

LET'S TALK MATHS IN THE EARLY YEARS

Elaine Taylor Brown considers the question "We don't need to worry about maths with our children. Surely, they are too young? Surely, it's all about the play?"

As early years practitioners, we are well aware that in the statutory Early Years Foundation Stage (EYFS), the framework we must follow, there are seven areas of learning and development. These consist of three prime areas – Personal, Social and Emotional Development; Communication and Language; and Physical Development – alongside four specific areas – Literacy, Mathematics, Understanding the World, and Expressive Arts and Design.

It's essential to remember that all these seven areas of learning and development (the "WHAT" children have to learn) are statutory requirements, along with the characteristics of effective learning (the "HOW" children learn). These apply to all children in our settings, whether they are as young as 6 months old in a baby room or as old as 5 years in a Reception class! The three prime areas are rightly considered the foundation of all learning and development. They provide the fundamental skills and dispositions necessary for success. These areas are universal, essential wherever a child may live, and form the building blocks of lifelong learning.

On the other hand, the specific areas target more academic aspects of learning. These aspects, while still important, are influenced by cultural factors. For instance, in many countries, phonics may not be the primary method for teaching reading, and formal reading instruction may commence at a later age, probably at age 6 or 7 when children start formal schooling.

First and foremost, it's essential to acknowledge that children's time should indeed be filled with play, exploration, and high-quality interactions facilitated by attuned, enthusiastic, and highly skilled adults. There's no doubt that our focus should primarily be on the prime areas of learning, as we recognise the limited timeframe available to help children establish a solid foundation in these areas.

However, this does not mean we should neglect mathematics. Mathematics in early childhood education **MUST** be playful. It should be the magical, golden thread that seamlessly weaves through those all-important prime areas of learning, rather than existing as a separate entity. By making maths playful, language-rich, and emotionally engaging, we can ensure that children not only learn maths but also develop a positive attitude toward it.

The problem with maths...

As I sit here writing this blog, a recent conversation with my partner comes to mind. He had taken a break from tiling the kitchen and decided to read over my shoulder as I typed. We ended up discussing mathematics, and I pointed out that he had been applying mathematical thinking all morning without even realising it. His puzzled expression prompted me to elaborate. I highlighted his spatial thinking, his knack for estimation, his problem-solving skills, and his keen awareness of patterns, all of which he had employed while tackling the kitchen tiling project. From navigating tricky corners to precisely cutting tiles to fit odd gaps, he had engaged in a variety of mathematical processes. To his surprise, he realised that he had, in fact, been a mathematical genius all morning!

We live in a world full of mathematics, where maths plays an integral role in our daily lives. From setting our morning alarms and planning our journeys to cooking meals and budgeting for shopping trips, maths is an indispensable tool. Yet, we often fail to recognise its presence, its utility, its inherent beauty, and its intricacies. The reason behind this oversight lies in our perception of mathematics as an abstract and seemingly irrelevant subject—a set of rules and procedures we were taught by rote, without ever fully grasping its essence. The harsh reality is that many of us carry the scars of our own negative experiences with maths from our educational journeys, often leading to maths anxiety. Given these views and feelings about maths, it's only natural that they influence how we interact with the children in our care when it comes to mathematics. Whether consciously or unconsciously, our beliefs about maths shape our teaching approaches and the learning environments we create. It's time for a change.

We must reevaluate our relationship with mathematics and recognise it as a dynamic, essential tool for problem-solving, decision-making, and understanding the world around us. By fostering a positive attitude toward mathematics in ourselves, we can better nurture the mathematical development of the next generation and help them view maths as not just a subject but a valuable life skill. Play, play and play some more!

So, how do we go about introducing mathematical learning to young children? Well, it's quite straightforward—through play. Play is the language of children, their culture, and their world. Consider this scenario: Picture yourself in a baby room within a setting. There's a baby engaging in tummy time, reaching out for toys just out of their grasp. They stretch, explore their surroundings, and wiggle with great excitement to lay their hands on a wooden spoon just inches away. Once they grab the spoon, they instinctively put it in their mouth, feeling its shape and texture, exploring its nuances. The nearby adult responds with praise and encouragement, saying something like, "Ooh, that's a big spoon, isn't it?" This seemingly simple interaction is a profound example of mathematical learning for that baby.

Mathematical concepts are intricately woven into the fabric of those prime areas of development—the physical development as they reach, explore space and build strength, the personal and emotional development as they experience the joy of success,

as they persevere and communication as the nearby adult engages in a naturally mathematical conversation, prompting the baby to respond and participate in their unique way.

Now, let's venture into the toddler room next door during snack time. A child is assisting a practitioner in setting the table. The adult serves as a model, counting the plates and arranging them on the table. Meanwhile, the child helps prepare the fruit, matching it to the plates, unstacking cups, and passing them to the practitioner. Together, they fill the cups from a large jug. Once again, this scenario provides genuine opportunities for physical, personal, social, and language development— all through routines and playful interactions enriched with mathematics.

There's counting, sorting, matching, sharing, estimating—all happening naturally. How often do we truly observe and engage with children during these everyday activities, recognising the mathematical potential embedded within? If we fail to see the mathematics right in front of us, we miss the chance to maximise, breathe life into, and extend these experiences. Instead, we might resort to planning abstract, structured maths activities at a table—activities that, let's be honest, often fail to fully engage children. They may spend that time with us, all the while worrying about what might happen to the fantastic block structure they were called away from or the pram and doll they left parked by the shed.

Mathematics is not an isolated subject; it's an integral part of our daily lives and interactions. Embracing this perspective allows us to create rich mathematical learning experiences organically, ensuring that children develop a genuine understanding and appreciation for maths from a young age. The Mathematical Journey: Early maths is about giving children the essential tools they need to understand and interact with the world around them. It's about fostering a love for learning and problem-solving (and finding) that will stay with them throughout their lives.

So, the next time you see a child splashing in a puddle, or you help them with a puzzle, to put their shoes on the right feet, or you count the stairs you climb, - remember it's all part of a beautiful journey of mathematical discovery. And as practitioners, we have the incredible privilege to take their hand and guide them on this path- sometimes they will need us, and sometimes they won't. But it's a journey we are there for, by their side watching, encouraging and being ready to step in when needed and ultimately when we are trusted and invited. We have the power to help children unlock the world of mathematics. So...who's ready to play!

For more information on supporting early maths development, why not look at the mathematics section in [Development Matters](#) or check out the early mathematics evidence based approaches in the EEF Evidence Store [here](#).