



Case Study; Numeracy is not just numbers

Numeracy is an integral part of children's everyday lives, with support and opportunities to explore mathematical concepts children can develop their exploration, curiosity, and communication skills.

In this Blog PACEY Cymru speaks to Eleri Williams who accessed three 'numeracy in early years' webinars facilitated by PACEY Cymru and tells us how the information shared has supported her practice and the experiences she now offers the children in her care.

Tell us about your setting

I registered as a childminder in 2024, as a bilingual provision, based in Ceredigion. I am registered with CIW (Care Inspectorate Wales) to care for children up to 12 years but currently provide care for children under the age of 6 years. I chose the location of my property carefully as I wanted a rural setting with the countryside on my doorstep, so that we could utilise the environment in our everyday play and learning. I have a large outdoor area, which has a section for our ducks and chickens that the children love to help care for. I am also lucky that within the grounds there are a range of fruit trees where the children are encouraged to pick their own fruit for a snack.

What interested you in the numeracy in early years webinars?

As a newly registered childminder I am eager to develop in the role. Having read about the series of webinars that PACEY Cymru were offering in relation to early numeracy I realised that this was an area I would like to develop my understanding of further. The course description explained each session and I therefore decided it was exactly what I needed, as they would equip me with ideas and knowledge that I could use in my every day, home-based childcare practice.

The first session discussed exploring, sharing, sorting, and grouping through playful, practical activities. The second session focussed on the understanding of numeracy in everyday lives including outdoor learning experiences. The third session discussed the role of the engaging adult in relation to supporting early numeracy, providing inspiration on how to introduce young children to the world of numeracy through exploration, investigation, experimentation, and critical thinking.

How has this training influenced your practice?

As a newly registered childminder it is hard to know if what you are doing is right. After the training I felt reassured and informed. The discussions during the sessions enabled me to reflect on my current practice. It reminded me that there is more to numeracy than counting and number recognition. The training helped me identify aspects that were working well within my provision and provided a confidence boost as I was reassured that I was already incorporating lots of opportunities to develop early numeracy skills.

The discussions helped me understand my role as the enabling adult and in creating a numeracy rich environment, the importance of open-ended resources and mathematical tools such as tape measures and weighing scales. I now understand that by providing something that provokes interest, awe and wonder and giving children time to explore, allows them to develop

many numerical skills including decision making. It was shared with us of the need for children to learn by trial and error, having access to a range of resources to explore and incorporate as well as opportunities to plan and let children solve their own problems without an enabling adult imposing a solution. We discussed how we can scaffold children's play, by asking open ended questions, and including mathematical vocabulary to encourage the children to develop their foundational skills.

Since the training I am more aware of the questions I'm asking to scaffold the children's understanding, stepping back to allow time for them to be absorbed in their play and have uninterrupted time to explore and experiment. Already I can see the benefit of this in terms of concentration.

In addition, it has given me a greater awareness of numeracy in terms of the curriculum, the part it plays in the children's development; the importance of observation and knowing how to support children whilst also allowing them to pose and solve their own problems using everyday items and experiences, allowing them to work on developing key life skills. The course has emphasised the benefit of an inspiring and enriched environment, the need for a good understanding of each child's interests and that each child faces a different challenge, even when given the same experience.

I am also, now looking at the resources I have and the activities and experiences I provide in a new light. Taking time to think how I can incorporate a wider variety of play experiences to enhance children's numeracy skills as much as possible.

Christmas was an amazing opportunity to holistically incorporate mathematical vocabulary into our play. The children loved posting letters to Santa. I took this opportunity to expand on their skills by not only counting the letters, and recognising numbers on the letters, as I would have previously, instead I offered a range of letters to post. Children sorted and matched the letters, ordered by size, we talked about the positioning of the stamps, and took them to the post box to post to Santa. Even at the post box there was numerical vocabulary used; we talked about the height of the post box how they had to reach up high to post the letter. We talked about who was the tallest. Where do the letters go? On the post box or in the post box? We even looked at how they fit in the post box, what if the letters were too big? How could we get them in?



I have also provided the children with a variety of exploration trays. These included berries, dried fruits, fir tree branches, and ice cubes. Using these provided opportunities to compare, order, sort, and match items by size.



The sessions inspired me, and I look forward to incorporating the new ideas into our play. While I have many resources for small loose parts play, the idea of using Go kart tyres, old steering wheels and guttering to enhance the environment is such a fabulous idea. Go kart tyres are small enough for the children to roll, stack and organise and I will definitely be looking to include these in my outside area.

As a result of the training, I can see a wealth of opportunity for mathematical vocabulary development. It's been heartening to observe the children incorporating into their independent play, some of the new mathematical vocabulary I have introduced since attending the webinars. This shows that they have retained the information modelled and shared.

I am enthused to use the children's natural curiosity and fascinations to embed the essential foundational skills including sorting and classifying, understanding spatial awareness of themselves and shapes as well as recognising patterns, counting and understanding numbers. My outdoor area is perfect for using the children's love of nature and the outdoors to ignite their imagination and allow opportunities for learning and consolidating all of the skills covered in the sessions. For example, when we go out for walks in the autumn, we will continue to collect leaves and allow the children to sort, match by size, shape, and count. I can enhance their learning by creating problem solving scenarios which pose a challenge to each child and allow them to solve their individual challenges.

Would you have any top tips or suggestions for peers?

My top tip would be to look at each activity and experience and consider the wider numeracy skills that can come from it. Numeracy is not just numbers.

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