Maths Help at Home Booklet
Key Stage 2

As your child moves from simple counting and adding to becoming a fluent mathematician, it is not always clear –especially to parents who are not confident mathematicians – how to help. But in fact our help is crucial, and can be the difference between success and failure.

Golden Rule

Whatever you do, make sure your children enjoy it.

If they struggle to understand, make mistakes, or get bored: keep calm, make it easier, change the subject, tell them a joke, play football, go to the park …. but please don't get cross or impatient – do not say you were no good at maths when you were at school-you could put them off maths for life.

Generally the advice is;

- Talk about and involve children in the situations in which you use maths in everyday life;
- Play games involving numbers and/or logic, such as card games, dominoes, darts, draughts, chess etc.;
- Stimulate their thinking at times of boredom, (such as when travelling), with mental activities;
- Check with the school for any specific help which would be useful. Also check the methods they are teaching with your child's teacher (Calculation Policies are available on the School Website);
- The following gives a very rough idea of appropriate activities but any number games that the children enjoy are great

For all ages

One very good idea which is appropriate for any level, so the whole car/bus/train/plane can be involved.

Ask the question:

'The answer is 10 (or any number), what's the question? '

Possible responses:

- 8 plus 2
- 1 million divided by one hundred thousand
- 5 x 2
- 25 - 15
- 2.5 times 4
- the number before 11
- 9999 subtract 9989
- the square root of 100

This is a brilliant activity because: there's no failure; it stimulates thinking about and stretching knowledge of numbers and mathematical relationships; it's good fun.

Look out for car number plates. What is the number on the plate? What is this to the nearest 10 or 100 or 1000? How many more would you need to reach the next multiple of 10, 100 or 1000?

Key Stage 2 (8 - 11years)

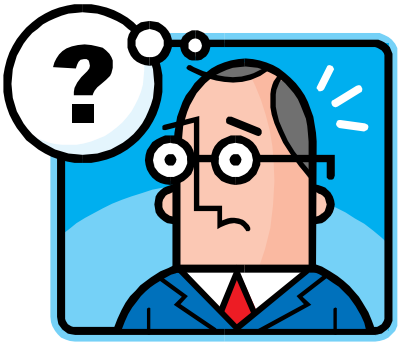
Mental activities:

- A good knowledge and quick recall of times tables is essential to children's mathematical progress. The children are taught up to 12 x 12. The target is for all children to know their tables by the end of year four. It is very important that children practice their times tables daily at home.

- When learning their tables, children are taught to look for patterns such as odd and even number answers, or patterns made by adding together the separate digits in the answers.

- Children are also taught to recognise the reversible effect so that they know 6 x 2 is the same as 2 x 6. They are also taught the relationship with division so that knowing 6 x 2 = 12 means they also know that 12 ÷ 2 = 6 and 12 ÷ 6 = 2. For each known times table fact, they also know three others:
  6 x 7 = 42 so they know that 7 x 6 = 42
  42 ÷ 6 = 7
  42 ÷ 7 = 6

- To help children with their multiplication, one of the ways we use is to find all the factors that are used to make up a number. For example the factors of 18 are 1, 18, 2, 9, 6, and 3 because
  18 x 1, 1 x 18, 3 x 6, 6 x 3, 9 x 2, 2 x 9 all equal 18.



- Practicing and developing knowledge of addition and subtraction facts within 20 (7+8, 13-5 etc.) and multiplication and division facts to 10 x 10 (6x7, 35/5 etc.) Make it into a game if possible, e.g. have a set of cards numbered 1-10, pick a number such as 4, say 4 times the number on the card as each is turned over, keep all the cards you get right. Beat the calculator as above. On a journey, adult passenger times response, try to beat your own time.

- Ask 'progressive' calculations, e.g. 7 + 6, 17 + 6, 27 + 6, 47 + 6, 147 + 6; 5 x 2, 50 x 2, 500 x 2, 500 x 20.

- Working out 2-digit additions and subtractions, multiplying and dividing 2digit numbers by 1 digit numbers mentally. Talk about how to make it easier, e.g. for 28 + 15, call it 30 add 13 and that's easy; for 16 x 4, double 16, then double 32.

- Open- ended activities, e.g. the answer's 25, what's the question? How can you use combinations of 3 and 6 to make different numbers? (Use each number as many times as you like with addition, subtraction, multiplication or division.)

Everyday situations:

- Weighing, measuring capacity and timing when cooking. Converting a recipe for 4 people to one for 6 people. (Scale a recipe up or down to feed the right amount of people.)

- Being involved with measuring and calculating how much curtain fabric is needed, how much wood for shelves, how many wall or floor tiles are needed, how much carpet etc.

- Talking about time, e.g. How long is it until lunch time? The journey takes 2½ hours, when will we arrive? We need to be there at 2.00 pm, when do we need to leave home? Many children will still need practice with reading clock times, particularly minutes past and minutes to the hour.

- Handling amounts of money when shopping, working out total costs, working out change, checking receipts. Working out prices of sale items, e.g. 20% off. Managing pocket money and saving for things.

- Working out distances and directions from maps.

- Discussing and comparing house prices from newspaper house sales pages.

- Working out how much petrol will be used on a journey, working out average speed for a journey, costing journeys or holidays etc.

- Plan an outing during the holidays. Ask your child to think about what time you will need to set off and how much money you will need to take.

- Use a bus or train timetable. Ask your child to work out how long a journey between two places should take. Go on the journey. Do you arrive earlier/later than expected? By how much? Choose a shape of the week. Look for this shape in the environment. Ask your child to describe the shape to you.

- Play 'guess my shape'. You think of shape. Your child asks questions to try to identify it but you can only answer 'yes' or 'no'.

- Hunt for right angles around your home. Can your child spot angles that are bigger or smaller than a right angle?

- Look for symmetrical objects. Help your child to paint or draw symmetrical pictures/patterns.

- Make a model using different boxes/containers of different sizes. Ask your child to describe their model to you.

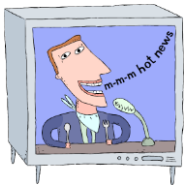
- Practise measuring the lengths and heights of objects in metric measurements. Help your child use different rulers or tape measures correctly. Encourage them to estimate before measuring. Compare measurements in metric and imperial.

- Let your child help with the cooking. Help them to measure ingredients accurately. Talk about what each division on a scale represents.

- Choose some food items out of the cupboard. Try to put the objects in order of weight by feel alone. Then check by looking at the weights on the packets.

- Practise telling the time with your child. Use both digital and analogue clocks. Ask your child to be a 'timekeeper' – e.g. tell me when it is half past four because we are going swimming.

- Use a stop clock to time how long it takes to do everyday tasks –e.g. how long does it take to get dressed. Encourage your child to estimate first.



- Use a TV guide. Ask your child to work out the length of their favourite programmes. Can they calculate how long they spend watching TV each day/week?

- Getting children involved in real situations where they are using mathematical skills is motivating and stimulating.

Play activities/games:

- Card games such as sevens, cribbage, pontoon etc.
- Any games involving calculating scores, e.g. scrabble, monopoly, quoits, darts, and bowling.

- Beat the calculator. In pairs, one with a calculator, one without, each works out the answer to a calculation aiming for the one without the calculator to say the answer first.
- Games involving strategic thinking/logic, e.g. draughts, chess, mastermind.
- Specialised computer games designed for using and developing maths.

Useful Websites

- http://www.mad4maths.com/
- http://www.bbc.co.uk/schools/ks1bitesize/numeracy/
- http://www.bbc.co.uk/schools/ks2bitesize/maths/
- http://www.woodlands-junior.kent.sch.uk/maths/
- http://nrich.maths.org/public/
- http://www.crickweb.co.uk/ks1numeracy.html
- http://www.crickweb.co.uk/ks2numeracy.html
- http://www.amblesideprimary.com/ambleweb/numeracy.html
- http://www.ictgames.com/resources.html

All of the above provide the foundation for mathematical understanding and development.

Remember!

Be positive even if you don't feel it.

Ask your child to explain to you how they are doing their maths. (It may be different to the way you were taught)

'Talk' to them about and involve them in everyday maths.

Ask the teachers if you have any questions about the Maths your child is doing.