





Topic: Patterns and algebra

Describing patterns

Lesson concepts

-  **Patterns** — Pattern/non-pattern
-  **Patterns** — Describing patterns
-  **Patterns** — Repeating
-  **Patterns** — Spatial (nonlinear)

Today students will:

- ▶ copy and describe simple patterns.

Resources

Digital

Slideshow — Patterns

Find and prepare

Percussion instruments or objects to make sound patterns

Music

Props such as ribbons/streamers or hats

Digital camera (optional)

Materials to make patterns (for example: beads, counters, blocks)

Key terms

repeating pattern

For definitions and explanations of terms, please see the [Glossary](#).

Lesson

Introduce the lesson

Note

The following language is important to highlight and develop throughout this lesson.

pattern, same, describe, copy, non-pattern, repeat, repeating, rule, continue, colour, shape, size, direction, loud, soft, fast, slow, high, low

Explain to students that they are going to explore repeating patterns.

Ask students to reflect on any patterns that they have noted in their daily life.

Focus questions

Q: *Where can you see patterns at home?*

A: For example: on the tiles, cupboards

Q: *How could you describe these patterns?*

A: For example: circle, square, triangle, circle, square, triangle

Q: *What patterns have you heard before?*

A: For example: clapping patterns at music

Copy patterns

Explain to students that a repeating pattern:

- is something that is repeated over and over
- doesn't change
- can be as simple as 'clap, stamp' repeated or can be more complicated.

Demonstrate a movement pattern such as touch heads, clap hands, tap knees.

Ask students to copy the pattern.

Reinforce the pattern by having students repeat it while standing, sitting and walking.

Ask students to identify the repeated elements.

Describe patterns

Say to students

- It requires a lot of concentration to keep a pattern or rhythm going. You can remember the pattern by saying the words for the body parts (describing the pattern). You could also use pictures to help you remember the pattern.

View the **Slideshow — Patterns**.



Have students identify:

- examples showing repeating patterns
- examples that do not show repeating patterns
- the repeated elements in the patterns
- how these could be represented using movements and sounds.

Say to students

- Repeated patterns are not just ABAB patterning (for example: blue, green, blue, green). The repeated part could be more complicated (for example: three red, two blue and one green).

Sound patterns

Explain to students how patterns can be sounds as well as images and movements.

Provide students with classroom objects or instruments to use to create and copy repeating sound patterns.

Focus questions

- Q: *What sound pattern did you find most difficult to repeat? Why was that?*
 A: Personal response required.
- Q: *What sound patterns have you heard before?*
 A: For example: bird calls, fire alarms
- Q: *Are all sounds a pattern? Why do you think that?*
 A: No, if nothing is repeated there is no pattern.

Represent patterns

With students, select a favourite piece of music.

Call out a simple pattern of body action such as jump, clap, jump, clap.

Have students:

- copy the pattern by moving parts of their body to the beat of music
- repeat the activity with different patterns
- repeat the activity using props such as ribbons/streamers and hats (for example: moving them up and down, left and right, on and off).

Video students performing a variety of movement patterns (optional).

Review the videos and ask students to identify the repeated elements (optional).

Focus questions

Q: *What pattern can you see in this dancing?*

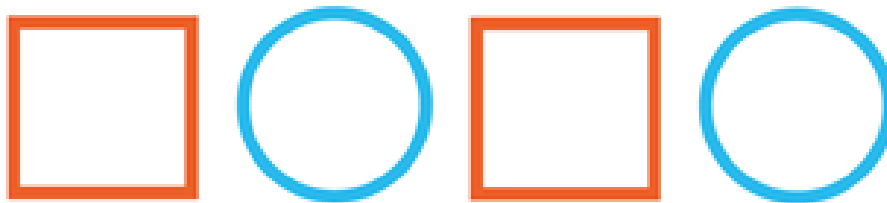
Q: *How could you draw the pattern?*

Q: *How could you change this pattern to make a new movement pattern?*

Represent patterns

Remind students that a repeating pattern occurs when a part is repeated over and over.

Display a simple picture pattern, for example:



Focus questions

Q: *Is this a repeating pattern? Why do you think that?*

A: For example: I can see that 'square, circle' is repeated.

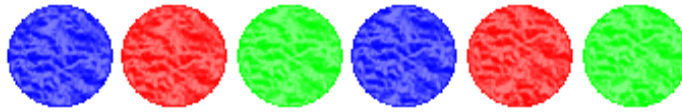
Q: *What is repeated?*

A: The square and circle.

Q: *What would come next?*

A: Square.

Display another pattern using materials, for example: blue bead, red bead, green bead, blue bead, red bead, green bead.



Focus questions

Q: *Is this a repeating pattern? How do you know?*

A: For example: Yes, I can see a repeated part.

Q: *What would come next?*

A: A blue

Q: *How do you know?*

A: For example: I know that the repeating pattern is 'blue, red, green'.

Note

Reinforce that a repeating pattern can have more than two parts and they can be combined in many different ways.

Represent patterns

Discuss simple patterns.

Focus questions

Q: *What is the pattern?*

A: Personal response required.

Q: *How could you copy this pattern?*

A: For example: By using different objects in a similar pattern.

Q: *How could you make a similar pattern with objects such as counters or blocks?*

A: Personal response required.

Ask students to make similar patterns using objects such as counters and everyday materials.

Make sure that students check that they have made a pattern by describing the repeated part each time.