

# MATHS




## Lessons 36–37

Prep

**Topic: Patterns and algebra**

**Describing and creating patterns**

### Lesson concepts

-  **Patterns** — Pattern/non pattern
-  **Patterns** — Continuing patterns
-  **Patterns** — Describing patterns

Today students will:

- ▶ create and describe simple patterns.

### Resources

#### Find and prepare

hand-made percussion instruments (optional)  
(for example: drums, shakers, tapping sticks)  
range of materials to create patterns (for  
example: paper shapes, blocks, collage  
materials, paint and paper)  
digital camera (optional)

### Key terms

pattern, same, describe, copy,  
non-pattern, continue

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

## Lesson

### Introduce the lesson

Explain that students will work with patterns over the next two lessons.

Discuss patterns and non-patterns (that is, patterns have elements that repeat and can be predicted).

### Describe patterns using everyday language

Show movement and sound patterns to students.

Describe the movement and sound patterns that are shown.

Ask students to copy the movement and sound patterns (for example: clap, clap, nod, nod OR jump, jump, clap, jump, jump, clap).

Provide materials for students to:

- construct simple dance props and percussion instruments such as twirling ribbons, drums, tapping sticks or shakers
- explore how they can create movement and sound patterns in response to music
- share and copy patterns
- describe the patterns created.



I played the bottle shaker by going: shake, shake, tap, shake, shake, tap.

We stepped in a pattern: orange cushion, blue cushion, yellow cushion and purple cushion.

### Focus questions

Q: *What is repeated in this pattern?*

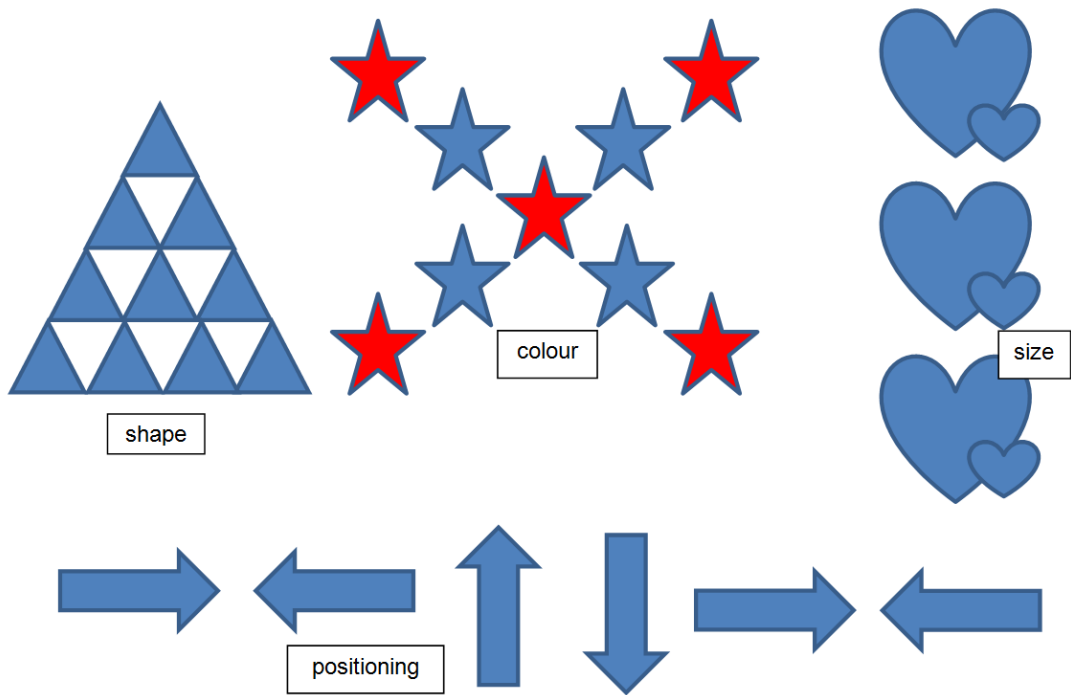
Q: *How could you make the pattern longer?*

Q: *How could you remember that pattern?*

Discuss different ways that visual patterns can be made.

Use materials to identify and show features that could be used when making visual patterns including:

- shape
- size
- colour
- positioning
- quantity.



### Copy simple patterns

Provide a range of materials for students to create a variety of visual patterns by drawing or manipulating small objects.

Ask students to:

- create a pattern using one element such as shape or colour



shape pattern



colour pattern

- develop patterns varying more than one element, such as colour and number



colour and number pattern

- photograph or record these visual patterns (optional)



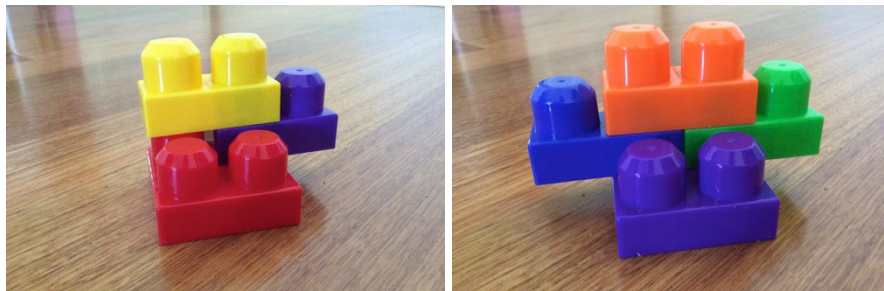
- display and describe these patterns (for example: red, blue, green, yellow, red, blue, green, yellow, red, blue, green, yellow, red)
- identify a pattern from a description (for example: 'My pattern is long block, short block. Which photo matches that description?')
- continue given patterns after describing them.

### Focus questions

- Q: *Why do you think that this pattern matches the description?*
- Q: *What features were used to make this pattern?*
- Q: *How are these patterns the same/different?*
- Q: *What will come next in this pattern?*

Demonstrate how students can create patterns with an element missing by:

- arranging materials in patterns
- removing one element



- asking students to identify what is missing and replace the element to complete the pattern.

### Focus questions

- Q: *How did you know what was missing?*
- Q: *What was the pattern?*