

Helping your child with maths in Year 3 and 4

REAL LIFE MATHS

Families come across all manner of everyday maths situations when they are with their children - much more so than teachers who are confined to classrooms. By doing maths in real life, meaningful situations, children are more likely to develop the idea that maths is important, maths has meaning and maths is do-able! Wherever you see maths, talk about it! Below are some ideas that can be used on a Monday morning, a Wednesday tea-time or a Saturday afternoon!

Talking about numbers and shapes that you see in the environment	<i>What's the prize money for that competition?</i> <i>What shapes are these paving stones?</i> <i>What shapes can you see in the railings?</i> <i>What patterns can you see in this wrapping paper?</i>
Cooking	<i>If it's 5.15pm now and the dinner needs 20 minutes in the oven, what time shall we get it out?</i> <i>If this recipe is for 4 people, but we only need to make it for 2 people, how much flour do we need?</i> <i>If there are 4 of us for dinner and we each want 3 sausages, how many sausages do we need?</i>
Time	<i>If your programme is 55 minutes long, what time is it going to end?</i> <i>We need to pick Auntie up at 5.20pm, it's going to take us half an hour to get there so what time should we leave?</i> <i>The train is going to take us 45 minutes. If we catch the 14.07, what time will we get there?</i> <i>It would be extremely beneficial for your child to wear a watch (ideally analogue and digital).</i>
Money	<i>Let's add up as we go round the shop to see roughly how much it's going to cost. We can see if we're right at the till!</i> <i>How much change are we going to get from this £20 note?</i> <i>If the DVDs are 'buy 2, get 1 free', how much do we save?</i> <i>How much does Harry Kane earn each week?</i>

Measures	<p><i>How much water do you think is in the dog's bowl? Can we check?</i></p> <p><i>How much taller than your brother do you think you are? Can we check?</i></p> <p><i>How long will it take us to walk to the shops?</i></p> <p><i>What time is it?</i></p>
Number calculation	<p><i>Play '21'/'Pontoon' with a deck of cards.</i></p> <p><i>Yahtzee (dice), darts, watch snooker, bowling, archery</i></p>

Times Tables

By the end of Year 4, children are expected to recall multiplication and division facts for multiplication tables up to 12×12 .

To allow children to make connections between the different times tables, we teach them in the following order:

1x, 2x, 5x, 10x, 0x (Year 2)

(2x), 4x, 8x, 3x, 6x, 12x (Year 3)

9x, 7x, 11x and revision of all times tables up to 12×12 (Year 4)

Times table	Patterns and links
x 0	Multiplying a number by 0 gives 0. Zero lots of 2 is zero. Zero lots of 7 is zero.
x 1	Multiplying a number by 1 gives the same answer. One lot of 2 is still 2. One lot of 7 is still 7.
x 2	The ones digits repeat in this pattern; 2,4,6,8,0 All the numbers are even. Multiplying by 2 is the same as doubling.
x 5	All the numbers end in a 5 or a 0. The numbers alternate odd, even, odd, even.
x 10	All the numbers end in zero. The tens digit goes up by one each time.
x 4	All the numbers are even. You can double and double again to multiply by 4.
x 8	All the numbers are even. You can double, double and double again to multiply by 8.

x 3	The numbers alternate odd, even, odd, even...
x 6	All the numbers are even. You can multiply by three and then double.
x 12	All the numbers are even. You can x10 and then add two more lots. You can multiply by 6 and then double.
x 7	The numbers alternate odd, even, odd, even. You can multiply by 5 and then add two lots.
x 9	As the tens digit goes up by 1, the ones digit goes down by 1. You can x10 and then subtract one lot.
x 11	The tens digit and the ones digit are the same. They both go up by one each time. The numbers alternate odd, even, odd, even. You can x10 and then add one more lot.

It is very useful for children to know times tables fluently. Chanting and singing the tables when you're in the car, bath or park all help!

[Click here](#) for a range of times table cover songs to support your child to learn the times tables.

[Click here](#) for a range of times table dance videos.

Maths Games

Playing maths games with children is also a great idea! It develops positive attitudes, mental maths strategies (which are very important), and is a good way of keeping them away from the TV!

The games below are designed to be adapted and varied. Learn the basic rules and then change them up as you want – let the children decide what to do!

BINGO

Draw one 3x3 grid for each player which they fill with numbers up to 20, for example:

11	5	16
9	3	4
1	8	20

The caller calls out any number between 1 and 20. If the player has the 'number bond' to 20, they cross it off their grid.

i.e. If the caller says 14, any player can cross off 6 as $14+6=20$

The first player with 3 in a line calls BINGO!

Playing against brothers, sisters, cousins, aunties, grandmas can be competitive and fun.

This can be played with lots of variations:

- Doubling numbers
- Halving numbers
- Number bonds to 10, 50, 100 etc.
- Throw two dice and add them
- Multiply by any single digit number
- Multiply by 10, 100, 1000

DICE GAME

Put 7 counters/buttons/sweets/raisins in the middle of the table. Throw 2 dice. The first player to add them and call out the correct total takes one object from the middle of the table. When all the objects are gone, the player with the most is the winner.

This can be played with lots of variations:

- Change the **number** of dice or the **type** of dice (you can buy fraction dice, 10-sided dice etc.)
- Change the calculation i.e. work out the difference between the dice, just use one dice and double it, use 3 dice and call out the largest/smallest number

WHAT'S THE ANSWER?

Decide on the answer e.g. 30. Each player has to think of as many calculations as they can for which 30 is the answer e.g. half of 60; $27+3$, double 15.

After 1 minute, only unique calculations get a point and the player with the highest point score wins.

COUNTDOWN

Throw a dice 5 times to create 5 numbers. Decide upon a total (20 or 30 are often good). Players have to try to reach the total; they can use $+$ $-$ \div as many times as they like, but they can only use each number once. The player nearest to the total wins that round.

To make it harder/easier, change the number of numbers, decide that every number has to be used once and only once, change the total, put players in pairs to play etc.

WHAT NUMBER CAN YOU MAKE?

Cut out ten pieces of paper and write one 0-9 digit on each:

0	1	2	3	4
5	6	7	8	9

Turn the cards face down.

Decide on a target. It might be an:

- Even number
- The largest number
- A number in the 5 times table
- A number greater than 60 but less than 100

Take it in turns to take a card, turn it over and put it in a place value grid:

Tens	Ones

The digit can't be moved once it's been placed!

Whoever gets the target number wins!

You could change your grid to make it HTO, ThHTO or even TThThHTO.

CARD GAMES

[Click here](#) to find a range of cards games to play with your child.

FREE USEFUL LINKS

National Numeracy is a nationwide charity which is dedicated to improving everybody's numeracy skills. They have produced a Families' Toolkit which has lots more great ideas for things to do to help your children. [Click here](#) to go to it; scroll down to the 6-9 year olds section.

The **NRich** website has got absolutely loads of investigations and games that will challenge parents and children alike. [Click here](#) to have a go at some of their games, and [click here](#) to have a go at some of their investigations.



We use **Sumdog** to support children in maths for years 1 – 6. Sumdog is a fantastic website (and APP) that uses motivating games to encourage children to practise their mental maths skills.

It's simple to use Sumdog. Either log in through your browser, or download the app for iPad & iPhone, Android or Kindle. Your child can practise anytime, anywhere! As children play, they answer questions. Sumdog personalises the questions for each one, and tracks their progress through the school curriculum. [Click here](#) to login.



We are also extremely passionate about learning and embedding our times tables. The pupils in years 2 – 6 have their own **TT Rockstars** account and earn coins for their own rockstar by concentrating on different times tables each week and consolidating the ones they learn by revisiting them each half-term. The children can enter the garage, studio, arena or a festival! [Click here](#) to login.

There is a range of free, engaging and interactive maths games on **Top Marks**. [Click here](#) to access them.

Maths Frames has more than 200 interactive maths games children can play at home. [Click here](#) to access them.

More exciting games can be found on **Third Space Learning** by [clicking here](#).