



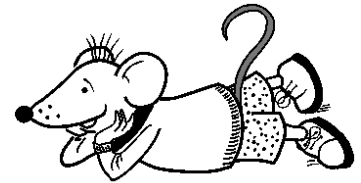
## Parental Guidance

" I was useless at maths at school" ....

How often have you heard someone apologise for his or her lack of mathematical ability? It frequently happens on TV and radio. It seems to be a subject which many people have negative feelings about. Yet maths is all around us, every day. We carry out many mathematical processes daily without thinking about it.

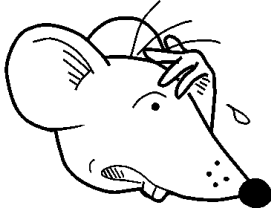
How can we enable our children to become confident and happy in their handling of maths? As a parent you are the child's first, and probably their most important, teacher. It is important to encourage them to see the maths around them and to develop a positive attitude.

### **How can I help my child be more confident about maths?**



Gaining confidence is the key to success and there are a number of things that parents can do to instill this confidence:

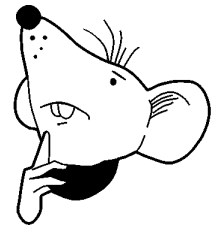
- Get them involved in worthwhile practical activities (not just watching TV for hours!). A few suggestions for each Key Stage follow this section.
- Encourage them to ask questions about what they are doing. It is important not to ridicule a child when they have asked what might seem to us to be a silly question.
- Talk to them about what they are doing, whether they need help or if they are unsure of anything. Find time to talk at the end of the day about what they have done.
- Help them to think for themselves. Don't always tell them the answer straight away – ask them how they would set about solving a problem. A great deal can be discovered about how children learn by listening to what they think should be done. It is often much easier and quicker to tell children answers, but talking and discussing is time well spent in the long run.
- Share books, stories and rhymes and talk about them in a fun way. (There are some fun nursery rhymes with counting activities on the Early Years part of the MathSphere site.) You could also share some of the maths activities, attempting some of the work yourself – it can be very motivating to beat one's parent at saying the four times table!



- Making mistakes is a perfectly normal human activity; it is how we learn. When your child makes a mistake treat it as a learning opportunity, as the mistake may well highlight a more fundamental lack of understanding of an earlier concept. The best way to deal with mistakes is to ask the children how they reached the answer. Do not be too critical – children soon lose interest if they are criticized too much.

- Rewards are always a good idea, but keep them in proportion – a new bike for learning tables is ‘over the top’! Most children love receiving stickers, stars etc.
- Be positive and the enthusiasm will rub off on them.

## How do I know when my child has developed this confidence?



For children to be confident in Maths they must develop a ‘feel’ for numbers and the way they work. Parents can recognize this when their child:

- a. shows they understand the number system by counting on and back confidently and by reading and writing larger numbers
- b. knows many facts by heart, including adding and subtracting all single figure digits, tables and halving numbers (Knowing by heart means instant recall.)
- c. uses, as a first option, mental methods to solve a problem – paper and pencil methods are used only if this is not possible.
- d. uses what is already known to help work out harder problems.
- e. has ways of checking whether answers are correct and is prepared to spend a little time carrying out these checks.
- f. talks confidently about how he/she has worked out a problem.

I know all my tables,  
right up to ten times  
ten.



## The Foundation Stage

The Foundation Stage has been defined as the period of a child's education from the age of 3 to the age of 5. During this time children may well spend most of their time at home, or they could be attending day nurseries, playgroups etc. For the last year of the Foundation stage they are likely to attend a school in a reception class. At this time they will be assessed, usually within a couple of months of entering school. This assessment is called a baseline assessment.

This period of time is called the Foundation Stage because it lays the foundation for all future learning and parents are in an ideal position to make it a positive and happy experience.

### **What sorts of activities are useful?**

Probably the sort of activities you already do around the house, just involve your child in them. Here are one or two ideas to get you started:

#### AT HOME

##### *In the kitchen:*

When stacking pots and pans after they have been washed, or putting plates into the dishwasher, ask questions

- Which is the smallest?
- Which should go at the bottom?
- How can I fit them all in?
- Let's count the number of cups etc

Cooking involves all sorts of measurements:

- Which is the biggest spoon?
- How many spoonfuls of sugar have I put on the cereal?
- How much orange in my cup?
- Can you put two teaspoons of coffee in the jug? Etc

Laying the table:

- How many forks do we need?
- Which side of the mat does the knife go?
- Have we got enough spoons?
- Can you put a cup on each saucer? Etc



### *In the bathroom:*

When getting dressed ask questions

- What shall we put on first?
- Which is your left arm?
- How many toes on this foot?
- Let's count the number of buttons together etc

### *When in the bath ask questions:*

- Will this sink?
- How full is this jug?
- How many toes are sticking out of the water?
- Is this a large enough towel? Etc



### AT THE SUPERMARKET

Going to the supermarket can also be a great place to talk and learn about mathematics.

- Shall we use a small trolley or a large one?
- How many slices of ham shall we get?
- Can you put four carrots in a bag?
- Do you want a large bottle of coke or a small one? Etc

There are many other opportunities, at home, in the street, the park etc., where your child can be helped to recognize shapes, colours, sizes, etc. which all go together to produce a happy, positive learner who is ready for school.

## **Key Stage 1**

Key Stage One is the years one and two in a primary school, ( 6 – 8 years old) ending with National Curriculum Tests at the end of the second year.

The activities in school will develop from the reception work. In school the children will have a daily Maths, or Numeracy lesson. For more on this see the file called, *What is the Numeracy Strategy?*

Again there are many activities that can be carried out at home which will help children through these years.

- Counting games, up to about 20. Guess the number of marbles, coins etc and then count them.
- Comparing amounts in glasses or bottles – young children will usually think that there is more in a long thin glass than a shorter, fatter glass, just because it is taller.
- Compare the weights of things, by estimating and then using scales.

- Estimate and compare how long objects are.
- Use simple everyday words to describe objects – a square face, an oblong side etc.
- Talk about the time – morning, afternoon, whole hours etc.

Two new issues will arise during Key Stage 1

### **a. Learning by heart**

For example: it is expected that children will know by heart all pairs of numbers with a total of 10 in year 1 and this will extend to knowing by heart the 2x and 10x tables in year 2. Know by heart means instant recall!

This is unlikely to happen if the learning of them is just confined to school. Use opportunities at home to reinforce the learning of pairs of numbers – again ask questions in practical contexts:

I have 3 sweets and you have 5. How many have we altogether?

As most of the early maths that children do in school will be based on mental methods, rather than writing sums down it is really important that they do learn these facts.

### **b. Homework**

Amazing as it may seem, more and more schools are setting homework for children, even in year one. Traditionally this has often been to hear them read (not always a happy time!) but now maths activities are also being set. Often these will be of a practical nature and will be designed so that parents can be involved as well.



Children are not always the best listeners in the world and sometimes they will misunderstand what they have to do, or will find it too difficult. Try to take the stress out of these situations – more harm than good will come if too much pressure is exerted and everybody gets cross.

Your school will have a homework policy and you will probably be informed of it or given a summary at the beginning of the year, or at the first parents' meeting. If you find that the homework does become a real problem the best person to talk to is the teacher who is setting the work.

## Key Stage 2

By year 3 the number of objectives begins to increase and the children are expected to know more by heart. For example in year 3 they should know by heart 2, 5 and 10 x tables. By the end of year 5 they should know all tables up to 10 x 10.

Paper and pencil methods will be used more often and it is important that the children understand the methods they are using. These will not always be the same methods as their parents used! Again, if in doubt it is important to contact the teacher. Explanations of most of the methods used can also be found in the concepts pages of our modules of worksheets.

As well as helping with homework, many activities can still take place at home, which will help improve mathematical thinking. These include:

- Card games. Most card games require collecting totals, matching or remembering numbers that have gone before. They are excellent practice for mental arithmetic.
- Dice games. Some of these can be found on the MathSphere site – they usually involve counting or working out probabilities.
- Board games. Again these are excellent, the buying of items or giving of money often helps with understanding larger amounts, up to millions! There are also many simple two-player games of strategy, which involve logical thinking and working out a winning strategy – all good maths!!

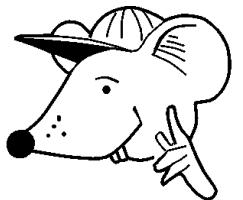
The advantage of these games over more recent computer games is that they involve discussion – you can talk through strategies and why they work and rules can always be adapted if they become a little stale – perhaps trying to lose all your money as quickly as possible rather than winning as much as possible.

### **How can MathSphere help?**

One of the great advantages of MathSphere is that it provides parents with detailed information and learning material for their children that directly matches the content and sequence of both the National Curriculum and the Numeracy Strategy.

For each school year the Numeracy Strategy has clearly laid out the mathematics topics that should be taught. By following this Strategy, MathSphere provides a gradual increment in complexity from worksheet to worksheet.

We're really good  
at helping!



MathSphere:

- Provides you with clear and detailed guidance as to what is expected in the Numeracy Strategy
- Gives you the means to see how schools are tackling number operations
- Allows you to see how well your child is progressing
- Provides extra practice to re-inforce the teaching in school
- Allows you to focus on particular topics with which your child may be having difficulty.

Those parents who become actively involved in the Numeracy Strategy, perhaps by using MathSphere, will be giving their children a valuable head-start for the years to come.