Maths Champions Case Study

Champion: Dianne Griffin **Setting: Broadstone Christian Nursery**

INTENT

Introduction

A little bit about your setting, why you joined the programme and what you wanted to achieve from it.

Broadstone Christian Nursery caters for sixteen children a session, aged two to four years. The Nursery is a ground level building with immediate access to the outdoor environment. We have thirty one children and seven practitioners in total. Open from 8 until 6pm for 48 weeks a year.

The Maths Champion programme was suggested by the Owner as we have been focusing on the prime areas of leaning, especially since Covid. The thought was that this would be a good opportunity to reflect and evaluate our practise involving the whole team. We had heard that children attending settings who were involved in the Maths Champion programme showed three months additional progress in both maths and language development.

As someone who had struggled with maths during school it was only when I had to complete Maths GSCE as part of my Foundation Degree that I found an Adult Learning Tutor who changed my view of the subject. With his support it started to make sense. I've wanted to give the best start to the children and support practitioners too.

How did you decide what to do?

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?

After talking with the other practitioners it became obvious that we all had concerns over our own mathematical abilities and that unlike language development we didn't have fun with maths. The Deputy Maths Champion and myself both completed the online courses Developing Mathematical Confidence in the Early Years and Developing Mathematical Thinking in the Early Years so that we were aware of current terminology and information.

A staff training morning provided us with the opportunity to use the excellent Induction presentation and talk about the Glossary of key terms handout. We were able to identify resources we had available in the setting to promote these areas so that newer practitioners were aware. Staff completed the confidence audits and this showed we covered the entire criteria with some grading as 'well embedded' in areas and others 'not yet.' The learning environment audit was completed by the Owner, Maths Champion and Deputy Maths Champion and this showed criteria grading of 'well embedded' to 'working towards a consistent environment'

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?

We each chose a core activity to introduce and these were rotated so that everyone completed them with different groups of children. Each practitioner reviewed the impact of the activity on a feedback sheet and how it had increased children's mathematical knowledge. This was returned to the Maths Champion so it could be reviewed that day. Being a small team, three practitioners working each session, we were able to have informal chats on the day about whether activities had met the main focus, whether practitioners needed any further support and if the activity needed to be modified for our setting.

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?

As a result of the Maths Champion programme the children are showing more mathematical awareness:

- Printing with 3d shapes:
  "2d shapes are flat"
  Names cube and cylinder.
  "The prism has a rectangle on this side and a triangle on this side."

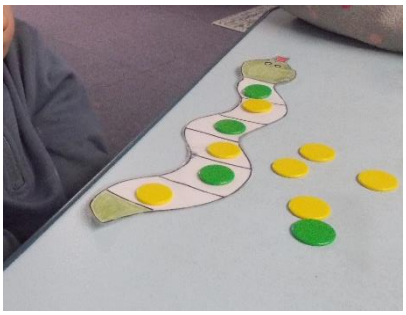
- Matching shape on top of screw with nut. Counting sides with practitioner and naming independently "triangle"
  Using informal mathematical language "This one's pointy"

- Children building towers with Duplo and practitioner saying she is going to make a pattern. Children spontaneously take up this activity and make their own. One child deciding to make an ABCABC pattern with nine bricks.

- Children observed using natural materials to make ABAB patterns.

- Children choosing song card Pat a cake. Completing simple pattern (clap and pat) Younger children also following pattern at a slower rate imitating practitioner who is giving verbal instruction as well

As a result of the input from all the practitioners our Children's Observational assessment has shown that children have developed their mathematical skills and this has been noticeable for all the children at 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?*
HomeLink packs have been extended for families to borrow and carry out activities at home with their children but this is still an area that we would like to promote more.
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 core activities enabled us to reflect on our practice showing that some areas were already embedded and providing us with a confidence boost that we were meeting some criteria. But it also helped us identify where areas needed improving and how to achieve better practise. By using the core activities with the whole team it ensured that the learning opportunities were embedded in our practise and I noticed these were transferred into other activities. Practitioners became more aware of the language to use and took advantage of spontaneous opportunities to develop mathematical learning. This highlighted the previous focus on identifying numerals rather than the concepts of maths. Carrying out the learning audit made us stop and reflect on the resources available both indoors and outdoors and whether the practitioners are using the appropriate mathematical language. The latter has seen a change when it comes specifically to shape and promoting the use of formal (curved, straight, corners) and informal language (pointy, wiggly) instead of primarily focusing on the common shape names. Practitioners completed the 'concluding assessment' and all showed an improvement in their grading. They appear more confident in introducing mathematical concepts.
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?*
By completing the Maths Champion programme I would like to continue to research the subject and implement more activities within the setting.
For the setting *What has been the impact on your environment?*
The concluding assessment for the learning environment audit showed that where it stated 'All staff..' this has improved and become either 'In place' or 'well embedded.'

Next steps *What further improvements might you make and how will you continue to monitor the quality of maths opportunities within the setting?*
• The Owner and Maths Champion are already discussing how to promote Maths skills more at home and this may take the form of a termly ideas sheet. To extend HomeLink folders with resources for families to borrow and explanation leaflets • Practitioners may be interested in completing NDNA online Maths courses Let's look at Maths: Number, Let's look at Maths: Shape, Space and Measure, Making Maths Matter, Mini Maths Explorers-Outdoor Challenge. • Sharing resource books I have found useful such as 50 Outdoor number activities on a budget by Martin Williams