

**Disclaimer: Activities with children must always be risk assessed, including for allergies or choking. Children must always have adequate supervision. Resources and materials must always be appropriate for children's age and stage of development.**

## Top tips: How patterns support mathematical reasoning

**Research shows that children's ability to identify patterns forms the basis of early mathematical thinking.**

Children need many opportunities to discover and talk about patterns, including visible patterns such as a zebra crossing on the road, and more abstract patterns, such as the days of the week. Through experience they will build up the skill of spotting patterns for themselves, noticing how patterns change and begin to use pattern to help make sense of things and to solve problems.

Our top tips this week provide ideas for different 'pattern spotting' opportunities you can provide in your setting:



- Sing familiar rhymes with repeating elements of pattern, such as 'heads, shoulders, knees and toes' or 'Old MacDonald had a farm'
- Read stories with a repeating pattern elements such as the 'That's not my....' series by Usborne, and books that contain physical patterns such as Pattern Fish by Trudy Harris
- Provide a range of different patterned resources for children to see and feel such as fabric throws, rugs, small world animals and framed wallpaper samples
- Point out visual patterns in the environment such as spots or stripes on clothing, traffic light sequences, petals on flowers, branching patterns on trees, seeds in fruit etc.
- Provide collections of loose parts such as leaves, stones and acorns to arrange into repeating and irregular patterns
- Provide musical instruments or resources that children can make noise patterns with. For example, pots and pans with wooden spoons or homemade shakers using recycled plastic bottles filled with rice or dried pasta
- Play games that involve a pattern or turn taking such as rolling a ball back and forth
- Use routines, such as a visual timetable, to help children identify patterns such as now and next
- Draw children's attention to patterns in time such as the days of the week and the changing seasons.

### NDNA products to support you with these tips

- [Maths Champions.](#)

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**And more resources at [www.ndna.org.uk/hub/myndna](http://www.ndna.org.uk/hub/myndna)**