

Maths Champions Case Study

Champion: Tijesom Ali

Setting: Fieldhead Carr Primary School

INTENT
Introduction <i>A little bit about your setting, why you joined the programme and what you wanted to achieve from it.</i> I have been teaching for over 10 years, working across various primary age groups, with my passion lying in Early Years. I have been teaching in the nursery at my current school for over four years and have served as the Early Years Lead for the past three years. Our nursery welcomes children aged 3 to 5, with admissions taking place throughout the year as soon as a child turns three. We offer 58 nursery places with five different session options: morning sessions, afternoon sessions, full days on Monday/Tuesday with Wednesday morning, or Wednesday afternoon with full days on Thursday/Friday. Additionally, we provide full-time places (Monday- Friday) for children eligible for 30 hours of funding. I joined the Maths Champions programme to deepen my knowledge and experience in teaching maths within Early Years, ensuring I provide engaging and positive learning experiences for young children. I was nominated as the Maths Champion for Nursery, while Sophie, our school's Maths Lead, was nominated as Deputy Maths Champion.
How did you decide what to do? <i>What did the audits highlight, what changes did you consider and how did you identify the change/s to be made? Did the changes you considered come from the online training or resources etc?</i> I began by completing the online courses to gain a clear understanding of what the programme entailed. The courses were detailed and highly informative, providing valuable insights into early maths teaching. Following this, I started assessing children and training my teaching assistants on what I was learning. Through weekly moderation meetings (every Thursday after school), we discussed how to support children's progress. We conducted observations and used these to plan next steps, ensuring individual learning was continuously developed. As part of this process, I carried out staff confidence and learning environment audits. One key finding was the variation in mathematical resources and language used in the setting. My team and I carefully evaluated which resources would best support children's mathematical development and how to create meaningful learning opportunities within the provision areas. I also noticed differences in staff confidence when teaching mathematical language, some had a strong understanding, while others needed more support. Recognising this, I made it a focus in our Thursday EYFS meetings to ensure all staff felt equipped to embed mathematical language effectively in their teaching.
IMPLEMENTATION
What did you change or implement? <i>Outline a positive change, or changes, that have taken place as a result of being part of the Maths Champions programme. How did you plan for it and what did you do? How did you plan to assess the benefit of the change on staff practice and children's experiences?</i>

We quickly moved forward with exploring opportunities for everyday maths within our setting. My deputy and I were particularly inspired by the information on loose parts available in the Maths Champions resources section of the Development Zone. Although we had heard about using loose parts, they were not yet part of our continuous provision, and we wanted to understand the full extent of their impact, particularly on mathematical learning. After conducting research and discussions, we decided to introduce loose parts.

Working closely with staff, we carefully selected resources for our children while also ensuring that staff felt confident in supporting their use. We wanted to be intentional about how these materials would enhance mathematical learning. To start, we introduced a small selection of loose parts as we invited children to the carpet area and demonstrated how we use them. This allowed children to freely access and explore the materials in provision while also understanding where to return them during tidy up time.

We then observed the children during play. Staff spent dedicated time engaging with children who were naturally curious about the new resources. They introduced and described the materials, modelled how to use them in play, and focused on embedding mathematical language.

One group of children became particularly interested in a set of wooden disks. As they compared them, they used language such as bigger and smaller, tiny and big. They experimented with sorting the wooden disks by size and fitting them into different containers, exploring concepts of size and shape.

In the construction area, children transported loose parts to enhance their structures, experimenting with balance, weight, and shape. They worked collaboratively to problem-solve, discussing why certain materials worked better than others. We also noticed an increase in the use of positional language, with children narrating their play using words like in front of, behind, under...

The children extended their play further by incorporating the new resources into block play, building towns with shops, cars, and roads. Staff engaged alongside them, asking open-ended questions to challenge their thinking and encourage mathematical language. This was done by staff as they used open-ended questions. Following the success of this introduction, we observed children naturally transporting loose parts to other areas of the setting.

Additionally, we ran a staff training session to consolidate learning from the online Maths Champions training. We provided an overview of key points and facilitated group discussions where staff reflected on current maths opportunities in the setting and brainstormed new ways to enhance them.

IMPACT

The success and benefit of what you did:

For children

What has been the impact of the changes on children's learning and development? How has being involved in the programme made a difference for children in your nursery?

The Maths Champions programme has led to significant changes in our environment and the resources available to children. As a result, we have seen a noticeable increase in children's engagement in open-ended play, which has, in turn, enhanced their use of mathematical language and overall communication. Children are now engaging in richer conversations with both their peers and staff, deepening their understanding through meaningful interactions.

The introduction of loose parts has had a particularly positive impact on children's confidence. Some of our more reserved children have been especially intrigued by these new resources, engaging in independent play with less adult support than usual. It has been wonderful to see their confidence grow daily as they share ideas, make suggestions, and become increasingly animated while exploring and testing their thinking. With a wider range of loose parts available, children are naturally working more collaboratively.

For families

What has been the impact of the changes on families? How has being involved in the programme made a difference for families whose children attend your nursery?

Parents have shared that they now recognise the value of simple, everyday activities in supporting their children's maths learning at home. From singing rhymes and counting out snacks to discussing patterns on clothing, they appreciate how these small actions can make a big impact on their child's mathematical development. This was done by inviting parent in to see how we deliver maths inputs during our 'watch us while we work' workshop.

For staff

How has being involved in the programme made a difference to your staff team/individual practitioners? What has been the impact on their practice?

Staff have gained a wealth of knowledge from the training we delivered. Through sharing ideas and discussing best practices, they have developed greater confidence in embedding maths into everyday learning. My deputy Maths Champion and I have observed this first hand, especially in staff members who were previously less confident. We have seen them take a much more active role in supporting and extending children's learning and asking purposeful open-ended questions.

These staff members have openly shared that before the Maths Champions programme, they felt anxious about teaching maths and lacked confidence in assessing children's learning. Staff feel comfortable seeking support and ask questions to enhance their practice. Overall, staff confidence has increased significantly across the setting.

For the Maths Champion and Deputy Maths Champion

How has the programme helped you as Maths Champion and Deputy Maths Champion to develop your own practice? What has been the impact on your practice?

As the Maths Champion and Deputy Maths Champion, the programme has provided us with access to a wide range of CPD opportunities that have both inspired us and deepened our understanding of early maths. Having readily available resources to access whenever needed, along with the reassurance of support from our Champions Early Years Adviser, kept us motivated and on track throughout the process.

The online training was particularly valuable, giving us a greater insight into the key mathematical concept children need to develop a strong foundation. This learning has not only strengthened our own practice but will also continue to benefit countless children who come through our doors.

For the setting

What has been the impact on your environment?

Since joining the Maths Champions programme, maths has become much more prominent in our nursery, and the children are clearly benefiting from this, as seen through observations and their progress when completing half termly assessments.

We now have a wide range of new resources available to support maths learning throughout the nursery, including measuring tapes, sand timers, clocks, scales number lines, and more. These resources were introduced following an audit of our environment, and we are committed to continuously seeking out new and engaging ways for the environment to further support children's mathematical development.

Next steps

What further improvements might you make and how will you continue to monitor the quality of maths opportunities within the setting?

Our next step is to further develop the range of resources available for outdoor use, both on a large and small scale, with a focus on creating more maths-related opportunities. We are currently auditing our outdoor provision and working on a plan to enhance it.

Additionally, we will continue to have a designated maths lead in each room, supporting them in researching and implementing new ideas to benefit both the children and staff in this area.