



BANCHORY-DEVENICK SCHOOL



A Parent's Guide to Maths



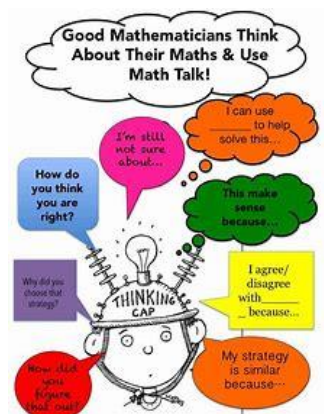
You don't have to be an expert to help your child with Maths. Developing number confidence and a positive attitude can have a crucial impact on a child's schooling and their ability to use numeracy in everyday life, and it's important that you are positive about Maths. You are your child's role model, and if they think that you hated Maths at school, what's to stop them thinking that way too?

Try and make Maths fun. It shouldn't always be about textbooks and worksheets. Help them see the Maths in the world around them. Take them shopping, do some baking, play some games, look at the temperatures, get them to plan a trip...all these activities have a wealth of Maths skills.



It is worth noting that the way Maths is taught in schools has changed considerably over recent years and more and more schools are moving towards Maths Mastery. Maths Mastery works on the premise that all children can succeed in Maths. It starts with the child's prior knowledge of a concept and looks at extending and embedding learning that can be transferred and applied in different contexts. It works on the basis of concrete, pictorial and abstract.

- Concrete - Here we use real objects that the children can handle and manipulate to help them understand and explain what they are doing.
- Pictorial - Children then build upon this concrete approach by using pictorial representations which can be used to reason and solve problems.
- Abstract - With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts to solve problems across different contexts with confidence.





It is important when the children are working, that they have the opportunity to talk about what they are learning. Using the correct mathematical language, we want them to be able to explain, not just what they are doing, but also how they are doing it. If they have an answer, can they tell you how they know it is correct?



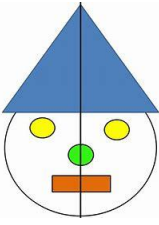

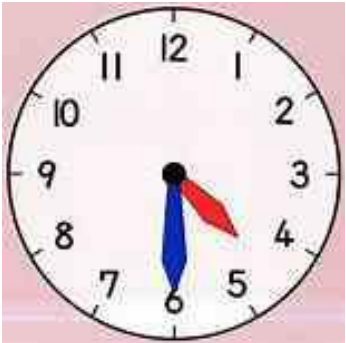
Pre-Schoolers

<p>Listen to and sing songs and rhymes with numbers and counting in...there's hundreds out there just waiting to be enjoyed on You Tube! Join in the actions and be prepared to sing them over and over and over again!</p>	<p>Talk about the numbers you see around you...on the telephone, the remote control, on front doors, on buses, in supermarkets etc. Choose a number of the week and see how many times you can spot this when you're out and about.</p> 	<p>Share a book with your child. There are loads of fantastic books based around numbers, but most books can be used to spark off a mathematical conversation, e.g. Who's bigger, the ant or the caterpillar? How many ducks can you see? Can you see a circle?</p>
<p>Count as much as you can. Count with your child, encourage them to count and let them see you counting. Count how many pencils in the pencil case, how many socks in the laundry, how many stairs, how many footsteps etc.</p>	<p>Get your hands dirty by exploring the shapes of the numbers. Make them in sand, snow or shaving foam, draw them with paint or chalk, make them out of small stones or pasta. As well as helping your child become more familiar with the numbers, you are also reinforcing that Maths is fun!</p>	<p>Play some Maths games that look at numbers, patterns, shapes etc. The more fun you can have, the better!</p> 
<p>Useful Resources - Concrete objects for counting, magnetic numbers, shapes sorters, geometric puzzles boards, number sorters, abacus, simple games etc.</p>		

Early Level (Nursey-Primary 1)





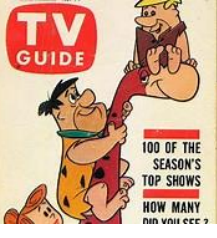
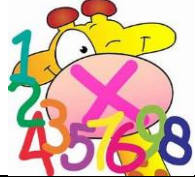
<p>Keep singing those number songs and rhymes and counting those objects...it's all good practise and consolidation.</p>	<p>Play games that involve numbers and counting, e.g. Snakes and Ladders, Build a Beetle, The Merry Game of Floundering, Connect 4, What's the Time Mr. Wolf, Hide and Seek etc.</p>	<p>Play shops and use coins to make different amounts.</p> 
<p>Use non-standard units of measure:</p> <ul style="list-style-type: none"> - How many cups will it take to fill this pot? - How many giant/ baby steps will it take for me to cross the room? - Which item is heavier, lighter/ taller, shorter / wider, narrower etc. 	<p>Guess the shape from its description, or by feeling it blindfolded. Look for shapes out in the environment.</p> 	<p>Play Find the Object and use positional language to direct your child, e.g. up, down, over, under, between, through, beside, behind, in front of, on top of etc.</p> 
<p>Build structures using Duplo or Lego.</p> 	<p>Make patterns with objects, paints or playdough.</p>	<p>Start talking about the length of time it takes to do something, e.g. walk to school, bake a cake etc.</p>
<p>Useful Resources - Objects for counting/drawing, games, play money, a cash register, shapes, large simple clock.</p>		

First Level (Primary 2-Primary 4)

<p>Practice number bonds, e.g. how many different ways can I make 20?</p>	<p>Keep playing games...shopping, set up a restaurant and write a menu, set up a teddy bear's picnic and divide the food equally etc.</p>	<p>Take your child shopping. Ask them to buy 2 or 3 items...calculate cost and work out change from £1 / £5. How many different ways can you make e.g. 72p?</p>
<p>Go on a right-angle hunt. Look for examples of tiling patterns. Make tiling patterns of own using 2 or 3 different shapes...put into the context of design tiles for a new bathroom/kitchen.</p>	<p>Look for examples of symmetry around the house and when out and about. Make symmetrical patterns, drawings and painting of own.</p> 	<p>Measure different things: height, weight, length etc. Encourage them to estimate first and talk about which type of scales, rulers etc are appropriate for a given task. (Of course, this is always more fun if there is a reason for doing it, e.g. making a birdbox, baking a cake etc).</p>
<p>Practise telling the time using both digital and analogue clocks and use the terminology for both. Start off with routine times like bath-time, bedtime etc.</p> 	<p>Get your child to be the timekeeper, e.g. tell me when it's half past 4 so I can start making the tea etc.</p> 	<p>And if you don't do anything else, practise those times tables...sing them, chant them, do quick fire sums (both multiplication and division). Use concrete materials to multiply (if I give 3 sweets to you, 3 to your sister and 3 to daddy, how many will I need altogether), and also to divide (e.g. this bar of chocolate has 12 pieces, if I divide it between you, me and daddy, how many pieces will we each have)?</p>
<p>Useful Resources - Play money, cash register, games, digital and analogue clocks, scales, rulers, tape measures.</p>		



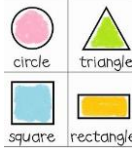



Second Level (Primary 5-Primary 7)


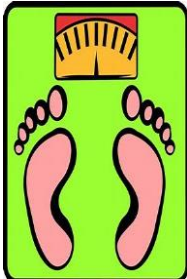



<p>Practise basic sums and ask them to explain the strategy they are using.</p>	<p>Play games...let them be the banker in Monopoly, keep score etc.</p>	<p>Read, write and order larger numbers, e.g. car prices, house prices etc.</p>
<p>Help with the shopping; write lists, use catalogues to do price comparisons between shops/retailers, order take-aways, buy presents within a set budget etc.</p>	<p>Talk about the relationship between percentages, fractions and division when shopping in the sales.</p> 	<p>Work out the distances of car journeys and use a calculator to convert between miles and kilometres.</p> 
<p>Plan and cook a meal. Use a calculator to convert between grams and ounces.</p> 	<p>Convert between 12 and 24-hour time.</p> 	<p>Find the duration of programmes on the tv.</p> 
<p>Read bus, train and flight timetables and work out the lengths of the different journeys.</p>	<p>And above all, keep practising those times tables.</p>	
<p>Useful Resources - 12 and 24-hour clocks, board games, cards, dice (to generate numbers), calculators.</p>		



Where My Child is Working

Please see below a guide to the different levels the different stages are working towards. This is just a guide as some children will require consolidation at earlier levels and some children will need extending to higher levels. Please also be aware that this is not the Maths curriculum in its entirety.

	Number	Times Tables	Money	Time	Measures	Shape
Primary 1	To 10		<ul style="list-style-type: none"> - Identify coins and note to £2 - Calculate costs and change to 10p 	<ul style="list-style-type: none"> - Days, months, seasons - Talk about clocks and time 	Longer, shorter, taller, heavier, lighter, more and less	Name squares, rectangles, circles, triangles 
Primary 2	To 20 	2, 10	<ul style="list-style-type: none"> - Identify coins and note to £5 - Calculate costs and change to 20p 	Read and record o'clock and half past on analogue and digital clocks 	Length (metres / half metres), weight (kilograms / half kilograms), capacity (litres / half litres)	<ul style="list-style-type: none"> - Count the corners and edges of squares, triangles, rectangles and circles - Name cubes, cuboids, cylinders, cones and spheres
Primary 3	To 100	<ul style="list-style-type: none"> - 2, 4, 8 (use doubling) - 5, 10 (use doubling) 	<ul style="list-style-type: none"> - Identify coins and notes to £10 - Calculate costs and change to £1 	Read and record o'clock, half past, quarter past and quarter to on analogue and digital clocks	Quarter metres, kilograms, litres	<ul style="list-style-type: none"> - Name pentagons, hexagons, octagons and count edges and corners - Name triangular prism and square pyramids
Primary 4	To 1000	<ul style="list-style-type: none"> - 3, 6, 12 (use doubling) - 7, 9, 11 	<ul style="list-style-type: none"> - Identify coins and notes to £20 - Calculate costs and change to £10 	Read 12-hour times (analogue and digital)	Length (centimetres and metres), weight (grams and kilograms), capacity (litres and millilitres)	<ul style="list-style-type: none"> - Name quadrilaterals (kite, rhombus, parallelogram, trapezium) and count the number of edges and corners - Count the number of faces, edges and vertices on 3D shapes

	Number	Times Tables	Money	Time	Measures	Shape
Primary 5	<ul style="list-style-type: none"> - To 10,000 - 1 decimal place 	<ul style="list-style-type: none"> - Multiply 2 digits by a single digit - Divide 3 digits by a single digit 	 <p>Calculate the cost and change of buying multiple items</p>	<ul style="list-style-type: none"> - Read 12 and 24-hour times - Calculate the duration of events or journeys within the hour and give starting and finishing times 	 <ul style="list-style-type: none"> - Read measures to the nearest labelled division - Begin converting between different units of measurement, e.g. 3.5kg = 3500g etc. 	<ul style="list-style-type: none"> - Identify and name regular 2D shapes and describe their properties in terms of sides, angles, diagonals - Use rulers to draw squares / rectangles and compasses to draw circles
Primary 6	<ul style="list-style-type: none"> - To 100,000 - 2 decimal places 	<ul style="list-style-type: none"> - Multiply 2-digits by 2-digits - Divide 3 digits by 1 digit and identify a remainder 		<ul style="list-style-type: none"> - 12 and 24-hour times and convert between the two - Calculate the duration of events or journeys which bridge the hour and give starting and finishing times 	<ul style="list-style-type: none"> - Name isosceles, equilateral and scalene triangle - Draw triangles using compasses and protractors 	
Primary 7	<ul style="list-style-type: none"> - To 1,000,000 - 3 decimal places 	<ul style="list-style-type: none"> - Multiply 4 digits by 2 digits - Divide whole numbers and express remainder as a decimal fraction, e.g. $43/5 = 8.6$ 	<ul style="list-style-type: none"> - Compare the price of goods against a given budget and determine if they are affordable 	<ul style="list-style-type: none"> - Convert between different units, e.g. express 1 and half hours in minutes - Calculate the duration of events or journeys which bridge several hours and give starting and finishing times 	<p>MEASUREMENT CLIPART</p> 	<ul style="list-style-type: none"> - Identify and name quadrilaterals, e.g. kite, rhombus, parallelogram, and trapezium and describe their properties in terms of sides, angles, parallel and perpendicular lines, diagonals - Calculate radius, diameter and circumference and use knowledge to draw circles to set dimensions

Useful Websites and Links

Sumdog - <https://www.sumdog.com/>



Education City - <https://www.educationcity.com>



Topmarks - <https://www.topmarks.co.uk/maths-games/5-7/counting>



Squeebles - <https://keystagefun.co.uk>



CBeebies - <https://www.bbc.co.uk/cbeebies/topics/numeracy>



Maths Rocks - <https://www.mathsrockx.com>

