



Medium Term Planning Maths – Pattern

Medium -Term Planning ‘Maths Map’ Are you properly equipped for your journey yet?

Pattern

End destination – Children will be able to continue, copy and create an AB, ABB, ABBC patterns and identify the pattern rule (unit of repeat) in an AB, ABB, ABBC patterns. Spot an error and ‘correct’ a pattern and explain whether a circular pattern is continuous or not

1. Check Your facts

Subject knowledge
References:

NCETM Progression document
<https://www.ncetm.org.uk/media/5c5btyon/typical-progression-pattern.pdf>

2. Secure Your Expert Language!

Key language AND definitions so everyone is consistent.

Pattern type – pattern, repeat, sequence, order, rule
Shapes and colours – circle, square, triangle, red, blue, yellow, big, small
Actions and Movement – clap, tap, stomp, jump, move, copy
Describing patterns – same, different, next, before, after, again, change, repeat

3. Predict the Hazards and Opportunities!

Identify the misconceptions and remember these are VERY valuable teaching opportunities.

- not recognising a pattern such as ABBA (e.g. stating that patterns cannot have two of the same colour together)
- when copying or extending a pattern, changing it before making three repeats
- spotting that there is an error but not being able to describe it
- identifying an error but not being able to correct it
- correcting an error by making a ‘local correction’, which just moves the



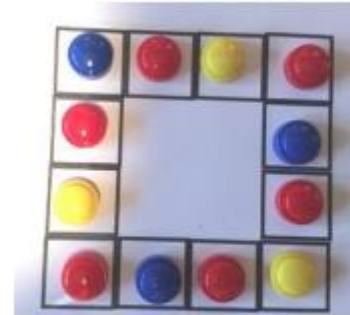
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Nature and environment – sports, stripes, waves, zigzag, spirals, symmetry

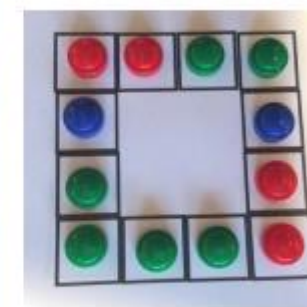
problem along (e.g. by adding an extra item when colours have been swapped)

- describing the whole pattern instead of identifying the part which repeats, or the unit of repeat.

A pattern that works:



A pattern that doesn't work:



When exploring if a pattern works or not, draw attention to the number of spaces and the size of the unit of repeat.

4. Identify Your 'Vehicles/Hooks'

What have the children shown you they are interested in that you can use to engage their interest and build upon what they already understand?

5. Build Essential Connections!

Which other existing mathematical tools will they need to bring out and use here? Make these neutral.

6. Sharpen Those Tools!

List the activities that will give children the opportunity to focus upon and become skilful in using specific tools. Use hyperlinks, images of tasks, book names and page



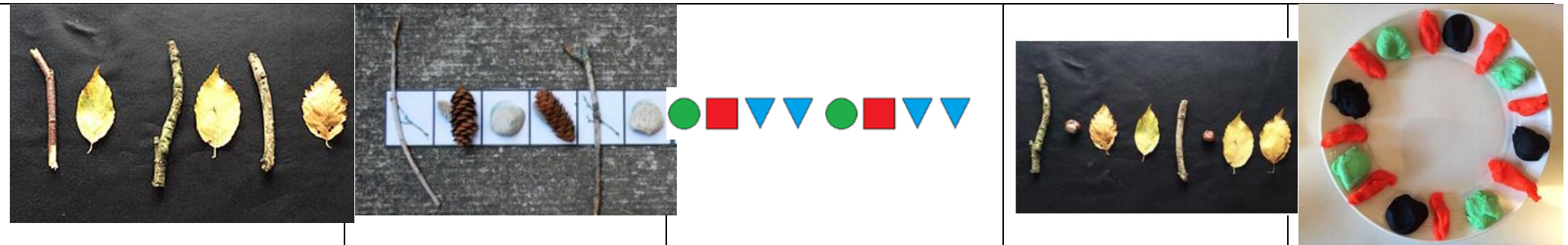
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- Nature/natural world
- Nursery rhymes and singing
- Snack time fruit
- Model making
- Interests – observe and use
- Ordering and sorting

- Communicating - Talking/Demonstrating/Pictorial
- Pattern (noticing/seeing pattern in numbers)

NCETM

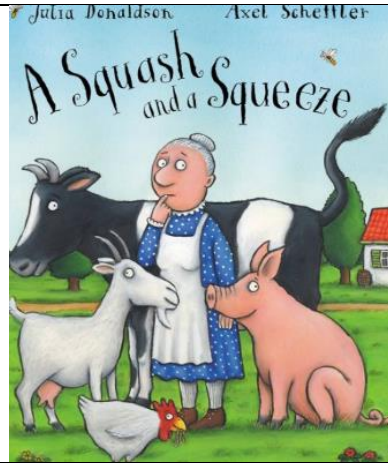
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NCETM - Stories and rhymes present a good opportunity to explore a growing pattern, e.g. 'There was an Old Lady who Swallowed a Fly', or 'A Squash and a Squeeze'. Explore representing these diagrammatically – to see a staircase pattern, for example



7. 'Concrete' Experiences 'Walk the Walk'

'Move from 'Real World' to 'Maths World'.

Concrete real world



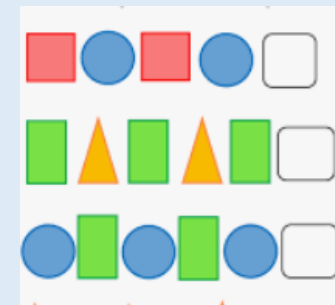
8. Creating Representations 'Capture the experience using an Image!' (Pictorial)

Pictorial



9. Translate the Experience into 'Abstract'

Abstract





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End Point - What do I want the children to understand and be able to do? Long Term aims for pattern – Nursery/Reception

- Continue, copy and create an AB pattern.
- Identify the pattern rule (unit of repeat) in an AB pattern.
- Continue, copy and create ABB, ABBC (etc.) patterns.
- Identify the pattern rule (unit of repeat) in ABB, ABBC (etc.) patterns.
- Spot an error and 'correct' a pattern.
- Explain whether a circular pattern is continuous or not

Characters of Effective Learning – How do young children learn best?

Playing and exploring – engagement
 Finding out and exploring
 Playing with what they know
 Being willing to 'have a go'

Active learning – motivation
 Being involved and concentrating
 Keeping trying
 Enjoying achieving what they set out to do

Creating and thinking critically – thinking
 Having their own ideas
 Making links
 Choosing ways to do things



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Children's interests – What are this group of children motivated by? What areas interest them? How are these children engaged in their learning? What do they love to do? When are they at their most happiest?

Steps needed	Adult led/provocations/enhancements	Continuous Provision areas