

Maths Champions Case Study

Champion: Charlotte Callaway

Setting: Duchy Preschool

INTENT
Introduction <i>A little bit about your setting, why you joined the programme and what you wanted to achieve from it.</i>
I was designated as part of my supervision last year the role of supporting staff to improve aspects of the curriculum to improve children's outcomes. Our preschool takes children from two years to five years, and we also run a before and after school club which is open to primary aged children at our feeder primary school. We are a little town and the only preschool with the exception of one childminder in the town. Looking at our current cohort of children we identified that baseline assessments were below age-related expectations. From all the current research and from looking at children born during the Covid Pandemic, children have a significant gaps in their learning in all areas. The Maths Champions programme was an ideal opportunity for the setting to ensure that we could help close the gap for these children in this cohort and beyond. We have found that maths is an area that some of the staff worry about due to their own knowledge and this is a way to embrace and share new activities whilst exploring that maths is fun and not as scary as they think.
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>
Firstly, I completed the three online training courses so that I was able to understand the information and make sure that I understood all the terminology. From this I then led an introduction session to staff during a staff meeting in which I could raise some of the points made and as a team explain why we had decided to access the programme. From the staff meeting we then completed the staff audits and the learning environment audit to see how this mirrored what staff had said in the meetings. Looking at the environment we realised that we had a lot of resources but that some of the ideas had not been followed through such as having a numbered parking area. So, this was one of the first things we did straightaway and made sure that anything else that we purchased was put out and staff knew where to find them.
IMPLEMENTATION
What did you change or implement? <i>Outline a positive change, or changes, which 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>

From the audits the first thing we changed was the access to resources. We made sure that we had a maths resource area with all the items. This was because we already had designated areas for art, writing and mark making but maths seemed to be forgotten.

From the staff audit it was seen that staff was more apprehensive with maths, so we had a staff training session, and I created a resources folder using the resources section from the module and then led a training talk. Through staff looking at this we all discussed what we could change and add so that they could feed and add their own ideas. Lots of ideas developed around adding and enhancing to the areas we already had such as cooking books or visual recipe cards in the mud kitchen. We also added in the building block/construction area a toolbox with measuring tapes and instructions so that they had real life instances for where and why we use maths. The instructions were simple and focused on a specific objective, for example, how to make a tower in a particular sequence.

After a few months we then re-visited the audits and found that children were often extending their play, and the language used was more detailed from 'I have a tower' to 'my towers the tallest'... 'I have 6 blocks'... 'look the same.'

Also, reading staff observations showed that they were more confident in using the terminology to assess children's learning and showed great knowledge in how best to support the children. Then then used this knowledge to plan for future observations and activities.

Staff were invited to participate in the Early Years Development programme and all were very confident in discussing the maths elements and freely talking in the seminars. When reflecting in staff meetings they felt that they had the confidence to discuss maths as they were more confident in their own knowledge and had extended this further looking into the links and social media groups mentioned.

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 this course it has shown us that we needed to refresh and add to the resources that we already had. Children's confidence in trying the resources from the old weight scales to measuring tapes is amazing, we have seen the children flourish with a willingness to explore and learn. The language they have used has been more detailed and they are noticing more in the environment such as numerals on the tape and on the weights. These discussions are lovely to hear, and lots are initiated by the children. For instance, when they wanted to know what temperature to cook the cakes in the mud kitchen, they looked for the number and realised that numbers have a purpose.

Outside the children are really enjoying the number line and the car park and point it out to parents/carers as they enter and leave the setting.

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 made sure that we include in our curriculum newsletter a section on how to support your child learning at home and using some of the ideas from the course parents have feed this back through their online observations. We are going to continue this and share with parents/carers in keyworker meetings simple ideas that they can support as through parent discussions it was an area that most adults felt less confident.

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 are more aware of the language they are using and also the importance of incorporating maths into everyday language. I have observed this, for example during snack and when lining up they talk about how many plates/ children there are and also about how heavy the fruits are etc. This language has cascaded, and the children have started to talk about whether they have a long or short breadstick and the shapes of the cracker. Staff are now looking at when they plan activities how they can incorporate not just literacy but maths. For instance, during children's interests in minibeasts a staff member decided to incorporate the story 'Spinderella' written by Julia Donladson. They considered making numbers as a focus as they were looking at observations and realised that counting and numerals was an area in which the cohort needed more experience of. This was amazing to observe as staff were thinking 'outside the box' and felt comfortable to extend the children's maths learning.

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 maths champion and deputy champion it has really heightened my own understanding of maths and consider that just like everything in a child's development, we need to ensure the foundations/base of their learning is solid before start looking at numerals etc.
I personally really enjoyed the maths resources sections and also to see how the progression is with real play examples to further enhance my understanding.
I have loved the course and really enjoyed looking at maths with new ideas and I want to continue my journey and have joined several maths groups online to support this.

For the setting

What has been the impact on your environment?

Maths has now got a prominent place within our setting and a dedicated area in the older preschool room. By implementing a few little things such as the numbers for the cars/trikes to be parked outside the language used by everyone has increased.
By looking at how we can enhance areas we have found children using mathematical language throughout from the measuring tapes in the building blocks area to the scales in the role kitchen. This has rejuvenated staff and the areas that all felt were becoming drab and repetitive.



Next steps

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

Through this course staff and myself are feeling more confident and secure in our own knowledge in maths and have taken this further by reading up on journals or social media groups to continue my knowledge and understanding of how to further enhance and support children. I also want to continue to add to the maths idea/ portfolio I have started in each room. In these I want to add activities that as a setting we have recorded, observed and planned so that staff can feel proud and supported in their learning.

As part of working with parents we are looking into holding some mornings in which we showcase how we can further enhance their child's learning in maths with everyday resources. We want to ensure that we reach the most parent/careers and when its most convenient for them.

We will continue to do the maths audits termly so that we can see where we still need to improve or if areas have become stale and need a refresh. This will feed into the observations that are recorded and the planning that is recorded. In planning meetings we can continue to share any courses that staff have been on and showcase one of their activities that the children loved.