

Maths Champions Case Study

Champion: Liz Adie

Setting: Cale Green Primary School

INTENT	
Introduction	
Our setting is a nurturing and inclusive Nursery environment, welcoming up to 20 children at a time on both full-time and part-time bases. At any one time, up to three dedicated members of staff are present, each deeply committed to providing high-quality learning experiences for the children. This case study follows our journey through the Maths Champions programme to enhance mathematical understanding for both children and staff within our Nursery. I decided this programme was a great way to bring the team together to focus on a key aspect of learning in the EYFS. All staff engaged wholeheartedly in the programme, recognising the importance of building a strong mathematical foundation in early childhood and the value of professional growth.	
How did you decide what to do?	
The central aim of our involvement in the programme was to improve staff confidence, knowledge, and active involvement in planning and delivering mathematical experiences. My deputy champion and I wanted to: • Build a consistent understanding of early mathematical development across the team. • Ensure that provision for mathematical learning was of high quality and accessible throughout the setting. • Empower staff to observe, assess, and plan for children's mathematical next steps with greater insight and creativity.	
IMPLEMENTATION	
What did you change or implement?	
To achieve our goals, we took a reflective approach that involved coaching, collaborative planning, and consistent review. Staff Confidence and Provision Audits At the start of the programme, staff completed confidence surveys related to their mathematical understanding, observation, and planning. These were complemented by provision surveys to evaluate the availability and quality of mathematical opportunities within the environment. The results of these audits led to action planning which was co-developed and regularly reviewed by all staff. This ensured that our goals remained focused, visible, and manageable. Targets included increasing the use of open-ended, natural and 'found' resources, identifying key mathematical vocabulary, and creating more opportunities for spontaneous and independent mathematical exploration. Coaching and Collaborative Planning Coaching sessions were an important part of the programme. Despite the challenges of staff changes and limited time, I prioritised ongoing 1:1 and group discussions, supported staff in identifying gaps in provision, embedding mathematical thinking into daily routines, and planning activities tailored to the children's interests and	

developmental stages. Staff were able to observe me modelling activity planning and teaching, as well as be observed and receive constructive feedback.

Examples of successful changes included:

- Introducing mathematical provocations in role-play areas (e.g. adding scales, measuring tapes, and real coins).
- Using outdoor spaces for number hunts, pattern-making with natural objects, and measuring activities during mud kitchen and water play.
- Integrating maths into stories and songs, with a renewed emphasis on mathematical language.
- Engaging in daily professional conversations more readily to identify learning opportunities and share the outcomes with families.

IMPACT

The success and benefit of what you did:

For children:

Children's Mathematical Engagement

Children now demonstrate **high levels of involvement** in mathematical activities. They are more confident to explore concepts like counting, sorting, measuring, and comparing. Practitioners reported seeing children initiate mathematical conversations during free play and use newly introduced resources independently and creatively.

Examples include:

- A small group of children measuring each other with string and comparing lengths.
- Children spontaneously creating patterns with loose parts during play.
- A child independently using a number line and cars, recording how far his cars travelled and comparing his score with those of his peers.

For families:

An increased understanding of the key aspects of learning in Mathematical development during the Nursery Year.

As a result of us sharing the children's learning and making it visible through open door sessions and on our online learning journal platform, families now have an increased understanding of the key concepts we teach and of the age-related expectations in Maths. Previously, we had not specifically focused on Mathematical development, but many of our families appreciated joining in with the fun activities and taking some of them home to try as a family.

For staff

Staff Confidence and Practice

Staff reported a **notable increase in confidence** when planning and facilitating mathematical learning. There was a shared language around maths and a greater understanding of progression and developmental stages. They felt empowered to:

- Identify and respond to children's next steps more accurately.
- Provide **intentional and well-resourced activities** that extended children's thinking.
- Use everyday moments as rich opportunities for mathematical learning.

One practitioner shared, *"Before, I would avoid maths-focused activities because I wasn't sure if I was doing it right. Now, I feel excited to create those moments and see how much the children enjoy them."*

For the Maths Champion and Deputy Maths Champion

This programme has had a **transformational effect** on both the children and the team. Through our collaborative coaching, reflective practice, and consistent action planning, the setting now offers a richer, more confident, and more cohesive approach to mathematical learning. The children are thriving in an environment where maths is not a standalone subject but a natural, integrated, and enjoyable part of their everyday experiences. This is as a result of our commitment to improvement and dedication to the programme. We were already a strong partnership, but the focus of the programme strengthened us further, for the benefit of all.

For the setting

All staff are now making intentional choices about how to promote mathematical opportunities – both within routines and as stand-alone activities, indoors and outdoors. Our provision is small and constantly evolving, so we draw upon what we have learned through the programme in setting-up provocations and learning spaces which support children in ‘stock-checking,’ mark-making, counting, using the cardinal principle, seeing numerals linked with quantities, constructing, patterning and measuring.

Next steps

My aim as EYFS leader, is to ensure that all the good work in developing staff confidence, amazing learning opportunities with appropriate resources and a learning environment which focuses on developing key skills in Maths in the Nursery, must continue in Reception. Some of my staff also work in the Reception class and so their experiences are already filtering through. I will encourage staff to share their experiences with the Reception teachers and invite the Reception team to explore our learning environment as a starting point to ensuring consistency is achieved across the EYFS.