Smile Mathematics Software Catologue 2004

To: Headteachers, Mathematics Subject leaders, ICT Co-ordinators in all Primary, Junior, Middle Schools, Special Schools and Head of Mathematics in Secondary Schools

Dear Colleague

Re: Software to support teaching and learning mathematics

Use your E-Credits to purchase Mathematics Software at 50% discount

Norfolk LEA Mathematics Team has negotiated a significant discount from MicroSMILE and the Association of Teachers of Mathematics for the computer programs described below. If you are not familiar with the software we have arranged an informal, free of charge, opportunity to 'drop in' to the Norwich and King's Lynn PDC to inspect the programs before you decide if you wish to purchase any. These are:

NPDC 12th January 2004 – between 2.30 – 5.00
WNPDC 15th January 2004 – between 2.30 – 5.00

For further information about these sessions please contact Jenni Woodrow on the above number.

MicroSMILE Software (suitable mainly for KS2 and KS3)

Approximately two years ago many Norfolk primary phase and secondary schools took advantage of our offer to purchase MicroSMILE software packages at 50% of the catalogue price. Since then MicroSMILE have published new packages: *Exploring Geometry, Probability and an updated version of the Co-ordinators package.* These and the other eight MicroSMILE packages are detailed in the enclosed catalogue. The catalogue briefly describes the individual programs in each package with most giving a target range of National Curriculum levels indicating approximately a level of mathematical difficulty.
The programs are generally uncomplicated, focus on specific aspects of mathematics and many are suitable for use as a whole class teaching and demonstrating tool or for groups of children working on one or more computer.

We are again able to offer Norfolk schools the opportunity to purchase any of this software at 50% of the catalogue price, provided there is sufficient interest to enable the authority to qualify for such a large discount. This offer is open to both those schools who purchased packages previously and also those that did not. If you would like to order any of this material please complete the enclosed order form and return it as indicated by Friday 30th April 2004.

Once we have sufficient orders we will invoice the school and ensure that the software and licences are delivered. In the unlikely event of insufficient interest we will return your order form by the end of the spring term.

<u>Developing Number</u> (suitable for KS1, KS2 and KS3)

We have in the past also provided many schools with single user or institution site licences for the *Developing Number* software package published by the Association of Teachers of Mathematics. This software runs on any PC running Windows 3.1 or later, with 16Mb of RAM memory. It contains three programs, *Complements*, *Numbers* and *Tables* and is probably appropriate for children aged from 6 upwards. An information sheet about the software is enclosed with this letter. The normal cost of this software is £49.95 for a single user version and £145 for an institutional site licence. If there is sufficient interest from schools who have not already purchased this package we are able to purchase single user licences for £12 and institutional site licences for £30.

If you are interested in purchasing a copy of the software, please complete the appropriate form and return it as indicated by 30th April 2004.

If you have any questions, then please do not hesitate to contact Jenni Woodrow on 01603 433276.

Yours sincerely

Robin Ings

Mathematics Adviser

Enc. Order forms

Norfolk County Council
at your service

Norfolk Education Advisory Service
MicroSMILE Software

Name: _____

School: _____

I wish to purchase the following MicroSMILE packages. **Please tick the required licences. Please indicate if you wish to use your E-Credits to purchase any of the software.**

MICROSMILE SOFTWARE	LICENCE							
	Single User		2 to 15 Users		16 to 50 Users		More than 50 Users	
Symmetry & Transformations	£25.00		£50.00		£75.00		£100.00	
Ratio	£15.00		£30.00		£45.00		£60.00	
Enriching Number	£12.50		£25.00		£37.50		£50.00	
Numeracy	£25.00		£50.00		£75.00		£100.00	
Sense of Number	£22.50		£45.00		£67.50		£90.00	
Angle Estimation	£12.50		£25.00		£37.50		£50.00	
Properties of Number	£20.00		£40.00		£60.00		£80.00	
Graphing	£20.00		£40.00		£60.00		£80.00	
Movement	£20.00		£40.00		£60.00		£80.00	
Co-ordinates	£17.50		£35.00		£52.50		£70.00	
Mathematical Puzzles	£25.00		£50.00		£75.00		£100.00	
Exploring Geometry	£20.00		£40.00		£60.00		£80.00	
Investigations	£15.00		£30.00		£45.00		£60.00	
Probability	£17.50		£35.00		£52.50		£70.00	

Please see overleaf.

Total cost of MicroSMILE software licences: £_____

Administration fee: £10.00__
(Order processing and despatch)

Total: £_____

Signed: _____ Date:_____

Please return to Jenni Woodrow, Norfolk Education Advisory Service, Professional Development Centre, Woodside Road, Norwich, NR7 9QL by 30th April 2004

Tel: 01603 433276 Fax: 01603 700236

Norfolk County Council
at your service

Norfolk Education Advisory Service

Developing Number Software

Name: _____

School: _____

I wish to purchase ☐ copies of the single user licence version of Developing Number at a cost of £12 each.

☐ I wish to purchase an institutional licence version of Developing Number at a cost of £30

Signed: _____Date: _____

Please return to Jenni Woodrow, Norfolk Education Advisory Service, Professional Development Centre, Woodside Road, Norwich NR7 9QL by 30th April 2004

Tel: 01603 433276 Fax: 01603 700236

Developing Number

Developing Number contains three programs: ***Complements, Numbers*** and ***Tables.*** These address the foundations of number work within the primary and secondary school.

The programs are designed to offer flexibility for a teacher…

… with regard to the way they are used:

they can be used with a whole class focus with just one computer in the classroom;
they can be used with students working individually or in small groups at a computer.

… with regard to the level of challenge:

learning the names for the numbers from 1-9, or finding the complement to 10 of a number, or practising the two times table;
learning the place value of any digit within the number 1518.792, or finding the complement to 0.8 of 0.47, or using a mental strategy to calculate 6x78.

… with regard to the involvement of a teacher:

particular tasks or levels of challenge can be created and controlled by a teacher;
students can work independently on computer generated tasks suited to their individual challenge level and which offer structured progression to increasingly demanding challenges.

These computer programs are designed to help raise standards in mental arithmetic. They aim to:

(i) Promote understanding of the number system and develop mental calculating strategies, by offering images to work with, particularly tabular arrays, moving and spoken numbers;
(ii) Improve fluency and knowledge of number facts by, for example, including timed exercises or withdrawing some of the support structure.

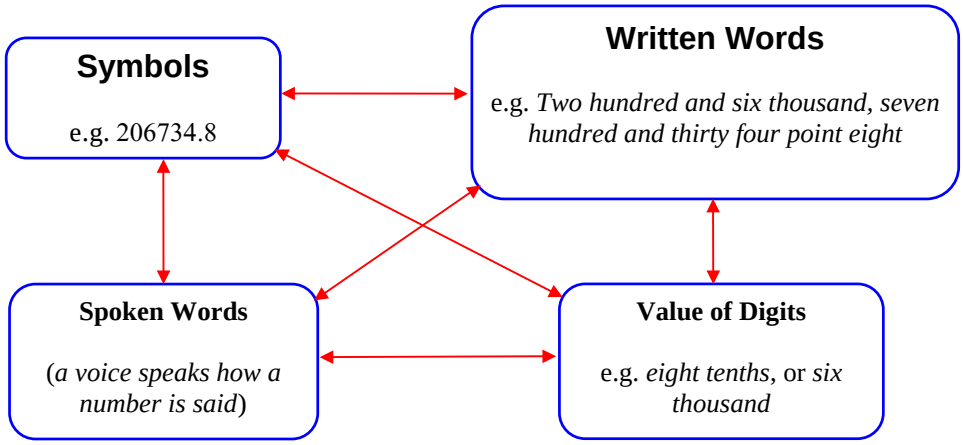
An overview of the programs:

Complements helps students develop the ability to find complements to 10, 20, … 100 (and indeed the decimal equivalents - e.g. complements to 0.1, 0.2, … 1.0). This skill forms the basis of many aspects of number work. The program uses the image of a 100 square to help students develop flexible mental arithmetic strategies, for example, becoming aware that if they can do 10-4 they can also do 30-24, 70-64, etc.

Tables helps students develop the mental ability to work out their multiplication tables by using only the following abilities: *double*, *halve*, *multiply by 10*, *add or take one number* (except for 7x7=49!). Students are

challenged to improve their fluency through timed tasks, and are also challenged to multiply bigger numbers by their 2 to 10 times tables.

Numbers helps students learn to read, write and say numbers, and recognise the place value of individual digits. The teacher, or indeed students themselves, can choose the range of numbers worked on, for example, from 1-99; 1-9,999,999; 0.001-999; etc.



Some of the links involved with the ***Numbers*** program

The programs are suitable for pupils of all ages and levels of attainment and can be used to support both whole class teaching and individual work:

1. **Whole class teaching** - One way of working is for the teacher to control the computer and pose questions, which the class work on together. For example, the program *Numbers* is particularly suited to this mode of working as it offers dynamic features of moving numbers, not easily achieved in any other way. For whole class focus for *Numbers* it is best to use 'Browse' or 'Browse tasks' modes. For *Complements* it is best to use 'Basic Browse', and for *Tables* it is best to use 'Browse' or 'Basic Browse' modes for a whole class focus.

Another way of working with the whole class is to use the images contained in the software, but in a different a medium, for example, a wall chart, the board or an overhead projector. Wall charts relating to these programs can be obtained from Educational Initiatives, Cardew Farm, Dalston, Carlisle, CA5 7JQ.

2. **Individual work** - A key feature is the provision of 'electronic exercises' for pupils to do individually on a computer. These exercises are structured in such a way as to provide either progressively more demanding tasks or to develop a particular approach to the building up of skills. The objective should be to achieve a high degree of proficiency at a given stage, before proceeding to the next stage. Timed exercises can help pupils to compete against themselves to improve their fluency. By entering any of the programs through the *Progression* mode, the computer will take the individual pupil through a

series of tasks, which will build in their difficulty and/or take the pupil through a particular teaching approach.

Pupils can work over a period of many lessons through their progression since the computer will store their individual progress, so that a new session can start with a pupil carrying on from where they left off.

The computer can also be a stimulus to individual work away from the machine. For example, the teacher might use the computer to pose a problem, returning to the machine later in the lesson to check out pupils' ideas and solutions.

As general advice, the software will work best if the teacher first introduces the class to the images (charts) and activities (work with the charts) which the programs use. Consideration will need to be given whether you wish to work with the program by setting tasks yourself (with the pupils working on ‘browse’ or ‘basic browse’ mode), or whether you wish pupils to work through computer generated progression of tasks in *Progression* mode.