



National Day Nurseries Association

Maths Champions Case Study:

Childminders and preschool

Val Taylor – EYP and LA Early Years Workforce & Professional Standards Officer

Introduction

I took part in this project as a Maths Champion myself to enable me to be able to support four of my childminders in the local area, and a pre-school that doesn't have an Early Years Professional (EYP) so would not have been able to participate in the project without support from me.

I have also been able to provide additional support to other settings in the local authority area that are undertaking the Maths Champion project themselves through my role as Early Years Workforce & Professional Standards Officer.

Highlights and lowlights of the project:

As Maths Champion for five different early years providers, a lot of my time was initially spent reassuring different practitioners regarding their own confidence levels with maths in the Early Years. I had some that were frightened of maths and were actually avoiding it in some areas when working with children due to their low confidence levels.

We initially talked openly about 'teaching' maths and that their interactions with their children, questions they asked, and accessible maths resources and games in the environment were key to success in this area. This helped to raise their confidence levels and supported them to evaluate their practice and look at where they could improve using the audit tools.

Impact of the project:

The practitioners

The project supported the different providers to evaluate what they did with the children in regards to providing maths opportunities, and in particular the practitioners' understanding of how to support children's knowledge of positional language has increased. There is now an increased use of timers, weighing scales, tape measures, rulers and practitioners are actually developing inventories of what they have and developing an awareness of resources available and organising them better so they are accessible to the children all the time. This has included "measuring baskets" that are accessible to the children containing tape measures, pencils, string, rope, rulers height charts and notebooks to enable children to master the skill of measuring different objects themselves. The adult interactions have been able to role model this learning opportunity which has then enabled children to practise this skills independently through their own interests.

One of the childminders has told me that they are now more aware of maths happening naturally with the children and how to extend the learning to benefit their development, e.g. when we have sandwiches for lunch we have been looking at the different shapes and sizes of the sandwiches, including four squares or two rectangular sandwiches, long/short, different shaped fruits, big/little and exploring and describing textures.

Another childminder I have been working with had little confidence with their maths, but now enjoys using a height chart with the children and confidently uses positional language. They have also realised patterns and sorting is maths as well as number and calculating and this has enabled their observations of maths to be more comprehensive, therefore planning for children's development in this

area has been increased and children's outcomes for maths will be developed further in this area.

The preschool commented that they found the discussion throughout the team that developed from doing the initial audit tools together most beneficial. They have now allocated a place at their regular team meetings to discuss maths enhancements further which enables the whole team to remain focused and involved in this project. The team at the preschool stated that they are now more confident in their approach, as to begin with their practitioners didn't realise how much they used maths in play already and felt they did not have the skills needed to be 'teaching maths', where in fact they have and have been using them all along without realisation. Their confidence in this area has improved considerably.

The environment

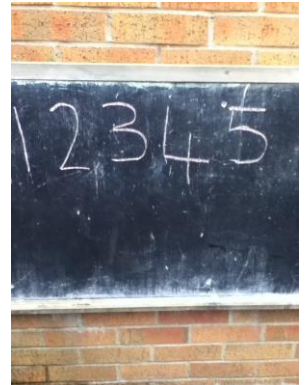
One childminder told me that the Maths Champion project had encouraged them to sort through their current resources and develop a more comprehensive inventory. They said they were reminded of all of the resources they already had (and in some cases had forgotten about) and it encouraged them to develop collections and baskets of resources that could be used by the children for a specific purpose. Another looked at shape, space and measure in particular and added timers and scales to filling and pouring and other activity centres. This has particularly supported and developed the use of more mathematical language and reasoning amongst the children they care for.

One childminder I have been working with was quite confident in maths already, however she now not only displays 2D shapes for children to see, she also displays 3D shape posters. She has also labelled blocks as cuboids and cubes to extend this learning further. The four year old child she cares for has now developed 3D language through this play opportunity that they not have done previously. They

love talking about the 3D shapes and the childminder supports this further with boxes, spheres and tubes for the children to play freely with, sort and talk about.



This preschool is using number opportunities outside in different ways and this is benefitting the children in their development. This includes dice, solid numbers and areas for children to write, copy and mark make their own numbers



The preschool have also increased the opportunities for games that support different mathematical skills and language, including more board, counting and sorting games.

This has enabled children to be engaged in their learning and count for purpose within their games.



The children and their development

I am confident that the assessment of children's mathematical development in the providers I have supported through this project will be more accurate and precise. This is due to the heightened awareness the practitioners now have of where maths is occurring and how to extend this further. The opportunities for children to access mathematical opportunities in these settings has increased since they started on the project, and are likely to continue to as they access more of the resources available.

A couple of the providers stated that they found the resources available through the project very useful for their setting, especially the ones that focused on child's interests or chosen resources, e.g. one childminder found the Possible Lines of Development (PLODs) for the dinosaurs very useful for a child in their care. They were then able to use the dinosaur resources and extend their mathematical learning using the different creatures and create new resources to support development further. This included a dinosaur number line to engage the children in counting up to 20 with their favourite toys. We also used the resources in measuring, sorting, positional language and problem solving.

The preschool also found the theme of dinosaurs captured the children's attention in maths. They stated that they use more spontaneous maths now, by extending whatever the children are interested in. There were a group of boys playing with dinosaurs so the practitioners joined the group, talked about the size and shape of the dinosaurs as they would have on previous occasions, but then extended and enhanced the activity promoting more spontaneous language as we talked about more/less/a lot.

The children and the practitioners then went on to build the correct sized homes for each dinosaur after using a tape measure to work out the box size needed. This led on to making sets by putting the smallest/largest together and making marks that represent numbers, as the children told me they needed house numbers on each box. Some of this would probably happened naturally, but with a maths focus in mind the activity was developed further to extend their learning in this area and it engaged the boys more than usual which showed when they returned to it the next day.

Future plans after the project

The preschool tell me that the project has led to three members of staff including the manager, enrolling as students to complete a

functional skill course in maths. If this is successful the manager will also consider a way to further improve this area of her own development.

One childminder tells me that she will continue to revisit the audits to evaluate the progress made and refocus on new objectives. They will continue to access more resources and at Easter when they review their children's progress forms she hopes to see an impact on children's learning since being part of the Maths Champion project.

They also have a focussed improvement plan in place around further supporting children's mathematical development and they are reviewing this on an ongoing basis to enable progress to be made. Part of this includes sharing photos and activities with parents to support home learning in this area.

Another of the childminding providers aims to develop further ICT opportunities around maths for the children they care for, provide more visual number signs and lines outside the setting to bring maths into the outdoor arena more and have more visual tools for size, shape and positional language.

As Maths Champion across a variety of settings we have been sharing ideas amongst ourselves as well and we have been able to demonstrate the different ideas. As such, my settings plan on implementing the "measuring basket" previously mentioned as this worked in one of the settings really well.