



Repeating pattern skills

ECE resources

Pattern skills for young children focus on repeating patterns or linear arrays that have repeating units such as **ABBABBABB**. Preschool children first master fixing patterns (filling in missing items) and duplicating or copying model repeating patterns. They then become adept at extending patterns (continuing an existing pattern by at least one unit of repeat, such as **ABCABCABC**), and abstracting patterns (recreating a model pattern using a different set of materials, such as **ABBABB** to **CDDCDD** using red/yellow and blue/green blocks). Eventually, children will be able to verbalise and demonstrate what makes a sequence a repeating pattern by identifying the core unit that repeats in a pattern.

Fixing pattern

This skill involves children using their pattern skills to fill in a missing item in a pattern.

How to spot this skill being applied in free play

You might hear children:

- Discussing needing one more item to fill in a gap in the pattern (for example, 'my pattern is missing a blue pompom in the middle').

You might notice children:

- Adjusting a pattern by either adding in a missing pattern item or switching items around until the sequence is in the correct order.

How to check for understanding

Ask children to fill in the missing item in a model repeating pattern (such as **ABAB_BAB**), either from a pile of potential responses and distractors, or by pointing to one of several different pictures of objects.

Guided activities to support fixing patterns

- Post pictures around the room of patterns with an item missing and ask children to determine what item should fill in the blank.

Copying patterns

This skill involves duplicating a repeating pattern by at least one unit of repeat with the same materials.

How to spot this skill being applied in free play

You might hear children:

- Discussing making the same pattern or design as another child (for example, 'I'm going to draw a green and white striped shirt too' or 'our patterns are the same: red, blue, red, blue').

You might notice children:

- Duplicating a repeating pattern design (for example, drawing a zebra with black and white stripes).

How to check for understanding

Ask children to make the same pattern as a model pattern using a pile of the same blocks (such as red, green, yellow, red, green, yellow). Make sure the copied pattern is 6 inches below the model pattern.

Guided activities to support copying patterns

Have children re-enact pattern dances: these could be dances that have been taught to them by teachers, dances they have watched online (such as this [GoNoodle video](#)), or even dances they have created themselves.

Extending patterns

This skill involves adding items to a repeating pattern by at least one unit of repeat.

How to spot this skill being applied in free play

You might hear children:

- Saying what comes next in a pattern (for example, 'I need to add a red and blue block to the top of my red-blue-red-blue tower')

You might notice children:

- Adding to an existing pattern sequence (for example, adding to a patterned block tower, or continuing a 'clap-clap-snap' pattern by adding an extra 'clap-clap-snap').

How to check for understanding

Have children add at least one unit's worth of items to a model pattern, answering the question 'can you keep my pattern going the way I would?' or 'what comes next in my pattern?' (ABCABC_ _ _). For more examples, see this [script](#) or these sample [materials](#).

Guided activities to support extended patterns

- Recite the beginning of a pattern or rhyming song and ask children to keep the pattern going (by finishing the repeating word, phrase, or phoneme).
- Have children add to existing shape patterns.

Abstracting patterns

This skill involves duplicating a pattern by at least one unit of repeat using different materials.

How to spot this skill being applied in free play

You might hear children:

- Saying 'my red blocks are the same as the green blocks in the picture' when copying a design (such as a picture of a Lego block construction) for which they do not have the same colour materials.

You might notice children:

- Recreating a design with objects that differ in colour, size, shape, and/or materials from the original pattern.

How to check for understanding

Have the child generate at least one unit's worth of a model pattern with different materials. Make sure the abstracted pattern is 6 inches below the model pattern.

AABBAABB

CCDDCCDD

For more examples of how to support children's understanding of patterns and how to abstract them, see this research-based measure with material descriptions [here](#).

Guided activities to support abstracting patterns

- Have children choose and present their own dance moves to create the same pattern structure as a model dance (such as 'clap-clap-stomp' for 'banana-banana-meatball').
- Invite children to copy a model necklace pattern with different beads or materials.

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