

Developing practice

To develop our understanding of how to teach pattern, we used NCETM's 'typical progression chart' for pattern to assess six focus children (aged 3-4 years) on their understanding of what a pattern is. We assessed if they could continue, copy and make their own AB repeating pattern.



Most of the children could copy an AB colour pattern and some could create their own using shapes. We then planned next steps in pattern learning. Some children needed to look at pictures of patterns to recognise that it was something that was repeated, such as stripes on a zebra. Some children needed to understand that a pattern was not something that has an alternating element but that it has a 'unit of repeat'.



“Yellow, orange. It keeps repeating!”



Recognising that a pattern can be just one element that repeats: AAAA.

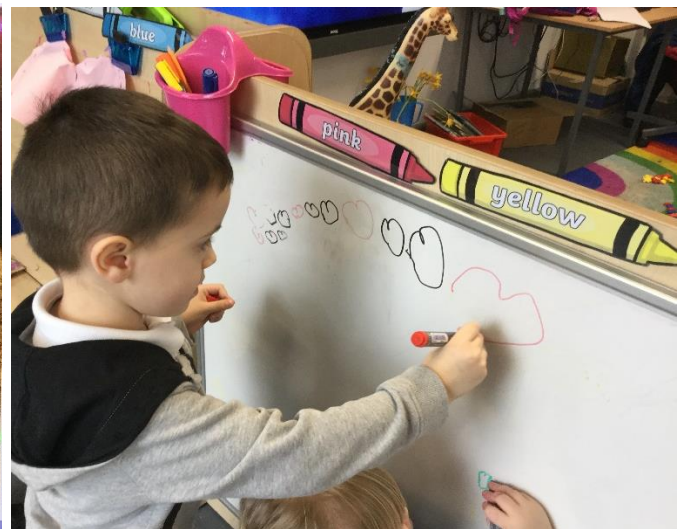
Working with each focus child individually allowed us to see the progression for each individual child, as not all of them followed the typical progression. Some children could copy and continue patterns but needed support to create their own pattern. Most children began to realise that a pattern could be based on the orientation too.



“It goes this way then this way then this way again then this way again”.

Continuous Provision

We looked at where the opportunities are in the environment and in our weekly planning for children to recognise and create patterns. We began to plan the teaching of pattern in to our daily routines, such as lining up as a 'boy, girl' pattern when getting ready to go outside, having pattern activities during Phonics session starters (using sounds and actions, 'clap, pat') and having a 'pattern of the week'. This allowed all children to have a weekly input on a different pattern so that they could then create it using resources and representations of their choice during continuous provision.



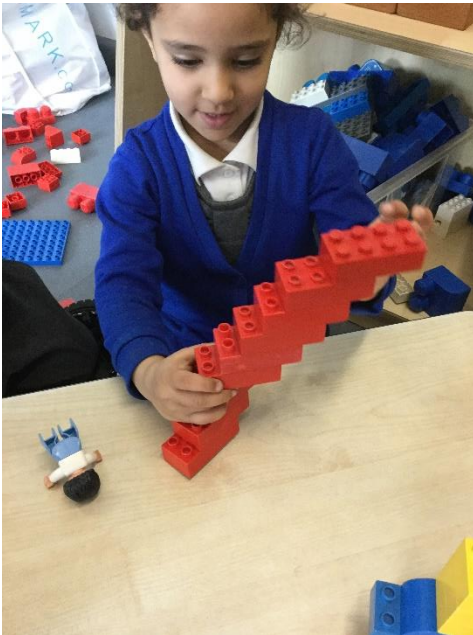
Spatial Patterns

We also introduced children to spatial patterns. For example, a cyclic pattern which can be created around an object using resources such as Cuisenaire rods and natural objects, such as pine cones and leaves.



Growing Patterns

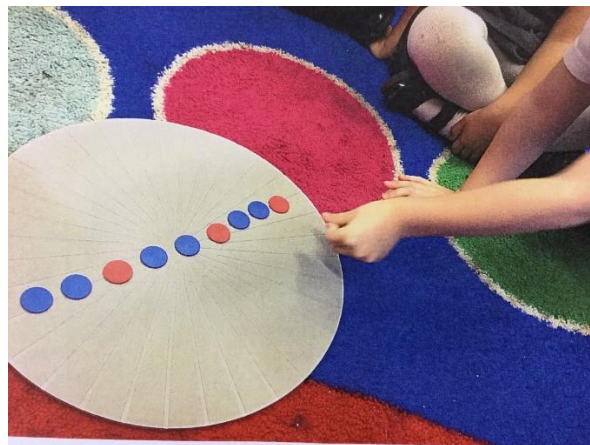
Some of the focus children have also created growing patterns using resources, such as foam bricks and Duplo lego, recognising that a sequence of elements that increases by a number each time, is also a pattern.



Spotting Errors

The children also began to spot errors in patterns, noticing when something had been added to an AB pattern and then fixing it by adding the C element throughout.

Along with noticing when something had been added to a pattern, children began to spot when something had been taken away from a pattern and could fix this. Teaching the children to do this, helped them to explain their own patterns and with recognising the unit of repeat.



“No it’s blue, blue, red. Got to put a blue here”.

Impact

The impact upon the children was that they could all continue, copy and create an AB pattern. They could say what the 'unit of repeat' was in their pattern and were recognising that patterns are created and can be represented in a variety of ways, not just with two coloured objects. They could spot errors in patterns and fix them, beginning to explain when they were not patterns. The children could link their pattern knowledge across the curriculum. For example, we focused on the story 'We're going on a Bear Hunt' and most children could retell the story with ease, recognising that the same part was repeating.

Maryam's learning

Maryam created AB and ABC patterns during continuous provision. When the teacher attempted to copy her pattern, Maryam spotted her error, corrected it and confidently explained why it was not a pattern.



Key message

The most important thing we learned about pattern is that it is everywhere and opportunities for recognising and creating patterns should be consistently available for children. We have realised how important the teaching of pattern is for children to make sense in maths. We believe it is the foundations for understanding key rules in maths, such as the number system and for children to begin use algebra; replacing A and B with different representations.