

How to help support your child at home in Mathematics

As a parent/carer, you give your child their first experience of maths. We'll help you make it a good one.

Even if you yourself don't feel confident with maths, you can still make a huge difference to your child's numeracy confidence and ability.

Top tips!

- ▶ **Be positive about maths!** Never say things like ‘I can’t do maths’ or ‘I hated maths at school’... your child might start to think like that themselves...
- ▶ **Point out the maths in everyday life.** Include your child in activities involving maths such as using money, cooking and travelling.
- ▶ **Praise your child for effort rather than talent** - this shows them that by working hard they can always improve.

5 years old and under

Children get their first experiences of numbers and maths through everyday play and talking at home

At this age, children are beginning to:

- ▶ learn early maths language of measurement, shapes, spaces, positions, numbers, order and patterns.
- ▶ know the sequence of numbers.
- ▶ understand positional words, e.g. in, on, outside, under.
- ▶ show an awareness of time.
- ▶ learn number rhymes and songs, e.g. one, two, buckle my shoe.

Around the house

- ▶ **Measure ingredients** or set the timer together when you are cooking.
- ▶ **Practise counting** up to twenty, and backwards too.
- ▶ **Find the same amount of different items** to help your child understand what numbers mean. For example, find 3 spoons, 3 hats, or 3 socks.
- ▶ **Talk about** the shape and size of objects, e.g. big car, round ball, rectangular book. Ask questions like ‘pass me the biggest box’, or ‘which is the smallest shoe?’.
- ▶ **Play with things** like shells, bottle tops, beads, Lego - and compare them. You can make patterns with them too.
- ▶ **Put things in order** - of weight, height, size. Ask your child to help you organise things at home.
- ▶ **Make patterns** with objects, colouring pencils, paint or play-dough.
- ▶ **Build structures** with Duplo, Lego, or cardboard boxes.
- ▶ **Solve problems** by working out ‘how many altogether’ or ‘how many more’, such as: ‘We have 3 red apples and 2 green apples, so how many apples do we have altogether?’ or ‘We have 6 chocolates/oranges/crisps, if I eat 3, then how many will we have?’

Maths and money

- ▶ **Play the coin game.** Together, trace around coins and colour in the shapes. Ask your child to match the coin to the image and talk about each one's name. (Note: toddlers may try to swallow coins, so always keep an eye out!)
- ▶ **At the shops** - ask them to guess how much a couple of items will cost. Give them small amounts e.g 20p, - what can they buy? Talk about the items you buy - which are more expensive, which are cheaper? Which are heavier, which are lighter?
- ▶ **Play shops** - make some pretend money (or use Monopoly money) for your play shop, and use items from all over the house as shop items. By 'buying' things with play money, your child begins to understand that different things need different amounts of money.

Games

- ▶ **Play with cards** - players take 2 cards and add the numbers - the player with the highest number wins.
- ▶ **Play with blocks** - get them to think about size, colour, shape, weight, texture, and create patterns and structures too. Ask them to guess how many blocks they could pile up without them falling down.
- ▶ **Play 'I spy'** but with numbers or shapes.
- ▶ **Play with containers** - how many socks can you fit in the box? Which container holds the most sand/water/beads etc.
- ▶ **Play the Clue Game** - Pick an object and give your child clues to that object by using directional language: up, down, over, under, between, through, beside, behind, in front of, and on top of. To make the game more challenging give two part directions e.g. 'It's on top of the table and to the left of the TV'.
- ▶ **Board Games** are great for developing skills. Try games like Connect 4, Jenga, or Snakes and Ladders.

Out and about

- ▶ **Go on a shape hunt** - how many circles, squares, rectangles, triangles can your child find? Are they 2D or 3D? You can look for patterns too.
- ▶ **Play games that use counting** - Hopscotch, Hide and Seek, What's the Time Mr Wolf, Skipping, Hula Hooping.
- ▶ **Get dancing** - create patterns by making up short dances, or rhythms using your body (e.g. clap, clap, stomp, belly slap, and repeat).
- ▶ **Play sport!** Sports are the perfect chance to talk about speed, scores, time and angles. Get competitive - how many goals/points can your child score? How many can you score?
- ▶ **Look for numerals...** on doors, buses, cars, signs, at home, at the shops... anywhere. Remember to talk about what the numbers mean.
- ▶ **Count anything** - how many lampposts are on our street? How many houses have a red door? How many dogs can you count in a day?
- ▶ **Talk about time** - for example, how long does it take to walk to the shop, or to school?

Songs

Try these classic songs (click on the link for lyrics and tune)

- ▶ [Five Little Ducks](#)
- ▶ [One, Two, Buckle My Shoe](#)
- ▶ [Once I Caught a Fish Alive](#)
- ▶ [Five Little Monkeys](#)
- ▶ [The Ants Go Marching](#)

Helping with homework

- ▶ **If you don't know something, that's OK.** Try and work out the problem together.
- ▶ **Set aside some homework time** Start a homework routine, find a quiet place for your child to work and take away any distractions if possible.
- ▶ **With younger children, you could set yourself adult "homework" time.** Do 'homework' yourself e.g. shopping list, checking your phone bill. Show them that you are using the skills they're learning.
- ▶ **Rephrase questions** using things that your child is interested in
- ▶ **If they're doing well, praise them for effort.** Say "well done, you've worked so hard", rather than calling them "clever" or praising talent. This helps children learn that their abilities can develop as long as they work hard.
- ▶ **When they get stuck,** ask them to explain what they've done so far and what they're finding hard. Try and help them work out where they've gone wrong.
- ▶ **If the homework is too hard** speak to their teacher.
- ▶ **With older children, still show interest** but let them be more independent and figure out problems for themselves.

Key Stage 2- top tips!

- ▶ **Be positive about maths!** Never say things like ‘I can’t do maths’ or ‘I hated maths at school’... your child might start to think like that themselves...
- ▶ **Point out the maths in everyday life.** Include your child in activities involving maths such as using money, cooking and travelling.
- ▶ **Praise your child for effort rather than talent** - this shows them that by working hard they can always improve.

Age 6-9

- ▶ explain why they think something is correct.
- ▶ count up to 100 and put numbers up to 100 in the correct order.
- ▶ add and subtract.
- ▶ recognise odd and even numbers.
- ▶ name 2D and 3D shapes.
- ▶ measure the lengths and weights of objects.
- ▶ put events in the correct order, for example, giving instructions for a familiar journey.
- ▶ collect information (data) to find out the answer to questions, for example, how do people travel to school?

Around the house

- ▶ **Talk about time** - for example, 'What time should you leave the house to get to school on time?' or, if they have a 20 minute turn on the computer and they've already used 10 minutes, how much longer can they use the computer for?
- ▶ **Measure ingredients** and set the timer together when you are cooking. How much more food will you need if extra people come for dinner?
- ▶ **Talk about the shape and size** of objects - use the internet to find interesting size facts like tallest and shortest people, or biggest and smallest buildings etc.
- ▶ **When you are sharing** food like pizza, cake or berries, ask your child to help you **share it equally** between the people eating.
- ▶ **Solve maths problems** at home, e.g. How many apples should we buy at the shop? Why?' or 'How long will it take us to get to Gran's house if we go to the library on the way?'
- ▶ **Collect information** together and create a tally chart, e.g. find out the family's favourite animal or fruit etc.
- ▶ **Make patterns** with objects, colouring pencils, paint or play-dough, and build structures with Lego, or cardboard boxes.

The tallest man living is **Sultan Kösen**
(Turkey, b. 10 December 1982) who measured
251 cm (8 ft 3 in)



Maths and money

- ▶ **Estimate** - at the shops ask your child to estimate how much 3 or 4 items will come to.
- ▶ **At the shops** - if you're buying a couple of items in a shop, ask them to guess how much they will cost.
- ▶ **Give them small amounts** of pocket money e.g 50p - what can they buy? If they want to save for something, how long with it take them?
- ▶ **Talk about the items you buy** - which are more expensive, which are cheaper? Which are heavier, which are lighter?
- ▶ **Explore quantities** by asking them to think about how many different ways they can make 50p. How many 10p coins do you need to make £1?
- ▶ **When you buy something**, get your child to hand over the money. Check the change with them afterwards.

Games

- ▶ **Play games with cards** - players take two cards and add the numbers - the player with the highest number wins. Try it with subtraction, multiplication, and division too.
- ▶ **Play 'Think of a number'** - you think of a number between 0-100, and they have to guess. They can ask questions like 'is it less than 20?'.
Play with blocks like Lego or Jenga - talk about size, colour, shape, weight, texture. Create patterns and structures. Ask them to guess how many blocks they could pile up without them falling down and then build them up to see if they were correct.
- ▶ **Play with containers** - e.g. How many sweets are in the jar? Ask your child to guess and then count to see how close they were.
- ▶ **Pick an object** and give your child clues to find it by using directional language: up, down, over, under, between, through, beside, behind, in front of, and on top of. Make the game more challenging: give more complicated directions e.g. 'It's on top of the table and to the left of the magazine'.
- ▶ **Play board games** like Connect 4, [PLYT](#), Snakes and Ladders, [City of Zombies](#) Jacks, Dominos, or the Rush Hour Game.
- ▶ **Ask your child to design** their own board game (and dice). Play the game together. Afterwards, talk about the mathematical thinking, reasoning, or problem solving the game used.

Out and about

- ▶ **Go on a shape hunt** - how many rectangles, triangles, pentagons, hexagons can you and your child find? Are they 2D or 3D? You can look for patterns and symmetry too.
- ▶ **Play outside games** that use counting - Hopscotch, Hide and Seek, What's the Time Mr Wolf, Skipping, Hula Hooping. Practise times tables by counting in multiples e.g. 4, 8, 12, 16...or 7, 14, 21, 28.
- ▶ **Get dancing** - ask them to create dance routines along to their favourite songs.
- ▶ **Play sport!** Sports are the perfect chance to talk about speed, scores, time and angles. Get competitive - try out different angles to try and score from. How many star jumps can they do in a minute?
- ▶ **Ask them to give you directions** to local landmarks/important places. How long does each stage of the journey take?
- ▶ **Use sticks** for shape challenges - how many triangles can they make with 9 sticks?
- ▶ **Explore the local area** and ask them to guess - how many buildings do they think are on the street? How far is it to the nearest river? How many cows/dogs/cats live in your town? Ask for the reasons behind their answers.

Books

For younger children (6-7):

- ▶ The Shopping Basket by John Burningham.
- ▶ 365 Penguins by Jean-Luc Fromental.
- ▶ We're Going on a Bear Hunt by Michael Rosen.
- ▶ The Girl Who Never Made Mistakes by Gary Rubinstein - great for teaching kids that it's OK to make mistakes, and that you can learn from them too.

For older children (8-9):

- ▶ The Dangerous Book for Boys by Conn and Hal Iggulden.
- ▶ The Daring Book for Girls by Andrew J Buchanan and Miriam Peskowitz - Great activities that use maths; things like finding north, writing codes, making kites etc.
- ▶ Matilda by Roald Dahl.
- ▶ Danny the Champion of the World by Roald Dahl - how many pheasants did they catch?

Radio, TV and film

Radio

- ▶ Megamaths by the BBC is a radio show about a team of detectives on a maths mission to solve mental maths problems.
- ▶ [Visit Megamaths](#)

TV and Film

- ▶ Whatever they're watching, there's opportunities to talk about maths - how fast are the cars going in Top Gear? How many votes are being cast on Strictly Come Dancing? How many years ago did the people on Gory Games live?

Age 10-13

- ▶ try different approaches when solving problems.
- ▶ break down problems into smaller, more manageable tasks.
- ▶ use mathematical language and symbols.
- ▶ convert between fractions, decimals and percentages.
- ▶ investigate and explain number patterns by drawing graphs and charts.
- ▶ Introduce to the language of algebra

Around the house

- ▶ **Talk about numbers in sport** - how many points does your team need to avoid relegation? How many goals/tries/conversions/points/runs has your team scored this season?
- ▶ **Measure ingredients/set the timer** together when you are cooking. Talk about fractions in cooking - how many quarter cups make a cup?
- ▶ **Talk about proportion** when you make a cup of tea or squash - how much milk? How much water?
- ▶ **Talk about the shape and size** of objects - use the internet to find interesting size facts like tallest and shortest people, or biggest and smallest buildings etc.
- ▶ **Talk about time** - for example, what time should they leave the house to be at school on time?
- ▶ **Look for maths on TV**, newspapers, magazines etc, and talk about what it means.
- ▶ **Use newspapers** and talk to your child about percentages in special offers, the probability in the weather reports, the length of TV shows in the TV guide, and compare the salaries in the jobs section.
- ▶ **Solve maths problems at home**, e.g. 'We have 3 pizzas cut into quarters, if we eat 10 quarters, how many will be left?'
- ▶ **Talk about shape**, size and quantity - use the internet to find interesting size facts like most and least populated cities, highest mountains or deepest valleys etc.

Money

- ▶ **If your child has a mobile phone**, use it to talk about maths and money saving. Look together for the best phone contracts/pay as you go plans. Does their network sell any extras that would make texts or calls cheaper? Is it cheaper to text or use BB messenger or WhatsApp?
- ▶ **At the shops** - if you're buying a couple of items in a shop, ask them to work out how much they will cost. As a challenge for older children, ask them to try and estimate what the weekly shop will come to.
- ▶ **If you give your child pocket money**, use this as an opportunity to talk about maths - are they saving for anything? How much do they need to save each week to buy it in a/two/six month(s)?
- ▶ **Work out offers** in supermarkets together - are they worth it?
- ▶ **When you travel** somewhere, ask them to help you work out whether it's cheaper to drive or take public transport. Are there any deals you can get on public transport?
- ▶ **Talk to them about getting a bank account** and look together for the best joining deal.
- ▶ **Ask your child to check change** for you.

Games

- ▶ **Play games with cards** - players take 2 cards and **add the numbers** - the player with the highest number wins. You can play this game with subtraction, multiplication, and division too.
- ▶ **Get them to design a tree house**, clothes or car (or whatever they fancy!), ask them to add measurements too.
- ▶ **Board games** are great for developing skills. Try games like Connect 4, Jenga, Monopoly, Scrabble, Dominos, [PLYT](#), or [City of Zombies](#).
- ▶ **Ask your child to design** their own board game (and dice), and play the game together. Afterwards, talk about what mathematical thinking, reasoning, or problem solving the game used.

Out and about

- ▶ **Before you go** somewhere (familiar) ask your child to give you directions (including timings if possible), then test their directions out. If they get something wrong, ask them to think of the best way to get back to where you want to go (which might not necessarily mean going backwards).
- ▶ **Look for patterns** and symmetry in your local area.
- ▶ **Play sport!** Sports are the perfect chance to talk about speed, scores, time and angles. Get competitive - try out different angles to try and score from. How many star jumps can they do in a minute?
- ▶ **Explore the local area** and ask them to guess - how many people live in the town? How far is the nearest airport? Ask for the reasons behind their answers, and check real answers online too.
- ▶ **Ask them to think about how many** bricks were used to build a local landmark. How are they going to estimate this?
- ▶ **Whatever their hobby** - dancing, football, netball, arts and crafts etc. ask them to explain the maths they have come across.
- ▶ **On journeys** ask questions like - how many miles/kilometres have we travelled? How many are left? If we travel at an average of 50mph what time will we get there?

Books, TV and film

- ▶ How did the 'clock' work in the [Hunger Games](#): Catching Fire by Suzanne Collins?
- ▶ How long does it take [Alex Rider](#) to solve his missions in the series by Anthony Horowitz?
- ▶ How many votes are being cast on X Factor or Strictly Come Dancing?

By discussing the maths found in books, TV and film, children see how maths is used all the time.