

Maths Champions Case Study

Champion: Louise Moores

Setting: Breckon Hill 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> In September 2023 I was moved into Nursery after many years of working in Year 1, Reception and with children with SEND. I knew I wanted to make significant changes to the way the Nursery was running and wanted to do the best for the children. I had staff who had recent experience in Nursery and were at first a little worried about the scale of the changes I wanted to make. They were all excellent Nursery practitioners but seemed to be lacking in confidence in some areas, especially maths. We are a school Nursery with 39 places both morning and afternoon. We don't currently offer 30 hours. The children join us just after their third birthday and most move into our main school Reception class. We are located in a high area of deprivation with significant mobility. Most of our children join us well below age related expectations and we also have a significant number (around 75%) EAL. This January we have also taken on 5 2-year-olds so changes are being implemented again. The Maths Champions programme allowed me to focus on areas of priority and make the changes that were likely to have the most impact. I could back up my strategy with research and deliver training to staff to improve confidence and help them to see the amount of good work they were already doing. I was designated Maths Champion as I am the lead teacher in Nursery and the EYFS leader was the Deputy so that she had a good oversight about what was happening in the setting.
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> The learning environment audit highlighted that we needed to look really carefully at the maths resources available to the children. As a result of the online training modules, I made a list of books related to maths and asked the maths leader if we could order these for Nursery and Reception. These books are in the maths area of the classroom and also in the reading area and library for the children to access freely. We also looked at the maths resources we had in the setting and made them more accessible to the children. We felt that our outdoor area in particular needed a refresh and invested in lots of different size containers for the mud kitchen, put large numerals outside and added things like large foam dice. Simple changes have really got the children using math language much more and enjoying engaging with maths in the provision. The use of ICT was also an area the audit highlighted and we have sourced old phones, keyboards and calculators which the children enjoy using. The staff audit made me consider what the staff already know about developing children's mathematical abilities. We did several training sessions and started with what they already do. A particular area they identified as having low confidence was shape. We spent some time as a team looking at the school maths policy and aligning our vocabulary. The staff seemed to really lack confidence in their ability to support maths in the setting and I really felt I needed to build their confidence and make them notice how much they already do. The instructional coaching training really helped with this.
IMPLEMENTATION
What did you change or implement?

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?

The biggest positive change had been in more carefully considering the resources in each provision area and making more links to maths and using mathematical language more regularly in the provision areas and free play. We have also been completing Elklan training in the setting and linked this to Maths Champions by looking at the focus vocabulary in each provision area and making sure we focused particularly on maths. This vocabulary is displayed in the provision areas and staff regularly refer to it to ensure they are including this in their practice. As a result the children are using mathematical language more in their play and have had good language models to do this. The confidence of both the staff and the children has grown a lot. A few simple changes to the daily routine and environment have made a big impact.

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 profile of maths and mathematical language has been raised in the setting. The children are interested in mathematical concepts and problems and have the equipment and language to engage in this. I have some children who have developed a fascination with the maths equipment available and are already subitising up to 10 and with practical objects are starting to add and subtract. The children see maths as fun and are excited by it and being involved in this programme has really made us focus in on what will work and how to support children's curiosity with maths.

Previously, some staff felt they were only doing maths in a small focused group and a very controlled activity. This was really boring and putting a ceiling on the children's learning. Now, children have the opportunity to explore in their own time and the staff are becoming skilled at seeing how maths can be integrated into play as something that we do all the time, everyday.

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?

We've tried to put more photographs of children engaged with maths on their Seesaw pages. Not all of our families engage with this but we are encouraging them. When we learn number nursery rhymes we are attaching a video clip of the rhyme as many of our parents are not familiar with these.

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?

The confidence of the staff had definitely grown throughout the programme. They were already very skilled at supporting children with maths but we've had a big shift away from a culture of small focused group work to really making sure that maths is a focus of everything we do. We've embedded a routine that involves daily counting for real life reasons like, how many children are in this group and how many toothbrushes we need etc. The staff can see the rationale behind these repetitive routines and the benefit that they have to the children's learning. They can also see the progress the children are making and have a good understanding of how to support the children with this. They can really see the value of high quality interactions between them and the children. They are also thinking of ways to enhance provision to include mathematical equipment or ways to encourage mathematical language.

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?

I was quite new to Nursery when I started the programme and I had lots of things that I wanted to change. Completing the training and the audits has really supported me to ensure that these changes are well thought out and are most beneficial to the children. The courses at the beginning gave me some ideas to implement in the setting either as part of the daily routine or resources for the provision areas. It's made me really consider the maths aspect of every provision area and raise the profile of maths with the staff and the children. It's also given me the confidence and evidence to say what we do and why we do it that way.

For the setting

What has been the impact on your environment?

In addition to a stand-alone maths provision area, we have integrated maths in many other areas of the setting through the resources available there. I feel that the setting is enabling the children to do more maths in their play. The shadowing of resources in the setting and the use of 'tidy up time' as a maths activity has given value to every aspect of the Nursery day and has really supported the children and staff to ensure the environment is tidy and welcoming.

Next steps

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

When we set up a new provision area we will be more thoughtful in the resources that we include to ensure that there are opportunities for children to investigate maths based problems. We are currently developing outdoor provision and would like to look at expanding the maths we do outside in the next term. I think using the environment and staff confidence audits at the beginning of every year will support us to maintain the focus on maths.