

The Mathematical Journey

Patterns

- copying the pattern by matching cubes one at a time
- copying by complete units eg. picking up a red and a blue cube together
- continuing the pattern in ones; in complete units
- correcting an error e.g. spotting a missing cube or reversed colours
- identifying the rule of the pattern: 'it should go red, blue, blue'
- noticing a growing pattern: 'It's like a staircase'

Counting and cardinality

- counting the number of items in the unit of repeat, or the towers in a staircase pattern

Adding and Subtracting

- generalising about a staircase pattern: 'It's one more each time!'

Position and spatial properties

- using vocabulary of position: 'The red comes next', 'it's blue between the red and the yellow'.
- reversing units to make reflecting patterns e.g.. ABC CBA

Development and Variation

- provide more complex repeating patterns: ABC, ABB, ABCD
- vary the materials and media, indoors and out
- make action or sound patterns and record them with invented symbols
- make growing patterns, eg going up in ones
- make reflecting patterns with peg boards, mirrors and constructions
- discuss patterns in stories & rhymes e.g. Goldilocks, Gingerbread man,



Resources

- coloured cubes, small toys, leaves and twigs; printing and sticking shapes
- peg boards, mirrors, construction materials. Long strips of paper for making patterns
- Books & rhymes eg John Burningham The Shopping Basket; There was an old woman who swallowed a fly
- see Erikson Early Math Collective website for more about patterns, including activity



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nrich.maths.org/early-years

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