

Family Maths Games: ideas to use at home

Want to improve your family's maths skills and have fun at the same time? Here are some ideas for family maths games from Maths on Toast, the family maths charity.

3 Top Tips for enjoying family maths learning:

1. *Maths is everywhere...* Cooking, shopping, packing things into bags and boxes, planning a journey... even the buildings all around you. The more you look, the more you will see.
2. *Believe in your own ability...* Everyone has the potential to understand and enjoy maths. 'Inherited negative attitudes' to the subject – i.e. children picking up on their parents' own low confidence or dislike of maths – is one of the UK's problems, but you don't have to have it in your own family.
3. *Getting stuck is ok...* What strategies have you got to deal with that 'stuck' feeling? Learning to persist is an important maths skill.

To encourage you to keep game playing at home, we thought we would summarise the instructions for some of the family maths games you enjoyed as part of the Family Learning Festival.

Guess the Number

You can make this game as easy or hard as you like. Start by only allowing whole numbers from zero to twenty. When you've got the hang of it, stretch yourselves by including bigger numbers, fractions... and even numbers below zero...

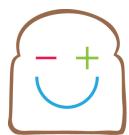
1. One player leaves the room (or covers their eyes and ears). The others choose a number.
2. The player comes back in. They have to work out what the number is, using only yes/no questions. For example, they could ask 'Is it an odd number?' or 'Is it more than twenty?' The aim is to work it out in as few questions as possible. When they've guessed, it's someone else's turn.

Higher/Lower

This game is for as many players as you like – just take turns. **You will need a pack of conventional playing cards, well shuffled, with jokers removed. Aces are 1s.** Your aim is to turn over as many cards as possible before you are 'out'.

Choose one person to be the dealer.

1. On your turn, ask the dealer to turn over a card.
2. Take a look at the card. Say 'higher' if you think the next card will be higher, or 'lower' if you think it will be lower.
3. Ask the dealer to turn over the next card. If you're right, carry on. If you're wrong, it's the end of your go.



And here's a summary of the hidden learning in some of those classic games you may have/already play at home...

Games and their maths content

Game	Why it's maths
Board games	
Ludo	Counting. Numbers to six. Number bonds of six. Strategy. Probability (will a six come up?)
Snakes and Ladders	Counting numbers to 100. Counting backwards. Understanding of how numbers relate to each other. Ten times table visible on grid - multiplication.
Scrabble	Addition and multiplication in working out scores
Monopoly	Money. Addition and subtraction.
Chess	Movement by rule in 2D space – relates to use of coordinates, transformations. Strategy and abstract thinking. Logic.
Checkerboard games (in general)	Movement by rule in 2D space – relates to use of coordinates, transformations. Strategy and abstract thinking. Logic.
Card games	
Card games (in general) – e.g. whist, rummy, bridge,	Numbers to ten. Recognition of 'same' e.g. same number but different suit. Strategy. Probability – which cards are left? Which combinations are most likely to appear?
Snap	Early recognition of 'same' in simple context (depending on cards!)
Pairs	Recognition of 'same' e.g. same number but different suit
Higher/Lower	Prediction. Number value.

See what other games you can come up with – and visit the Maths on Toast website for more ideas. www.mathsonttoast.org.uk