

Mathematics

Maths is how we make sense of the world and maths is everywhere, but do we always see it? We want our children to become confident, life-long mathematicians, full of curiosity and the capacity to ask and answer questions. For this reason, maths needs to be part of their thinking throughout the day. Children do not need to know they are learning maths in order to be learning maths.

Why is mathematical development important?

Mathematics (maths) is an important part of learning for all children in the early years and receiving a good grounding in maths is an essential life skill.

As well as numeracy, it helps skills such as problem solving, understanding and using shapes and measure and developing a child's own spatial awareness. It helps them to recognise, create and describe patterns, which is essential for early problem-solving skills.

Introducing maths to children from an early age helps to develop their understanding of all elements of problem solving and reasoning in a broad range of contexts.

How can I encourage mathematical development?

Ensuring children are engaged, motivated, and thinking critically for themselves is vital for mathematics.

For example, encouraging children to problem solve by asking: 'How many spoons do we need for everyone in this group to have one each? How many have we got? How many more do we need?'

From birth, children have a keen interest in the world around them, but to have the confidence to explore it they need the support from adults around them.

To many adults, the words Maths and Play have absolutely nothing to do with each other. For many of us, maths was a torture, something we had to do, and something we did not understand and could not do. Play on the other hand was something we loved. Young children are learning maths all the time through a wide variety of play experiences. From the time they are born, babies are surrounded by sense impressions. Shapes are of immediate importance: babies react instinctively to the arrangement of shapes which make up the human face. In the home children should be provided many opportunities to enjoy and learn Maths through Play.

Below are 10 ideas to help develop your child's mathematical skills, to play around with and to explore the limitless possibilities. They do not contain specific instructions or predetermined outcomes so are all very open-ended. Have fun! Do please share your experiences with us on Tapestry!

“Each new day has a different shape to it. You just roll with it”

-Ben Zobrist

Shape up



Play with shape-sorters. Talk with your child about each shape, count the sides, describe the colours. Make your own shapes by cutting large shapes out of coloured paper. Ask your child to “hop on the circle” or “jump on the red shape” Point out the different shapes and colours you see during the day. On a walk, you may see a triangle-shaped sign that is yellow. Inside a shop you may see a rectangle-shaped sign that is red.

“Many of the things you can count, do not count. Many of the things you cannot count, really count”

-Albert Einstein

Count and sort



Gather a basket of small toys, shells, pebbles, or buttons. Count them with your child. Sort them based on size, colour, or what they do (i.e., all the cars in one pile, all the animals in another). Make household jobs fun. As you sort the laundry, ask your child to make a pile of shirts and a pile of socks. Ask him which pile is the bigger (estimation). Together, count how many shirts. See if he can make pairs of socks: Can you take two socks out and put them in their own pile? (Do not worry if they do not match! This activity is more about counting than matching.)

“Today or any day that phone may ring and bring good news”

-Ethel Waters

Place the call



Begin to teach your child their address and phone number of your home. Talk with your child about how each house has a number, and how their house is one of a series, each with its own number.

“I know size can be daunting but do not be afraid”

-Robin Williams

What size is it?



Notice the sizes of objects in the world around you: That pink flower is the biggest. The blue flower is the smallest. Ask your child to think about his own size relative to other objects (“Do you fit under the table? Under the chair?”).

“Cooking with kids is not just about ingredients, recipes, and cooking. It is about harnessing imagination, empowerment, and creativity”

– Guy Fieri

You're cooking now!



Even young children can help fill, stir, and pour. Through these activities, children learn, quite naturally, to count, measure, add, and estimate.

“All truly great thoughts are conceived while walking”

– Friedrich Nietzsche

Walk it off



Taking a walk gives children many opportunities to compare (which stone is bigger?), assess (how many acorns did we find?), note similarities and differences (does the duck have fur like the bunny does?) and categorise (see if you can find some red leaves). You can also talk about size (by taking big and little steps), estimate distance (is the park close to our house or far away?), and practice counting (let's count how many steps until we get to the corner).

“The two most powerful warriors are patience and time”
-Leo Tolstoy

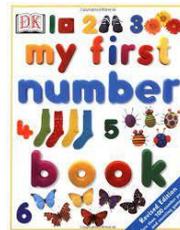
Picture time



Use an hourglass, stopwatch, or timer to time short (1–3 minute) activities. This helps children develop a sense of time and to understand that some things take longer than others.

“You have to be odd to be number one”
-Dr. Seuss

Read and sing your numbers



Sing songs that rhyme, repeat, or have numbers in them. Songs reinforce patterns (which is a math skill as well). They also are fun ways to practice language and foster social skills like cooperation.

“Life is going to throw you some blocks. You will decide if they are going to be your stumbling blocks or your building blocks”
— Saji Ijyemi

Big on blocks



Give your child the chance to play with wooden blocks, plastic interlocking blocks such as Duplo, empty boxes, milk cartons, etc. Stacking and manipulating these toys help children learn about shapes and the relationships between shapes (e.g., two triangles make a square). Nesting boxes and cups for younger children help them understand the relationship between different sized objects.

“The more we observe patterns, the more we connect the dots and make sense out of them, the more we learn”
- Omar Cherif

Pattern play



Have fun with patterns by letting children arrange dry pasta, chunky beads, different types of dry cereal, or pieces of paper in different patterns or designs. Supervise your child carefully during this activity to prevent choking and put away all items when you are done.

Remember, just as with other areas of development different children will develop different skills at different stages but if you are worried about your child’s mathematical development then do talk to us.

Further resources

<https://www.mathswithparents.com/>