

Developing Counting at Banks Road Infant and Nursery School

A case study from Early Years



Overview

Nicki Pursglove is the EYFS Leader at Banks Road Infant and Nursery school. Nicki took part in East Midlands West maths hub Counting Project in 2017/18. This project greatly increased the quantity and quality of counting which took place in two Foundation stage 2 classes. She explained:

“The idea of the project was simple – to allow children more time and opportunity to physically count groups of objects. In practice, it made me realise how much time I used to devote to counting aloud and demonstrating counting rather than giving children the opportunity to count for themselves. I feel like I have a much clearer idea now of how to help children to develop their counting skills and love that it is embedded in meaningful play.”

The Counting Project at East Midlands West maths hub

The project aimed for practitioners to develop provision for counting in Early Years mathematics within their school/setting environment. It was intended that the children in the project settings would display higher levels of involvement in counting activities and communicate their counting strategies in a way that is observable by adults. It was hoped that project settings would develop practice underpinned by a clear knowledge of counting principles (particularly related to cardinality) and that setting practitioners would feel more confident in how to support children’s early counting.

What we did at Banks Road Infant and Nursery School

We were provided with a bank of counting collections resources - easy to open plastic containers filled with collections of ‘real’ objects rather than mathematical equipment. We split these between the two Foundation stage 2 classes and added to the collections by setting the children a homework which outlined the project and provided them with a container to fill to add to the collections.

We then timetabled twice weekly counting collections sessions. In these we presented the collections to the children and challenged them to count them in pairs. We allocated counting partners initially thinking that mixed ability would be a good way to support our less able mathematicians but found that children’s characteristics of learning and maturity had a much greater impact on whether a partnership worked so changed and encouraged children to work with a friend. Adults supported children to count the collections accurately.

Previously our maths sessions would have looked more like a traditional model of revise, teach, practice, apply but now it looks like practice, share ideas, practice, reflect, practice, evaluate.

What the children did...

Counted, counted and counted!

Added to the collections with objects from home as a homework set by practitioners as part of the project. This gave them ownership, they were very proud of their collections, and they had a real purpose for counting as they wanted to know what their friends had brought and how many they had.

Started using ten frames. The children hadn't used ten frames before this project but they have enthusiastically taken them on as a strategy to help them with their counting. They helped them to check their counting and to recognise patterns of objects as numbers without having to count them (subitising). We also love counting in tens now!

Children worked with a partner to count their collection. They were encouraged to have a look before they opened the box and estimate how many objects they thought might be inside. They then opened the box and counted the objects using laminated ten frames to support their counting. They were then encouraged to record their findings by mark making on whiteboards. Children have developed their own methods for recording how many and mark making has increased dramatically both in quantity and quality over the course of the project.

Two of the younger children took it in turns to place silicon cupcake cases on a ten frame, taking it in turns to add one of their pink or red cases. They noticed that the cupcakes made a pattern "red, pink, red, pink". They took it in turns to count as they added each case. This really helped them to slow down their oral counting, they had to think really carefully about which number they would say next and listen to their partner.

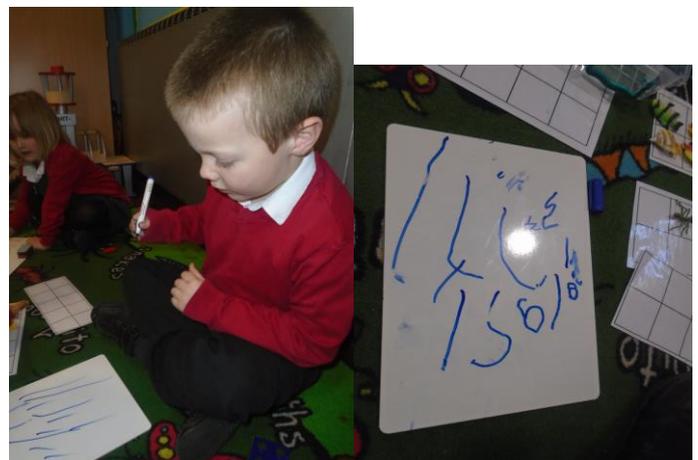
Two children played a game counting 8 lego bricks. Each time one child put a lego brick on the tower the other child drew a line on his whiteboard.

One child estimated how many ten frames they would need before they started counting 34 buttons. They got 3 and were delighted when they were all filled up and they had to go and get another one!

Summary and next steps

Banks Road learned specific knowledge about children's early counting skills. We also learnt about some of the strategies being used by key stage 1 to develop mathematical understanding and were able to incorporate these into our provision.

We are continuing to develop our counting collections by adding and changing the quantity and type of objects we are counting. We are currently making a selection of Spring and Easter collections using plastic flowers, seeds, beans, little chicks and mini Easter eggs. Our next step is to develop our maths 'daily dollop' to find way to develop our use of manipulatives.



"It has been really encouraging to see the positive impact of the counting collections on Children's mark making and fine motor skills as well as their concept of numbers." J Voce (class teacher)

If you are interested in engaging in similar work with **East Midlands West maths hub...**

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