, until very recently, an up-to-date list of Regional members has been unavailable (even the latest list contains errors). Does this mean that we must now hold an election?

## Paragraph 6.3

'The Council have the power to co-opt'.

5. For how long do co-opted members retain their position?

6. At what point *must* co-opted members resign their positions?

## Paragraph 7

'The Chairman, Vice-Chairman, Secretary, and Treasurer shall be elected by the Council at the first meeting following the AGM to serve for one year'.

7. I understand that one reason that this arrangement has been adopted is so that a certain continuity might be maintained; i.e. that knowledge of the rigour of the offices is assumed of the members of the Council. Does this mean that anybody who has not been a member of the Council before may be ineligible for election to office?

8. Another justification could be that costs are kept down by not circulating candidates' names to all of the members.
(i) Does this mean that the Council is unwilling to offer financial support to the Regions so that local elections may take place?
(ii) If the Council will aid Regional elections, is it possible for National and Regional Elections to take place through the same ballot?

9. It is possible that a Council meeting may be held immediately after the AGM. Does this mean that representatives cannot have a mandate from the Regions?

10. Are the Editor, Publicity Officer, and co-opted members eligible for election to Executive positions?

I repeat: it should not be deduced from this rather querulous document that I have any adverse criticism to make of any past, present or future member of the Council. It has taken more than a thousand years of tinkering to bring the mythical British Constitution to the state it is in today; it would be unreasonable to expect the MAPE constitution to spring forth complete from the foreheads of the members of the Council. It would take Olympian abilities to be able to identify the wood when surrounded by the trees.

# Mary Rose across the curriculum

**Barbara Clipsham**
*Ling Moor County Primary School, Lincolnshire*

Barbara Clipsham took part in the National Centre for Schools Technology (NCST) pilot scheme which attempted to explore various uses of the micro within a 'topic based' curriculum. NCST are particularly concerned to explore the juxtaposition of 'technology' design and problem solving with the use of the new technology.

I have a class of 35 mixed ability fourth year junior children. They had covered the usual infant and lower junior science and craft work but had used no tools other than scissors, compasses and rulers. They had no previous experience of practical problem solving. I have no scientific or craft background or knowledge. Both the children and I were starting from square one when it comes to science and technology.

In September the children worked with the microcomputer for the first time. I introduced them to it with simple programs from the MEP package; *Shopping* for keyboard skills; *Crash* to encourage problem solving and discussion; *Fraction Snap* to reinforce mathematical concepts. We moved on to *Your Facts* — soon mastered and exhausted — then *Factfile*. The children worked in groups, researching, planning and making their own files, working away from the computer for long periods. They entered their information, asked questions, and soon learned the first rule of the computer — rubbish in, rubbish out, and became more accurate and analytical of the information entered. We used *Watchperson* in connection with our topic on the police.

It was at this point that I agreed to take part in this term's project entitled 'Exploration'. I took Tudor Exploration as my centre point. A number of logical directions arose in a variety of subjects. I included the computer program *Mary Rose*. Study of the program showed that the children required a great deal of preparation and knowledge.

We spent mathematical time on angles, bearings and co-ordinates. In geography we had previously studied OS maps and we were familiar with six-figure grid references and had used *Treasure Island* to reinforce knowledge. This work was extended to include latitude and longitude and we studied the globe. The children's knowledge of the relationship and placement of oceans and continents was surprisingly poor. We also met the Buggy and turtle for the first time

and spent a fortnight 'playing' with them. (More of this later.) Throughout the topic, the children were working in five main groups, each of those was subdivided into two for working on the *Mary Rose*, Buggy or turtle. The children were grouped according to ability. Models were made individually or in pairs.

The first day after Christmas we began. I introduced the topic through a filmstrip of the first explorers travelling to the unknown at a time when most thought that the world was flat. We followed, briefly, the causes and development of exploration up to Tudor times. We looked in more detail at Henry VIII and the funding of the Royal Navy, the building and later rebuilding of the Mary Rose and its sinking. We were then ready to look at the *Mary Rose* program.

The *Mary Rose* program comprises two parts, first the Survey, which uses an underwater scan and provides five objects to be found in the Solent, one of which is the Mary Rose. The second program involves the actual diving and exploration of the wreck. The Survey program caused no problems. The children searched the area rapidly, if unsystematically, and each group found the five objects on the sea bed in an average time of fifteen minutes. We plotted the five objects on the chart, applying the work previously done on bearings and angles. We found the latitude and longitude at which we were to dive. We discussed how we would explore the sea bed. They were set the problem of building a model which would either explore the sea bed or raise objects from it. Some planned to build both. The children were now working in a field completely new to themselves and to me.

Plans of models were drawn carefully and discussed. The children found it difficult to realise that this was not imaginary drawing. The model had to be made. Most children began making their models from junk materials and made a prototype from their drawing. They soon met the problem of joining together unfamiliar materials such as plastic bottles. While making wheels out of cheese boxes with dowelling axles several children wondered why their wheels did not travel smoothly; it needed a lot of questioning for them to realise that the axles had to go through the centre of the box. Most children moved on to balsa wood and we had to learn how to manage the tools. On Mondays we had access to a box of saws, drills, hammers, etc. but during the rest of the week all we had were a few old tools which were unsuitable for juniors

to handle. Despite both this limitation and my inability to give much practical guidance, the children began to master sawing, hammering, drilling, shaping and joining materials together with nails, screws or adhesive materials. They have learned, by trial and error, the importance of measuring and marking accurately before cutting.

After a couple of weeks we had to stop and have a general think about things. We did some practical work on rigidity which linked with triangles in mathematics. We used Lego technics to investigate the workings of cog wheels and cranes. I set science experiments on levers, load placing, jibcranes and capstans. We worked out the ratio of one cog wheel to another, and used pulleys to lift cartons of sand. The children experimented with bulbs and batteries, and we made an electirc circuit. A great deal of time was spent experimenting with small electric motors, turning wheels one way or another. Unfortunately, these motors were not always sufficiently powerful to move the models made. After this breathing space we were ready to continue.

A vessel made from a washing-up liquid bottle, elastic bands and a straight wooden propellor would not float in a straight line. This led the makers to experiment with propellers, keels and rudders of differing designs. Problems were encountered, and solved, as lifting machines and pulleys were constructed. Several girls struggled with their 'junk' models longer than the other children, feeling happier there and apprehensive of the unknown. I led them on to making a base and wheels out of balsa and eventually they achieved circular wheels with a centre hole. With further assistance they made their own simple wheel base driven by motor and elastic band. They were quite pleased with the results but without their previous experience of cheese box wheels they would not have understood what they were doing.

Scientific concepts were introduced and reinforced by experiments on air and water pressure, floating and sinking, stability, centre of gravity, top or bottom heavy. The children worked in groups from prepared cards and soon applied the results of their experiments to the sinking of the Mary Rose. Throughout this work the children had to discover their own answers to the problems met — very often I was no wiser. When we talked about our work in school assembly the enormous amount of satisfaction the children had gained from the problem solving was obvious — even though the models were not yet finished.

Work on the Mary Rose dive began by kitting out the diver for the cold muddy Solent. The children knew about most of the equipment as we had seen and handled it the previous term, when we were visited by a Police Diver. The children worked in groups and were given a permanent diving number. They had to search an area 43 × 16 on the grid, but working on ten different levels. They had grids for each level, and a master 3D grid to mark up after dives.

As they worked, the discussion was a pleasure to listen to. They soon became accurate in marking, and recording the dives, using the agreed code. The children realised the frustration of the actual divers when they ran out of air while trying to finish clearing mud in a particular area. One group also had quite a panic as they were stuck between hull and deck timbers and running out of air. The groups searched systematically through the mud. They were not tempted just to go for finds. Discovering hull and deck timbers and seeing the shape of the ship emerge caused great excitement. On several occasions a group has found an object but been called to the surface before being able to raise it. They have immediately told the next group of divers the position and waited impatiently while they have brought it up.

A sailor's life in Tudor England really comes to life when you find a comb complete with sixteenth-century lice. There are 95 finds to discover and we have found only a few. There is quite a race to find out about the objects found using the working drawings and Mary Rose books. In particular, the brickwork caused surprise which was followed by research and discussion. We were visited by a member of the Mary Rose Trust who spoke and showed slides. She went back to Portsmouth with a long list of questions, and her reply has been most helpful. The research from this program is just beginning, and I shall have a class of archaeologists by the end.

To summarise, the areas we have explored include ships and building materials; the wars with France and Spain; famous sailors and their explorations; navigational instruments and map making. We have marked out the size of Mary Rose on the playground and some children are beginning a Factfile on ships. We have listened to, and played, music from the period. The opportunities for creative writing have been many and varied. The children have made clay models of the Mary Rose, dishes and plaques and a magnificent bust of Queen Elizabeth I. This week the children spent a day as though they were living in a manor house expecting a visit from Queen Elizabeth I. We prepared gifts, dances, mimes and songs. All the children had some article of Elizabethan clothing to wear. Six children were completely dressed in copies of Elizabethan clothes. Two visitors brought a selection of musical instruments for the

children to see, play and listen to – dulcimers, a shawn, rebec, viola, lute and crumhorns. We all had a marvellous day and were given the impetus for further research.

Our theme of explorations has been carried over into mathematical work with the Buggy and turtle. Attention has been focused on angles, direction, co-ordinates, polygons, triangles and scale drawing. Before Christmas the children learned to drive the turtle and to build procedures. Originally problems were posed on workcards and some children still use these exclusively. Others have gone on to set and solve their own problems. The children relate physically to the turtle. They work through the problems discussing possible courses of action. Educationally, the experience has been valuable.

We have taken many diverse directions. We have talked about gardens. Some children did embroidery based on Elizabethan knot gardens, and from this we talked about mazes. I drew a maze and they had to travel through it using the turtle without using the backward command. There was much hilarity and discussion as they found that even a slightly wrong estimation of angle led to disaster. The children's understanding of angles and their ability to use protractors has improved. I shall continue to use the turtle.

The Buggy was new to us, and we have worked through several programs with an exploration theme. Firstly we found how it worked and discussed possible uses of such robots. We ran M switch and ran the Buggy through an obstacle course, drawing the result to scale. The children worked from my cards, although we often moved away from the original problem. We used the Buggy to explore systematically the Buggy Park (a chipboard base 175 × 125 cm with raised surrounds which enables the Buggy to orientate itself). The children planned routes for the Buggy, which were refined as they were tested. This systematic approach helped when they were searching on the Mary Rose Dive program. The children drew on the experience gained from *Crash* as they began to program the Buggy. One particular experiment involved a buggy exploration of a model sea bed. Experiments had shown that only gentle slopes were acceptable. However, even with gentle slopes and on a rough surface the Buggy would not perform as they wished. The wheels did not grip and the back caught the ground. The children have made a list of ideas for redesigning the Buggy with, for example, better wheels, a higher back end, and variable speeds.

The work we have done has fitted into and extended the curriculum. The children have shown understanding of the many mathematical and scientific concepts they have met. Overcoming problems has added to their confidence and they have become more independent, logical and questioning in their thinking. They will 'sit down and think it through', to quote one boy, when they meet a problem, rather than come straight to me for the answer – this may be because they think I don't know the answer! As a class they have always been helpful and considerate towards each other and this work has constantly shown the value of this kindness and friendliness – it is not always the same people needing or giving help. I have been extremely pleased with the way in which they have worked. Five groups, usually split into two, doing different activities with one group banging or sawing could have meant chaos. However the children have been completely absorbed in what they were doing and I have been able to step in when necessary.

I set a very ambitious task. There were limiting factors: my lack of knowledge; shortage of time; shortage of tools and materials; but we built on a sparse technological background and covered a lot of new ground. The Buggy and the turtle have allowed the children to meet and solve problems in a logical manner. Both these and the *Mary Rose* program enable children to discuss and interact with each other. They are developing their skills of observation and prediction and learning to make decisions. Probably the most significant point is the children's acceptance of the computer as an essential tool which is there to help with, rather than to solve their problems. The computer was the catalyst for a tremendous amount of work, involving recording and research. It focussed the children's interest on Tudor England to a depth far greater than that produced pre-micro.

# Courses

**LOGO Summer Schools**

*Beginners Course* 23–27 July, repeated 6–10 August

*Advanced Course*, 'LOGO Lists and Language' 30 July – 3 August

Cost: £135 resident, £80 non-resident

The courses are intended for teachers in primary and secondary schools, inspectors, advisors and others interested in computers in education.

Further details from K. R. Johnson, Department of Artificial Intelligence, University of Edinburgh, 5 Forrest Hill, Edinburgh, EH1 2QL. Tel. 031-667 1011 Ext. 2497 or 2480.

# Information exchange

**Roger Keeling**
*Newman College*

One unquestionable advantage of the micro-computer is its capacity to process and examine large amounts of information. A number of information retrieval packages suitable for use in primary schools have emerged, namely *Factfile, Quest* and *PQuery*. A great deal of time is invested in the development of such programs, but comparatively little time is spent in researching and building up suitable and relevant databases (census data tends to be the exception).

There is a great deal of teaching potential in a situation where children research and construct databases of their own. The selection of field names and the format the information takes is critical, because it affects the way the data can be used. It is important that a database includes meaningful information which can be accessed in differing ways.

Here is a suggestion for those schools which have a BBC or 480Z (cassette or disc) and access to one of three programs mentioned above. The basic idea is for a class (or classes) of children to build up a database about themselves and their environment and then to swap it with that of a class in an entirely different geographical location. Children living in a rural community may swap with those in an inner city or children living in a coastal resort may swap with those in an industrial community. What conclusions can then be drawn about the children in the other school?

In order to facilitate comparison the following field names must be used. In any instances where an answer does not exist, or may be of a sensitive nature, simply enter 'unknown'. Field names should be in upper case and all entries in lower case, except for obvious exceptions (i.e. the first letter of a name or place of birth).

1.  NAME: Christian name first (one only) followed by a space and then the surname.

2.  DISTANCE: This field represents the distance (in kms) that the child has to travel from his/her home to the school (distances rounded to the nearest 0.25 kms).

3.  TRANSPORT: The mode of travel most frequently used to get to school. Generally it will be one of the following: bus, train, car, bike, or foot.

4.  DWELLING: This field represents the type of dwelling in which the child lives. Generally it will be one of the following: detached house (det. house), semi-detached house (semi-det. house), terraced, cottage, detached bungalow (det. bungalow), semi-detached bungalow (semi-det. bungalow) or flat. The information needs to be entered in a consistent way. Please use one of the listed terms. If a shortened version is given in brackets please use it.

5.  AGE: The approximate age of the dwelling in years.

6.  SKILLS: The field should indicate the skills or occupation of the child's father, emphasising type of employment/industry rather than status. For example, car factory manager, rather than managing director; insurance office worker rather than clerk. In the case of children whose father is deceased, or no longer living at home, or unemployed, the question should be answered with respect to the past.

7.  HOBBY: The child records here his/her favourite hobby. A maximum of two entries are allowed, separated by an asterisk (no spaces). For example:
    HOBBY: jogging*reading.

8.  HOLIDAYS: This field is for the child to state where his/her main summer holiday will be in 1984. If abroad it is sufficient to state the country. If it is in the UK then state the nearest town. If the child is not going on holiday this year, then enter 'unknown'. The duration of the holiday is immaterial.

9.  BIRTHPLACE: This field is to record the birthplace of the child's father (from the point of view of investigating social mobility). Similar criteria apply as to SKILLS if the child does not have a father.

10. NICKNAME: The child enters his/her nickname here. This could promote discussion on regional differences or differences associated with surname. Once again it may be necessary here to enter 'unknown' in some cases.

From this information the teacher can begin to investigate several aspects of the database. Some possible examples are given below. For every question, bear in mind that the children should be comparing answers between their own database and the one from the school with which they have exchanged.

1. How does the mode of travel to school, or distance travelled vary with geographical environment? How do children in rural communities get to school?

2. What does the type and age of the dwelling tell you about the built environment in which the school is sited?

3. What type of skills are exhibited by the childrens' fathers? How many farm workers are there in rural community schools or hotel workers in coastal resort schools? Do people do similar jobs in different parts of the country?

4. Do the hobbies vary between geographical areas?

5. Do children from coastal resorts go inland for their holidays? Do more people who live close to a port go abroad, proportionally, than those who live elsewhere?

6. How much mobility has occured? How mobile are families from industrial communities or rural communities?

These are a few ideas. Many other possibilities are open. No doubt the children will be able to add interesting areas of investigation.

In order to participate in this exercise, please complete the following questionnaire (or a photocopy of it), write a descriptive profile of your school, covering the points suggested below and send to Roger Keeling, Newman College, Bartley Green, Birmingham, B32 3NT by Autumn half term. Do *not* send your disc or cassette.

When a suitable school has been found for exchange purposes, then you will be sent the address of the exchange school in order that you can swap databases directly.

If you participate in this scheme we would be delighted to hear how you manage, and any ideas you may have for improving the database, given the restrictions of the existing packages.

# Information exchange questionnaire

Name of contact _____

Address of school _____

_____

_____    School 'phone number _____

Which machine are you using?

(*please circle one*)
BBC cassette
BBC disc (40 track)
480Z disc    480Z cassette
Spectrum cassette

Which program are you using?

*Factfile    Quest    PQuery*

(*please circle one*)

How many records are in your database?

**Profile of school**

Please give a brief description of your school (max. 500 words) in order to provide background information. This should include details on the local environment of the school, the type of catchment area, the main employers in the area, sources of entertainment and recreation for the children, and any other information which may help the teacher receiving your database to interpret the information contained within.

# Micro Primer software

A paper written for The Mathematical Association Microcomputer Teaching Committee by Brian Hughes, working with Pam Dann, Trevor Fletcher, Spencer Instone, Pat Perkins and Charles Sweeten.

Concern has been expressed to the Committee about the mathematical content and relevance of some of the programs in the *Micro Primer* software packs supplied to primary and middle schools (for BBC, 480Z and Spectrum computers), and which are also on sale to the public (for the Spectrum computer). Unlike textbooks which carry no official stamp of approval, these programs 'were produced in conjunction with the Department of Education and Science for England, Wales and Northern Ireland with substantial financial support from the Department of Industry' (quotation from a *Micro Primer* pack).

In secondary schools it can be assumed that a mathematician is able to check the content of programs being used by pupils, but in primary schools and in homes this is not always the case. Primary school teachers and parents often rely on receiving expert advice from those competent and able to give it, and would assume that 'official' packs supplied to schools are mathematically correct.

The sub-committee have considered the *mathematical accuracy* of those programs which have a substantial mathematical content, and have classified the programs into three categories:

(a)   mathematically sound programs without major problems;

(b)   programs which need particular care in use in order to achieve the objectives and to avoid introducing incorrect mathematical ideas; and

(c)   programs that have serious mathematical deficiencies.

It is our view that these comments should be brought to the attention of all primary school teachers as a matter of urgency. It is also important that teachers and parents should consider how the programs they use fit in with a pupil's overall scheme of work, and that they read the teachers' notes carefully (some programs, for example, have commands which are available to teachers but are not prompted by screen messages).

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## Mathematically sound and without major problems

*Build* — Useful in developing three dimensional awareness. Lines which have been drawn cannot be erased, however, and some will think that this is a disadvantage. Notes written by the author are available elsewhere and would help teachers to achieve the full potential of the program.

*Farmer* — Of limited use on its own, but would fit well into the middle of a programme of work on logical problems.

*Ergo* — Useful investigation, but the scoring system is dubious because of an element of luck at the start.

*Eureka* — Many excellent features; the slope of the graph is the same whether the man is in the bath or not, but many feel that this keeps the mathematical model usefully simple. More detailed teachers' notes are available elsewhere.

*More or less* — A sound example of an electronic workcard. About ordering relations rather than number bonds.

*Shapebuilder* — Needs linking to practical work.

*Spanish Main* — Good use of co-ordinates and bearings. Spaces, not lines, are numbered.

*Symmetry* — Restrictive and lacks aesthetic qualities. Axes are along lines of spaces, not along the grid lines.

*Time* — Good, but the hour hand is not always correctly placed.

*Watchperson* — Very limited and needs a lot of discussion of the reasons for the paths. The book gives the starting point incorrectly as 'at least a 3-node', rather than 'an odd node'.

## Programs needing particular care in use

*Crash* — The command F3 always denotes three forward *moves* but this does not always mean the same *distance*. Unless the teacher is aware of this, pupils may form incorrect ideas about distances. The unit of angle (45 degrees) needs careful discussion. This is a game of strategies but the notes do not discuss the strategies.

*Fraction snap* — Mathematically sound, but because of the lack of difficulty levels this is unlikely to be useful to 8 year olds.
When using only shading the pupil could be considering areas rather than fractions.

*Litter* — A very difficult problem to analyse successfully unless the variables are restricted — there is a real danger of this becoming purely a guessing game.

*Missing shape* — The screen display is not clear and 6 year olds are unlikely to appreciate the use of the word 'attributes'. Better to use real logiblocks.

*Shape shooter* — Although the teacher has access to a record of the number of incorrect shots, the pupil does not, and may find that he can get a good score by shooting at every shape. Giving the name of the shape does not encourage shape recognition. Because the escape key is not disabled, the teacher's record can be lost anyway.

*Shopping* — The objective of 'practice in giving/receiving change' can be achieved only when the program is used in conjunction with coins, otherwise it is an exercise in simple money sums. Insufficient data is given to plan the shopping trip properly. Some teachers do not like the pressure of the time element (to catch the bus).

*Spike abacus* — Either the rods should be 9 units high or the tenth bead should be placed on the wire before being exchanged for one higher unit. Again the score can be lost if the escape key is accidentally (or deliberately) pressed.

*Trains* — The scoring system is of very dubious value once a pupil finds the easy way of getting a high score (it is not related to the difficulty of the problem).

## Programs that contain serious mathematical deficiencies

*Gates* — The gates are not acting as real gates, because all the blocks pass through the gates before moving on different paths. The shapes are very poor representations and the objectives achieved are dubious. Of little educational value; use real blocks instead.

*What shape* — Nearly all the ideas in this program are mathematically incorrect, e.g.
1. The programmer assumes that all shapes with four equal sides are squares — they are not.
2. The idea of a circle having one side is very dubious — perhaps a disc has one edge.
3. The questioning is illogical — if only one of the shapes has 3 sides then only one question is needed to find the shape, but the program asks at least two.
4. The programmer assumes that a triangle always has only one sloping side.

*Vennman* — The program makes a fundamental mistake in confusing a 'set' with a 'member of a set' and could quickly lead to incorrect mathematical ideas being formed. Sometimes C is an area and sometimes it is a member of a set. The stated relationship to Dienes' blocks is not obvious.

*Vennkids* — The ideas involved were found difficult by 'O' level pupils in the 1960s.
The sets are not well defined (e.g. fat faces). The language of some of the questions is ambiguous without the use of brackets, and the random order of the questions can quickly lead to language difficulties.
It is difficult to see how this program could fit into a primary school pupil's development of mathematical ideas.

# Software review

### Shiva's First Maths Programme

Numeracy 1: *Lift off with Numbers*, and Numeracy 2: *Additional Fun*, by Iris Hewitt
Price: £14.95 per package.

These are the first two packages from a series of eleven. The whole series will be devoted to numeracy and logic. The programs, five to each package, are aimed at children aged between five and eight years.

Each A5 package encloses one cassette and a documentation booklet. Each cassette contains a menu program and five other separate activities.

The documentation is impressive. Everything that can, or may, happen while a program is running is described clearly and concisely. Instructions are given about making a back-up copy (either on tape or disc).

Each documentation booklet contains a general introduction which details the pre-knowledge necessary for the child successfully to work through the activities. It follows this up with suggestions for the teacher about how to introduce and consolidate the work.

All the programs are then described individually. The teacher is told exactly what will appear on the screen and the permitted responses. There is a short debriefing paragraph which emphasises the need for true understanding of concepts by the child. This is followed by a bibliography. The remaining, often major, portion of the documentation is taken up with a description of the materials, the rules and the playing instructions for the activities offered on the computer. In several cases the physical activity would seem to offer more than the computerised version — the number of players need not be limited to two.

The documentation concludes with a shopping list and a brief reminder about each program giving its title, aim and an abridged description.

The programs are part of a series and there are some common features. Each cassette offers five relatively simple activities. The only factor that may be altered, when appropriate, is the speed at which the problems are posed. Faster movement of, for example, an arrow, requires a faster user response. The activities are for either one child or two children playing competitively. In almost all of the two-person activities both players use the spacebar; I would be interested to know whether this causes any problems in the classroom situation. Sabotage or accidents may occur!

When a program is loaded the user(s) are prompted to type in their names and to set the speed for the activity. This happens every time — a teacher cannot set a value which will remain constant. Once a speed has been set and an activity has begun the user can only get out by using the Break key — which involves reloading the program. This does mean that if the speed has been set to 9 and the child cannot cope (I couldn't), frustration is likely to set in as the only way successfully to get out is to complete the activity and this is almost impossible.

When an activity has been completed the score is given. When only one child has been working this tends to be the number of tries. If two children have been working the winner is named.

There is very little sound accompanying the activities. What there is cannot be turned off.

The programs offer a limited amount of help: sometimes short messages appear in response to wrong answers. There is no rescue for a child who is getting everything wrong repeatedly.

Numeracy 1: *Lift off with Numbers* includes the following programs:

*Hang out the washing*
This involves putting shirts on the 5 washing lines. The lines relate to a pattern, the position on the line (i.e. the columns) to a colour. An arrow moves along the washing lines. A shirt in a given colour and pattern appears on the right of the screen. The child presses the spacebar when the arrow has reached the appropriate point. If the child makes a mistake the message 'no, try again' flashes on the screen. Unfortunately the arrow does not stay on the screen to indicate where the child tried to put that particular shirt. The program continues automatically after a mistake.

*Candles on the cake*
This is a game for two players. Each has a row of six cakes which need from 1 to 6 candles each, and a row of candles. The number

patterns for the candles are always the same and the cakes are always in numerical order. A die appears on the right of the screen. Each player, alternately, may indicate the cake which needs the number of candles shown on the die. If the child makes a mistake a message appears and it becomes the other player's turn. If the die matches a cake on which the candles are already lit the message 'candles already lit — you cannot go!' appears. When a certain number of cakes have their candles the computer appears to be playing itself as it throws the dice, beeps, and says 'you cannot go' to one player and then the other. Interest in the game might have been maintained if the players had to decide whether or not they could go.

*Rockets*
Eight rockets, graded in height, appear across the screen. The rockets are within a rectangular outline. A rocket with outline appears in the lower part of the screen and the child has to match it with one of the rockets in the row. I found this activity relatively difficult. It may have been due to screen distortion but the actual rectangle in the row did not match the rectangle round the rocket which was to be slotted in. A wider rectangle on the single rocket affects the way that rocket is perceived and tends to lead to mistakes. Success is rewarded by a countdown from the number of tries taken to a fairly uninspired rocket launch.

*Bingo*
The two players, each having been given a colour, are presented with a 5 by 5 matrix of squares with between one and six spots on each. A figure appears in a box on the right of the screen. The squares light up in turn, starting at the top left-hand corner of the screen. Each player takes a turn at matching the contents of a lit-up square with that number. The spacebar is used to make the selection. The winner is the first player to get a diagonal, vertical or horizontal row of squares. After fourteen squares have been allocated a number no longer appears, the players may select whichever square they need. If there is no outright winner victory is awarded to the player with most squares.

*Ladybirds*
This activity for two players involves making tens. Each player has five mummy ladybirds each with a pattern of spots on her back. A spotted baby ladybird appears. It may be rejected or placed, using the cursor control keys, with its mother. Parenthood occurs when the spots on mother and baby add up to ten. The player is not allowed to put a baby with the wrong mother. The number of spots

on each ladybird changes from game to game but each number is always represented by the same pattern.

Numeracy 2: *Additional Fun* consists of the following programs:

### Cats on the wall

Each of two players is presented with a row of cats sitting on a wall. Arrows point to three cats, two cats, or one cat. The figure 1, 2 or 3 appears at the right of the screen. The player uses the spacebar to indicate when the changing number of arrows matches the given figure. If the match is made that number of cats disappears from the wall. If a zero appears then that player misses a turn. The winner is the person who disposes of all the cats first. A message is given to indicate an incorrect response.

### Olly the octopus

An eight-tentacled octopus appears on the screen. Two players each have four two-spotted tentacles. The aim is to get ten spots on each tentacle. The spots alternate between red and black which makes counting easier. The tentacles and a negation (reject) box light up in sequence as a number appears on Olly's body. When the spacebar is pressed that number of spots is added to those on the lit-up tentacle. Once a tentacle has ten spots it changes colour. Mistakes are rejected. The game ends when a player has ten spots on each of the tentacles that are on his/her side.

### Make the picture

This one-person game involves matching pairs of numbers to domino-type pairs of spots. Each correct match is rewarded by the drawing of part of a picture. The activity finishes when the picture is complete. There are twelve matches to be made. The picture is always the same.

### Getting to the moon

A rocket is drawn in the centre of the screen, spacemen numbered 1 to 6 and a negation box are drawn on each side of the rocket, one set for each of the two players. Spacemen will be moved when the number they are assigned is the answer to an addition and subtraction problem. Each player has to add two numbers and subtract the result from ten and then stop the moving arrow when it points to the correct answer. Mistakes are rejected. The winner is the child who gets all his spacemen in the rocket which then takes off. If a number is to be rejected, either because the spaceman bearing that number has already gone or because the answer would involve a negative number, the child has to wait for the arrow to move to the

negation box. Some tedium would be avoided if the child had access to another key to signify rejection.

### Attack the castle

This two-person game involves adding or subtracting 1 from a given number and matching presses on a cursor control key (↑) to the answer. Each successful answer results in a soldier scaling higher up a castle wall. The winner is the player who gets each of his soldiers to the top of his ten stepped ladders first.

The programs have been designed to give the user experience and practice within a limited area. The screen design and layout are generally attractive. The programs are easy to use and they could run alongside the traditional classroom activities. Whether or not the price for each package is high depends upon the amount of use a school can get from it. In terms of documentation and presentation Numeracy 1 and 2 are better than a great deal of the skills practice type software that is on the market. They are not particularly original or exciting. Should they be?

*Senga Whiteman*
*Newman College*

# Newman College course

**Diploma in Computer Applications to Education, 5–13 age range**

Applications are now being accepted for the full-time Diploma, commencing September 1985, at Newman College, Birmingham. It is a one-year course validated by the University of Birmingham and carries DES approval.

The course aims to equip teachers to understand, initiate and guide developments relating to the use of microcomputers as a teaching aid across the primary curriculum. It will enable teachers to assess critically possible applications and to participate in software design and evaluation. It is also intended to prepare teachers to lead colleagues within their own schools and local education authorities.

The College has a specially equipped Computer Centre with approximately 35 micros (RML and Acorn).

It will be possible to provide accommodation on the campus. Further details and application form can be obtained by writing to The Registrar, Newman College, Bartley Green, Birmingham B32 3NT.

Terms explained: Information Retrieval
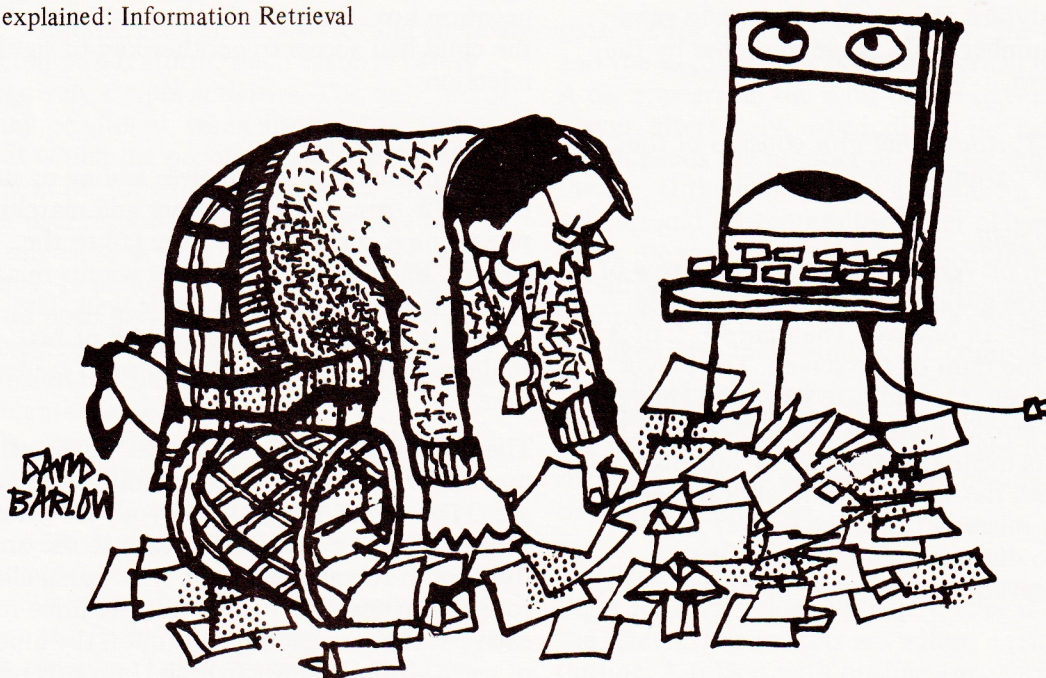


*'Hold on a minute, I know I stored it carefully somewhere.'*

# Book reviews

### Micros in the primary classroom
Ed. Ron Jones (Edward Arnold, 1984, £4.50)

This book is one of a series published under the umbrella title of 'Teaching Matters', whose declared aim is to utilise the expertise of teachers in providing information and advice on educational issues of the day and keep busy teachers 'abreast of new developments' and act as an 'in-service between covers'.

To assume that any new development in education can be introduced by a book alone is, of course, nonsense; but this small collection of essays on the use of micros in the primary classroom goes a long way to providing the primary teacher with a solid background on which to build new ideas and methods. All the contributors have played a major role in the development of computer-based learning over the past few years and the contributions take the form of lucid descriptions solidly based in good primary school practice.

The development of the use of micros in primary schools has reached the stage where 'good practice' can realistically be discussed, bearing in mind the availability of good educational software and the way in which it can be integrated into the whole curriculum. It would be impossible for any book to demonstrate fully the practicalities of using floor turtles, simulations, data-retrieval packages and control technology, let alone evaluate the educational possibilities, but this book points to the direction in which we should be moving. It is to be hoped that the reader will see how best he/she can adapt the ideas within the framework of their own classroom methodology.

Don Walton's chapter on 'Structured Reinforcement' gives a good introduction to those teachers who only recently have received their first micro and may be wondering how best it can be used. He feels that structured reinforcement programs benefit the majority of children because they learn through small well-structured steps.

The articles by Alistair Ross on 'Information Handling Skills' and Ian Whittington on 'Simulations' stress how much work can be done away from the computer, while still utilising the power and sophistication of the hardware. Graham Bevis provides an illuminating insight into the possibilities than can be offered by Control Technology as an aid to problem solving. Beryl Maxwell's approach to problem solving through 'Turtle Maths' poses questions about the nature of learning and teacher/child interaction as well as examining fundamental assumptions about the role of the micro in the primary classroom. Infant teachers will note that very little reference is made to purely infant-based materials, and this is a serious omission in an otherwise useful book.

The articles are put into context by Ron Jones's introduction, in which he looks to the

future. There are two underlying strands running through the book. Firstly, stress is placed on learning as an enjoyable activity. Secondly, emphasis is given to the fact that children learn through doing rather than through being taught. This book provides a valuable introduction to using the micro in the primary school. It also offers interesting suggestions about the areas of exploration for schools where the micro is established.

*Graham Banks*
*Newman College*

### Children and Computers in the Classroom
A. P. Mullan (Castle House Publications Ltd. 1984, £6.95)

I have no hesitation in suggesting that an easily accessible home ought to be found for this very readable book in the staff room of every school which has received its first computer within the last 12 months. The author comes through his writing as an enthusiastic educationalist interested in computing as a means of creating an environment in which children can learn, rather than an enthusiastic computer person who happens to be in the field of education. Possibly this is why the book is free of the detailed technical information and jargon which tends to baffle and frighten so many non-scientific and non-technically minded teachers.

The book seems to me to be conveniently divided into two sections by Chapter 4 — 'The Teacher as a Programmer'. In this chapter the author, contrary to his aim, succeeds in showing how the amount of work and expertise needed to provide the specification for a simple program which a professional programmer can encode is likely to be beyond the ordinary teacher. The first three chapters, 'Introduction to the Computer', 'The Computer in the Class-room' and 'Software' would form a gentle and informative course of introductory reading for the teacher new to, and unsure of computers in the classroom. Chapters 5 to 8 would provide stimulating and thought-provoking reading for those who have successfully negotiated the *Micro Primer* pack and want to know 'Where can I go now?'

The final four chapters, 'The Child as a Programmer', 'The Child as a Programmer: Aims and Objectives', 'A Possible Methodology' and 'The Computer and the Curriculum', whilst briefly describing a number of languages and discussing how the computer might fit into various curricular areas, does in reality con-centrate on LOGO. The author, with illustrations of first-hand experience, shows how a commit-ment to this language has implications which stretch beyond the use of a mere micro.

The book is meant for teachers and parents, but I cannot see many parents buying it. I do hope that it gets into the hands of many teachers, for this is the work of a man who does not gloss over the difficulties and apprehensions felt by many teachers. The author acknowledges and seems to understand these feelings; perhaps that is why this book offers such a gentle, yet quite searching, introduction to computing in the classroom.

*Ken Johnson*
*Newman College*

# MAPE news

### Capital

It is almost a year since I wrote to all MAPE members in the Capital Region asking for suggestions for local activities. A later letter invited nominations for a representative to serve for the year 1984/5.

The replies to both letters were very dis-appointing and the only nomination proposed that I continue as representative for a further year, which I am pleased to do.

However I am still trying to establish whether or not there is a role for a regional group here, where LEA and MEP support is so strong. There have consequently been no meetings in the Capital Region during the past year although I have dealt with a number of enquiries by both letter and 'phone.

I will happily continue to supply information in this way and gladly arrange some group meetings if members will let me know what they would like.

There are surely many new members of MAPE who have not received previous letters — perhaps they have suggestions to make?!

I eagerly await the floods of letters packed with exciting suggestions and will write to all members in the region next term to detail the ensuing plans.

*Heather Govier*

### Eastern

The Eastern region is beginning to stir. We have a committee, based mainly in the southern part of the area. Our first venture is a day meeting at Redbridge Teachers' Centre on Saturday 29th September. Details have yet to be finalised, but we hope to include work being undertaken by teachers in the region. If the meeting is success-ful we hope to repeat it at several venues in the region.

*Newton Coen*

## Northern

The Northern Regional Committee was formed just over a year ago and incorporates a representative from each of nine LEAs (Cleveland, Cumbria, Durham, Newcastle, Gateshead, North Tyneside, South Tyneside, Northumberland, Sunderland). The Committee's official period of office coincides with the educational school year: 1st September – 31st August. One person from the Regional Committee represents the group on the MAPE National Committee. The National Representative is to be rotated in alphabetical order according to LEA name. The 1984/5 National Committee member will be the Cumbrian Representative.

As numerous computer courses are being held in the region the committee decided that to present further MAPE-sponsored courses could create a conflict of interests, and therefore the committee decided its role would be to develop inter-authority communication. To help this role a Regional Conference was planned.

The Conference was held at St Mary's College, Newcastle, as this was a central point for our region. It began at 5.30 p.m. on Friday March 15th and ended at 8.30 p.m. on Saturday March 16th. The fee was £9.00 which covered all meals beginning with Friday dinner and finishing with dinner on the Saturday evening. Accommodation was arranged for £7.50.

There were two main lectures and each delegate could select five workshops from three sections. School Organisational Themes; Curriculum Themes; Computer Applications, and Special Interests. The workshops with organisational themes were heavily oversubscribed which probably reflects the current development status within most schools. The Conference proved to be a great attraction supporting the Committee's decisions regarding venue, fees and content. Unfortunately the delegate list had to be closed at 120 and people had to be turned away. The total number of people attending the Conference was approximately 160.

The Conference was extremely successful and credit for this must be given to the tutors and speakers, who supported us so well. The MEP Regional team helped tremendously, and the Committee were grateful for their involvement.

The Committee itself proved to be a very strong team with each member accepting a particular responsibility towards the Conference organisation. The excellent team work produced a trouble-free, worthwhile event resulting in a unanimous delegate demand for *annual* Regional Conferences.

*A. Liddle*

## Wales

Membership of MAPE has more than doubled this year, although its distribution through the counties remains greatly unbalanced. Numbers total 69 in one LEA, with only 4 in a neighbouring county. We now have over 200 members, many having joined towards the end of the year to secure a copy of the MAPE Tape.

### Meetings

One evening last summer, Dr Mike Thorne addressed members at the Cardiff Teachers' Centre, with a lighthearted introduction to Bigtrak and LOGO-type programs. This practical session was enjoyed by all, and we are thankful to Dr Thorne for giving us his time.

The software fair held at Perth y Terfyn Infants school, Clwyd, in the autumn term, attracted over a hundred teachers. Programs in regular use at the school and several others, provided by a number of companies, were on show. The catalogue of software suitable for infants was well received.

Members from South Wales joined forces with the South-West region at the Joint Regions Conference, at Cheltenham, last October. This was a very full day, which provided something for everyone.

We plan to meet in South Wales this term.

Members living in North East and South East Wales often find travelling over the border simpler than attending meetings at the other ends of Wales. Therefore, joint regions meetings may well prove valuable in many ways.

I would be grateful if members would get in touch with suggestions as to how MAPE may play a role in their areas.

*Sian Nicol*

## Southern Counties

There is an enormous amount of enthusiasm just waiting to be channelled. The regional committee has been formed, there are still vacancies across the region for further volunteers. At the next committee meeting we will discuss the possibility of producing a regional newsletter. We are also investigating the possible purchase of good software at reduced prices for MAPE members. With this in mind we have asked local members to name their top ten programs.

### Future events include:

Monday November 12th, Sussex University – Ray Allen (Head of Ambleside First School) will lead a discussion on Computers and Early Learning.

*David Marshall*

## Somerset

'Computers in Education Exhibition', Saturday 22nd September 1984, at Clarks, Street. Open to teachers from 10 a.m. until 4 p.m. and to the public from 12 noon until 4 p.m. Free entrance to teachers, 50p entrance for the public. No admittance to anyone under 18.

*Peter Hunter*

## Scotland

Following a most successful MAPE day held at Dundee College of Education last year, the formula of visiting speakers, talks by teachers and hands-on workshops will be repeated this year, on Saturday 27th October at St Andrew's College of Education, Bearsden, Glasgow. MAPE (Scotland) members will receive further details and application forms in due course.

*Russel Wills*

## West Midlands

One day Conference, Newman College, Saturday 13th October. Details will be sent out soon.

## Merseyside and Cheshire

1983 saw the launch of MAPE(M&C) with two separate day conferences, and an AGM.

The Liverpool conference was a particularly well attended function, and the delegates were treated to stimulating talks from Peter Gill and Michael Thorne, as well as being confronted by a range of interest sessions presented by local teachers.*

A second conference featuring the popular double act of Barry Holmes and Ian Whittington, and the electronic delights of Graham Bickerton, attracted an enthusiastic crowd to the Wirral.

In November, Malcolm Glover travelled to Wirral to present an interesting talk on aspects of language and the micro, as a prelude to the AGM which saw a constitution accepted and a committee elected.

Regrettably 1984 has seen a day conference in Knowsley cancelled, but much is still in the offing. Individual LEAs have requested MAPE talks, and there is much general interest in MAPE affairs. Local LEAs are beginning to cater much more for local needs. Teachers' user groups are growing (Liverpool now boasts a user group with over 150 member schools).

A day conference is currently being planned for the beginning of next term, and a newsletter and questionnaire are currently being drafted for local members.

*Jim Fawcett*

*Papers of the Liverpool conference are available while stocks last from:
  J. Fawcett,
  15 Berbice Rd,
  Liverpool L18 0HU.
Please enclose cheque/P.O. for 60p to cover postage and packing.

## Chiltern

The regional organisation was initiated at a conference early in 1983 at Crabtree School, Herts. Various events were scheduled including LOGO with turtles, control technology, etc., and an interesting talk from Virginia Makins of the *Times Educational Supplement*. The day was well attended and after the conference we held our first AGM. The outcome was the election of a Regional Committee with members representing the LEAs within the region.

Chiltern MEP region is very active and many things which were possible as MAPE activities would have duplicated existing provision.

One idea which has proved viable is the 'travelling roadshow'. We've called it 'Kids, Computers and Classrooms', and plan to hold it in various parts of the region. Our first venue was in Bucks and more recently in St Albans, Herts. The idea is to use a school on a Saturday to enable anyone who's interested (public, children, parents, teachers) to drop in and see children using computers and to have a go themselves, to ask questions and gain information about MAPE. It runs from 10 a.m. to 4 p.m. Committee members who are classroom teachers bring volunteers from among their pupils, plus examples of classroom work. Each member of the committee brings at least one micro and examples of good software to run on it. The event is advertised in the local press and in a Newsletter sent to all members in the Chiltern Region.

Just before Easter we organise a one-day Regional Conference which includes the AGM and the election of the new committee. This year the theme was 'Micros in Control' and included Alyn Williams and Jim Flood as speakers.

Two major problems seem to face the regions: firstly, the sheer size of the area they cover; and secondly, finance.

Many of us 'forget' to claim our travelling expenses, but even so, two or three mail-shots to the whole region is quite expensive. We don't want to charge entrance to our events in order not to discourage the curious, but some means of extending MAPE'S regional funding needs to be found. Anyone who is interested in offering suggestions or comments on the region's activities is most welcome to write to any of us on the committee.

My address is Kingsley, Scatterdells Lane, Chipperfield, Kings Langley, Herts.

*Bill Bailey*

*Editor's note*:

All regional representatives were invited to contribute to this section.

MAPE CONFERENCE BUS