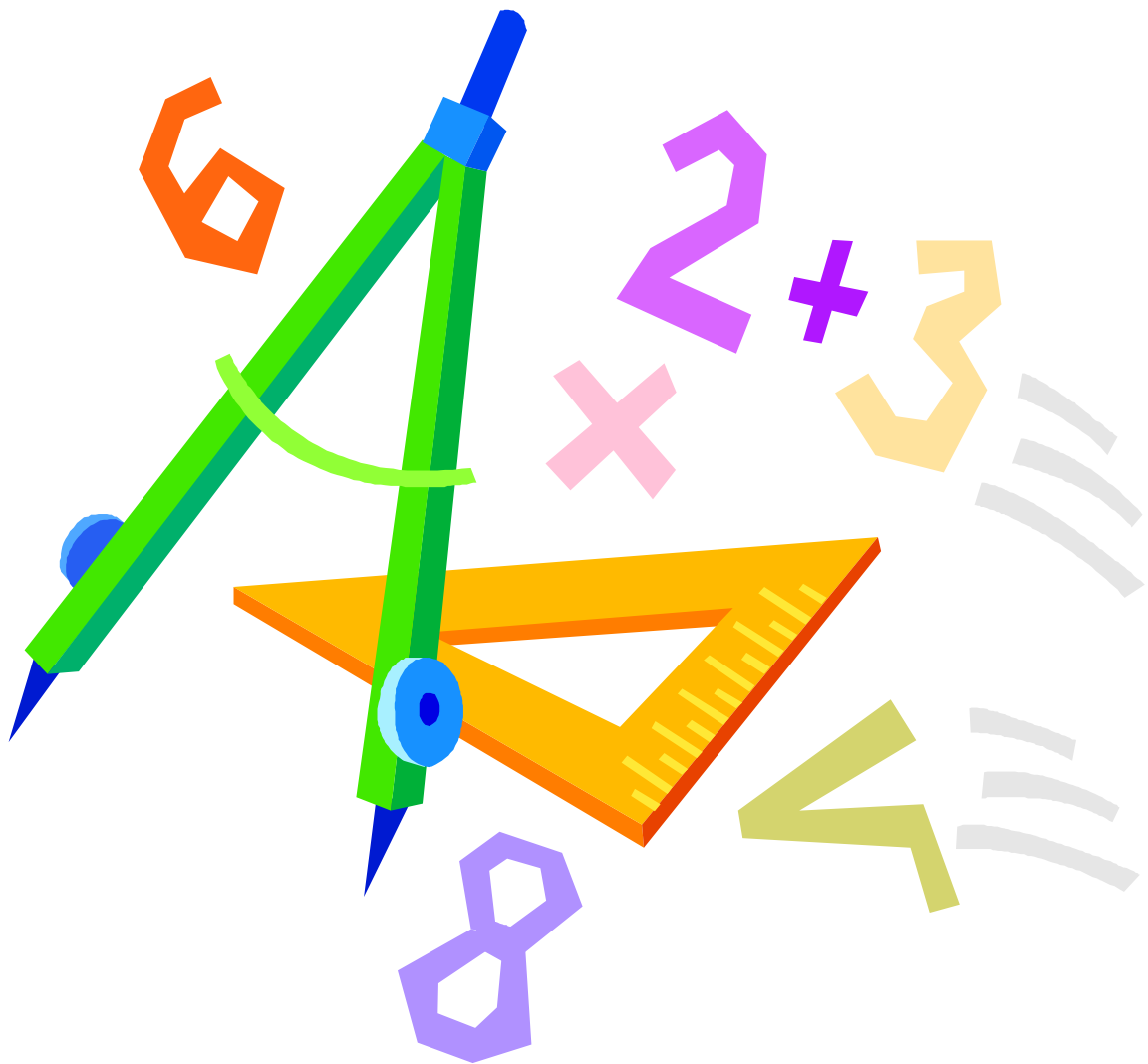


Parents/Carers' Guide

Helping and Supporting

Children with Maths



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

Do!

- ☺ Make maths fun.
- ☺ Encourage children to have a go.
- ☺ Praise achievements, however small.
- ☺ Encourage children to talk about how they work things out.
- ☺ Remember that asking questions is as important as finding answers.
- ☺ Work together for short sessions (little and often).
- ☺ Stop as soon as either of you has had enough!

Don't!

- ☺ Put children under too much pressure.
- ☺ Pass on negative feelings you may have about maths.
- ☺ Rush your child's learning.
- ☺ Worry about mistakes; we learn by taking risks and getting things wrong sometimes.
- ☺ Jump in too quickly with the answer. Encourage your child to solve problems for themselves.
- ☺ Continue if your child is finding the activity too hard.

And remember ... come in and talk to your
child's teacher if you're stuck, we are always
happy to help!

Here are some ideas of how to incorporate a little bit of maths into many of the things that you already do each day. Maths is all around us in everything we do and you don't have to be an expert. But, most of all...maths is fun!

We hope you enjoy trying out some of these ideas at home.



Cooking:

- Weigh out pasta. How many pieces weight 100gm? Approximate first. Who was the closest?
- What is the difference in weight between pasta when it's dried and when it's cooked? Does the weight increase, decrease or stay the same?
- Do some baking. Read the weighing scales. "Tell me when to stop spooning on the sugar".
- Count the fruit in the fruit bowl. Are there more apples or oranges? How many more? How many altogether?
- Dad needs the biggest potato. Compare them. Weigh to check.
- It will take 20 mins to cook. Set a timer. What time will it be ready?
- Get a feel for weights – How much does an apple weight? An egg? A potato? A carrot?, etc.

Washing up:

- Play with the water – Which cup holds the most water (*biggest capacity*)? Check with the measuring jug.
- How many cups of water does this saucepan hold?
- How many spoons have we dirtied?



Eating:

- Peel an orange and count the segments. "Who got the least segments?"
- Cut up fruit into halves, quarters etc. Cutting into 4 equal pieces makes quarters. Cutting in half and half again.
- Do you want your toast cut into triangles, rectangles or squares today? Halves, quarters or eighths? etc.
- Smarties/M&M: Sort them into colours. How many are there altogether? How many aren't yellow? Share them out equally.
- Who's got the longest pieces of spaghetti?



Travelling to school:

- Time your journey. How long did it take today?
- What time do we need to leave?
- Count how many steps!
- Chant your times tables.
- Count the silver cars along the way. How many traffic lights (so counting in 3's).
- Play 'I Spy' shapes along the way. Or 'I Spy' numbers.

Doing the washing:

- Who's got the longest socks?
- How many 'legs' on the washing line? How many pegs? Counting the pegs as they pass them to you.
- Pairing up the socks? There are 2 in a pair. Counting in 2s. How many altogether?



Watching T.V.

- Plan the T.V. schedule: How long until my programme is on? How long until you go to bed? Look at the T.V. guide – what's on at 17.30? Which programme lasts the longest? What time does this finish?



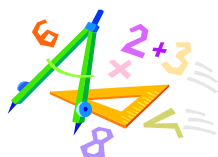
Shopping:

- Give your child a calculator to keep a running total of the shopping as you put it into the trolley.
- Which was the most expensive item? Cheapest item?
- I need a dozen eggs/half a dozen etc., 4 pints of milk, a kilo of potatoes, 2 litres of cola etc. – using vocabulary.
- Hand over the correct amount of money and check the change.
- Total up the 'pick and mix' – you've only got 20p etc. to spend.

- Count up the pocket money – have you got enough to buy xxx? How much more do you need.
- You want a XXXX, if you get £££ a week, how long until you have got enough?
- Write a Birthday/Christmas wish list – How much will it cost Santa?

Other ideas:

- Plan a day trip – what time do we need to leave? How much will the bust cost? How much to get in? If we spend 2 ½ hours there what time will we be home?
- Time yourself doing different activities. Who's the quickest? We say "in a minute" but how long is a minute? What can you do in a minute?
- Cut up potatoes into different shapes and make prints. What 3D shapes can you make? What 2D shapes can you print?
- Make up your own game and scoring system e.g. using a pack of cards, pick 3 at random, whoever has the highest total wins.
- What is the volume (*How much space something takes up*) of a carrot, onion etc.? Half fill a jug with water, read the scale, place item into water (needs to sink!) Read how much the water has risen to. Calculate the difference between the 2 readings and that gives the volume of the item.
- Play monopoly, scrabble, Sudoku etc.
- Calculate how much the takeaway will cost so you can get the money ready for the delivery person. What time will they arrive?



Skills

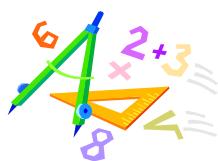
Encouraging children to be independent in ways of working will increase confidence and help build self-belief. Although supporting them with maths is crucial, it is also important that we do not do too much for them.

When children work on a problem and find it is a challenge, this becomes an opportunity to develop their resilience. This can also lead to a greater sense of achievement when they overcome the problem.

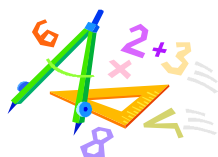
A major part of mathematics is the ability to transfer skills from one area to another. For example – addition is a skill we teach but we might look at addition of money, measurements or weights etc. Encouraging children to see these links is crucial so we emphasise that maths is a transferable skill.

Definitions of Key Terms

Partition	To split a number into smaller components e.g. $235 = 200 + 30 + 5$ or $37 = 30 + 7$ or $20 + 17$
Number Sentences	Written horizontal; calculation e.g. $45 + 34 = 45 + 30 + 4 = 75 + 4 = 79$ or $56 + 23 = 79$ I won 5 marbles and then I won 3 more. I have 8 marbles altogether.
Jottings	Any method of recording numbers / strategies that is not formalised. e.g. use of empty number lines, number sentences. We must encourage jottings.
Array	A way of arranging counters, objects or pegs to assist pupils with early stages of multiplication. e.g. <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: center; margin-right: 10px;"> O O O O O O </div> <div> $2 \times 3 = 6$ or $3 \times 2 = 6$ </div> </div>



Near Double	<p>When two numbers are added that are extremely close to each other in terms of size on a number line. Children are encouraged to use their knowledge of doubling numbers and to make the relevant adjustments.</p> <p>e.g. $12 + 13$ Children might use their knowledge of 'double $12 = 24$ and then add an extra 1 to make 25/ Alternatively they might use 'double $13 = 26$ and then subtract 1 to make 25.</p>																
Rounding up or down	<p>When numbers are 'approximated' to the nearest multiple of 10 or 100.</p> <p>e.g. when round 27 to the nearest 10-, 27 would become 30.</p> <p>Note that any numbers lying half way between two multiples, e.g. 25, are always rounded up (i.e. to 30).</p>																
Vertical Method	<p>Any written method set out in a vertical format.</p> <p>e.g.</p> $\begin{array}{r} 46 \\ + 27 \\ \hline 6+7 \quad 13 \\ 40+20 \quad 60 \\ \hline 73 \end{array}$																
Expanded Method	<p>A written method that acts as a 'stepping stone' between a mental method with jottings and a standard written method.</p> <p>e.g.</p> $\begin{array}{r} 200 \quad 70 \quad 4 \\ +123 \quad 100 \quad 20 \quad 3 \\ \hline 300 \quad 90 \quad 7 \end{array}$																
Standard Written Method or Compact Method	<p>An efficient written method</p> <p>e.g. $376 + 148$ 6 add 8 is 14, which is 10 and 4. 4 in the units and + 148 1 ten carried to the tens column. $70 + 40$ is 110 and 524 the extra ten is 120. Write the 2 tens in the tens 11 column and put the 1 hundred in the hundreds column. $300 + 100$ is 400 and add the additional hundred making 500. The answer is 524.</p>																
Grid Method	<p>Multiplication written method involving the partitioning of numbers within a grid structure.</p> <p>e.g. 34×27</p> <table><tr><td>X</td><td>20</td><td>7</td><td></td></tr><tr><td>30</td><td>600</td><td>210</td><td>810</td></tr><tr><td>4</td><td>80</td><td>28</td><td>108</td></tr><tr><td></td><td></td><td></td><td>918</td></tr></table>	X	20	7		30	600	210	810	4	80	28	108				918
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Sharing	<p>A form of division where a number is shared equally into sets. e.g. There are 12 cub scouts and 3 tents. How many cubs will there be in each tent?</p> $12 \div 3 = 4$
Grouping	<p>This is also known as repeated subtraction. A form of division where groups of the divisor are subtracted. e.g. There are 12 cub scouts to be placed in teams of three. How many teams can we make?</p> $12 \div 3 = 4$ <div style="margin-left: 100px;"> $\begin{array}{r} 12 \\ - \quad 3 \quad (1 \times 3 \text{ or } 1 \text{ team}) \\ \hline 9 \\ - \quad 3 \quad (1 \times 3) \\ \hline 6 \\ - \quad 3 \quad (1 \times 3) \\ \hline 3 \\ - \quad 3 \quad (1 \times 3) \\ \hline 0 \end{array}$ </div> <p style="text-align: right; margin-right: 100px;">= 4 teams altogether</p>
Chunking	<p>A strategy used in division involving repeated subtraction or the taking away of 'chunks' of the divisor. e.g. $256 \div 7$</p> <div style="margin-left: 100px;"> $\begin{array}{r} \text{36 remainder (r) 4} \\ 7 \overline{) 256} \\ - \quad 70 \quad (10 \times 7) \\ \hline 186 \\ - \quad 140 \quad (20 \times 7) \\ \hline 46 \\ - \quad 42 \quad (6 \times 7) \\ \hline 4 \end{array}$ </div>
Short Multiplication	<p>Multiplication by a single digit e.g. 34×3, or 243×8</p>
Long Multiplication	<p>Multiplication by a number with two or more digits. e.g. 34×13, 243×28, 26×34</p>
Short Division	<p>Division by a unit e.g. $34 \div 3$. or $243 \div 8$</p>
Long Division	<p>Division by a number with two or more digits e.g. $345 \div 13$, or $243 \div 28$</p>