Reception - Geometry - Exploring Patterns

Making simple patterns

Guidance

Children copy, continue and create their own simple repeating patterns. They focus on AB and ABC patterns. It is important to provide patterns with at least three full units of repeat. Encourage the children to say the pattern aloud as this helps them to identify the part which repeats and supports them to continue the pattern.

The children should be given opportunities to explore pattern in a range of contexts including shapes, colours, sizes, actions and sounds. Encourage them to build patterns both vertically and horizontally.

Other Resources



Pattern Bugs – Trudy Harris
In and Out the Dusty Bluebells circle game
Tongue twister patterns – Red lorry, yellow lorry
Clap your hands and wiggle your fingers song

Prompts for Learning



Whole class: Demonstrate simple AB action patterns such as:
Knees, clap, knees, clap, knees, clap
Punch left, punch right, left, right, left, right
Hands up, hands down, up, down, up, down





Say the pattern aloud and encourage the children to join in with you and to suggest new action patterns of their own. Once they are confident with AB, extend to ABC e.g. tap knees, tap shoulders, tap head, knees, shoulder, head, etc.

You can also start AB or ABC patterns along a line or around a circle: stand, sit, stand, sit, stand, sit
Hands on head, hands down, hands on head, hands down
Arms up, arms out, arms down, up, out, down etc

Word or sound patterns can be chanted together, opposites are good for this e.g. yes, no, up down, in out etc. Sounds learnt in phonics can be practised and reinforced through pattern.

sh, ch, sh, ch, sh, ch etc.



Create simple patterns such as red brick, green brick, red brick, green brick, red brick, green brick for the children to copy and continue.

Challenge them to create their own patterns using the AB or ABC structures.

Reception - Geometry - Exploring Patterns



More complex patterns

Guidance

Children continue to copy, continue and create patterns. They explore patterns which use items more than once in each repeat for example ABB, AAB, AABB, AABBB. Again it is important that each pattern you model has at least three full units of repeat. The more units of repeat, the easier it is to identify and continue the pattern.

Encourage the children to say each pattern aloud and to create patterns around the edge of shapes as well as in straight lines.

Other Resources



Duck, Duck, Goose circle game

We Will Rock You - Queen (clapping pattern)

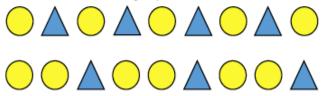
AAB Pattern Song – Musical Math (Youtube)

Prompts for Learning

Note: All the prompts in the previous step for creating patterns with actions and sounds can also be applied to more complex patterns.

Show the children an AB pattern and a similar AAB pattern and ask them to tell you what they notice.

What is the same and what is different?
Here they may describe the yellow, blue pattern or the circle, triangle pattern.



Repeat with a similar ABB pattern. What is different this time?



Ask the children to make their own AB, AAB and ABB patterns using yellow and blue cubes or counters.

What other patterns could they make using two colours?

Ask the children to describe their patterns.

Can their friends continue the patterns they have made?

Encourage the children to make patterns using these structures with different objects both indoors and outside.

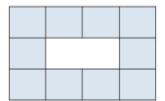
Reception - Geometry - Exploring Patterns

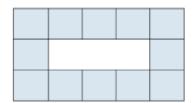
Digging Deeper

Which patterns fit?

Provide frames with a set number of spaces and cubes or counters in different colours.

Ask the children to build patterns around the edge putting one item in each space. Ask them to try different patterns to investigate which will fit around the frame exactly and which won't.





Which of these patterns will fit exactly around the frames?

AB, ABC, ABB, AAB, AABB, AABBC

Key questions



Which patterns will fit exactly into the frames? Are there any patterns which fit exactly around both frames?

How many more spaces did you need for a pattern that wouldn't fit?

Can you test some of your own patterns in the frames?

Which of your patterns fitted exactly? Which didn't fit?

What's my pattern?

Use lining up time as an opportunity to slot in some extra pattern spotting practise.

Ask one child at a time to go and line up creating a pattern such as:

Boy, girl, boy, girl, boy, girl.

Jumper, no jumper, jumper, no jumper

Short hair, long hair, short hair, long hair etc

Ask: Can you see my rule?

Who do you think could join the line next?

Ask the children to come up with their own patterns in small groups and challenge the rest of the class to work out the pattern.

© White Rose Maths