

Supporting mathematical development at home

Children's early maths skills start to develop from birth as they are instinctively attracted to the shapes that make up the human face. As they grow and develop, they continue to learn through their play and sensory experiences. This can come as a surprise to many adults who may not see any possible link between play and maths. Yet these experiences are laying a foundation for an enjoyment of and confidence in maths which is vital for their future mathematical development.



Maths is about much more than simply counting, adding and measuring. There are some skills that are seen as particularly important in early learning, particularly maths. These are: **'sorting'**, **'matching'**, **'finding and making patterns'**, **'problem-solving'** and **'estimating'**. Drawing children's attention to what is the 'same' and what is 'different' in everything from patterns on clothes to daily routines will build children's understanding of sorting and matching. To help your child become a problem-solver, set them challenges. Far better to challenge them to work out how many extra plates are needed when relatives come for tea than doing basic sums on paper. And finally a bit of guess work. Guessing helps us to know if we are on the right track; it builds our confidence in using numbers and makes us more likely to arrive at an accurate answer.

Let your child see you using maths whenever possible by thinking aloud when making calculations and encouraging them to join in as you count. A very simple example... count out food items as you prepare the evening meal.

- Children learn about maths through their play and daily life. Without 'experiencing' maths, your child will find it very hard to understand mathematical words (quarter, halve, take away) and symbols (3, 5, 8).
- Just as maths permeates adults' lives, so it permeates the play and daily routines of children - from filling tubs with sand (size and capacity) to counting out spoons at lunchtime.
- And just as maths permeates a child's life, so it permeates all areas of learning in the EYFS 2021 framework, from physical activity (speed) to learning about dinosaurs (size). Each area of learning also reinforces and complements another. Playing with musical instruments, blocks and clay helps children learn about aspects of maths; conversely, children's maths skills help them make better music, towers and models.

What can you do at home?

There are lots of practical and easy ways that you can encourage your child to practise and develop their maths skills every day. Rather than a list of must-do activities, you can dip in and out of these prompts and ideas based on your child's current interests and appropriate stage of development.

Numbers and their value

- Get in the habit of counting everyday things and pointing to each thing as you count it, e.g. buttons on your shirt, books on a shelf, cars parked on your street.
- Build number recognition by looking for numbers on houses or car number plates while out and about.
- Play games with dice or dominoes to practise subitising (recognising the number of objects in a group without counting).
- Give your child a group of objects (e.g. pencils) and ask them to give you back a certain amount of them.
- Anything can be sorted into groups. Sorting objects into sets of things with similar characteristics is important for beginning to understand what things have in common. This could be snacks, buttons or toys and can be extended to talk about how many are in each group. You could ask, "Which has more? Which has less?" "Let's count and check!"
- Dominoes can be a great way to understand that a number refers to an amount of objects. Matching games can also help your child to understand 1:1 correspondence.
- Songs and rhymes are great for helping young children learn to count. Focus on numbers 1-5 and then 1-10. Try 'Five Little Ducks Went Swimming One Day' and '1, 2, 3, 4, 5, Once I caught a fish alive'.
- Once your child has become familiar with counting then they can start ordering numbers. You could label blocks, cars or dinosaurs with numbers 1-5 then 1-10 and enjoy putting them in the correct order, muddling them up and starting again.
- Practise counting out objects such as buttons, toys or sticks collected on a walk. Encourage your child to point to each object as they say the number name.

Shape, pattern and measurements

- Measure everything! You don't even have to use real measurements like metres or centimetres - you could measure your child's height in hand-spans or measure the rug in footsteps.
- Make musical patterns using claps, stomps, clicks or beeps - can your child copy, continue or make their own patterns?
- Go on a shape scavenger hunt - draw five shapes (such as circle, square, oval, rectangle and triangle) on a piece of paper and keep a tally of how many you see. At the end of your hunt you can count up to see which shape won.
- Compare the weight and height of different things using words such as 'heavier or lighter than', 'shorter or taller than' and 'equal to', e.g. 'Daddy/Mummy is taller than the bookshelf', 'the bedroom doors are the same height', 'Mummy is shorter' etc.
- Play with different shaped blocks, discussing the 2D or 3D shapes of each.
- Use your child's hand to measure the length or height of things, e.g. - 'this book is two hands long', 'the window is 10 hands wide', 'the fireplace is 20 hands wide'.
- Make fruit kebabs using three or more fruits (e.g. strawberries, grapes and oranges), discussing the fruit patterns you are making with your child - can they copy your pattern or make their own?
- Measure ingredients and bake something yummy together and set the timer for it to cook.
- Play with objects, such as shells, bottle tops, beads or building blocks. These can be sorted into sets, used to make simple patterns or pictures (like a face or boat) or used to prompt discussions about shape.