

Maths Champions Case Study

Champion: Lindsey Smith

Setting: Howletch and Shotton Primary Childcare Ltd

INTENT	
Introduction	<i>A little bit about your setting, why you joined the programme and what you wanted to achieve from it.</i>
	We are a private day care setting based within East Durham. We have a high level of SEND and have a large number of children in receipt of EYPP. We are a 40-place nursery, with 12 0-2's and 28 2-5's each session. We operate Monday to Friday 8am until 6pm, 51 weeks of the year. We have 14 staff members who work within our setting, and we have a range of ages from 19 up to 62. We have a lot of experienced staff to support and share their knowledge with our newer younger staff members. I joined this programme as maths was one of our areas of weakness, highlighted in an OFSTED inspection in 2018. The programme seemed to incorporate activities which we already carried out or had the equipment to do, but gave us a mathematical focus. In undertaking this training, I hope to improve mathematical achievement across all ages within our 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 audits highlighted a lack of staff confidence within their own mathematical ability. We are a female team, and during discussions in staff meetings we had all had similar negative experiences with maths at school, particularly at GCSE level, which had impacted our confidence in our own abilities and knowledge. So, this became my focus, imparting knowledge I gained from the training sessions, and encouraging and supporting staff in implementing the activities. Once they realised the activities were focused on routines and activities we already have within the setting, I could see them beginning to feel a little easier about delivering maths teaching. I used my knowledge gained from the maths champion training to share with the staff team through staff meetings and room meetings. The core activities and resources section of the course have proven to be invaluable and now form a part of our continuous provision.
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>
	As part of the Maths Champion programme, my focus was on raising staff confidence in their own mathematical ability. Through sharing training and knowledge, which I gained as part of this course I was able to add to the staff team's knowledge of mathematical development in children. I planned a series of staff meetings and team meetings during which I shared the knowledge I had gained during training. I created a maths champion display displaying the main ideas of number sense, and an explanation and examples of what cardinality, comparison, subitising, patterns, measure, counting etc might look like in action. I spent time within both rooms, working alongside the staff team as they implemented the activities, and monitoring the changes to the children's mathematical knowledge. I used observations of the children to ascertain how their development has change, along with our termly assessments and progress summaries.

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?

Through my time within the Maths Champion programme, I have noticed a big change to the children's mathematical knowledge. Because staff are more confident in teaching maths, the children's confidence has grown greatly and they are willing to engage in challenge involving maths. The children have begun to subitise, are understanding that numbers are made up of smaller numbers and when observing in the rooms, mathematical language can be heard from both staff and children. The older children are counting past 20 and can use language of large numbers including one hundred, and they understand that this is a very large number. We recently had a lecturer in to observe one of our college students completing an assessed activity, and she commented on the knowledge of our children, saying she was impressed with how much maths knowledge the children have.

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 have been sharing our maths activities, and knowledge on mathematical development on our parents' platform. The parents can see the activities in action, and can implement them at home. The parents' comments that have come back have been positive. The parents are impressed with the difference they can see in the mathematical knowledge of their children. They have commented that their children are requesting to count, to explore shape, and are pointing out patterns within the environment when they are put at the shops or at a park etc.

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 main impact for staff has been the confidence of each individual staff member around the teaching of maths, how to approach it and what types of activities to carry out to meet different goals around maths development. They have a deeper understanding of mathematical development within young children and are not afraid to implement maths activities with all ages. The main improvement has been within the 0-2 room staff. At first, they couldn't see how they could practically fit the activities into the daily routine, but with myself working with them to implement they quickly realised how easy it was, and how there wasn't really any additional time needed. The activities can be implemented within the daily routine, and can be incorporated into the care routines of individual children.

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 feel I have a deeper understanding of the development of maths within young children, and my own fears and anxieties which stemmed from school have begun to fade away as I now realise that the activities are easy to implement and there are no complexities surrounding early years maths. I feel better equipped to support the staff team and support the mathematical development of all current and future children within my setting.

For the setting

What has been the impact on your environment?

Within the environment of both rooms, there have been significant changes, incorporating maths. Within the 2 to 5 room, I have set up a maths area, which houses equipment such as shapes, tape measures, calculators, large dice, dominoes, number lines, pattern making, abacus, and staff are using this area to effectively support children's development. Maths has become a part of our daily group time routines, with our 2-year red group and 3–5-year blue group, focusing on maths as a part of this routine. We have incorporated the 0–2-year activities within our SEN green group time, with our main focus being on modelling mathematical language. In fact, as a result of this repetition, one of our non-verbal children has recently begun to count as they play, counting blocks as they stack them to make a tower.



Next steps

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

I will continue to incorporate maths activities and resources within both the indoor and outdoor environments, working with the staff team to ensure maths remains a focus. Future resources will be purchased with maths in mind and we will continue to audit our environment with a maths focus. I will ensure the implementation of the core maths activities continues and ensure it remains a part of our continuous provision.