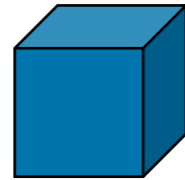


# Year 1 Unit 3: Shapes and patterns (2 weeks)

## Before you start...

- What prior knowledge and experiences do your pupils have with shape and pattern?
- What resources do you have to support pupils' understanding?



This is a cube. It has six **faces**, 12 **edges** and eight **vertices**.

## 2-D or 3-D: where do you begin?

3-D shapes can be picked up and are those which pupils will have most real-world experience of through play and their everyday lives which is why the unit begins with these. However, you may wish to make use of Maths Meetings or consolidation lessons to revisit basic shape names to support identifying and explaining 3-D shapes.

Video: The language of shape

## Dictionary Corner

This unit contains a large amount of vocabulary to expose your pupils to. Make use of the [vocabulary list](#), [this article](#) and the linked video to ensure secure understanding of definitions for all adults.



What shapes can you see?  
How many circles can you see?

## Identifying 3-D shapes

L1&2 Explore, identify, describe and classify 3-D shapes

The unit begins with 3-D shapes as these are the shapes we commonly interact with: building blocks, everyday objects and items around the classroom are all three dimensional. Pupils explore a range of 3-D shapes, learning their names and, through building towers, explore the properties of these shapes. Which can roll? Which have only flat faces? While some pupils may make use of 2-D shape names to describe properties of the 3-D shapes, it is not expected but should be consistently modelled to provide opportunities for pupils to connect this understanding. Pupils explore by counting faces, edges and vertices. In Lesson 2, pupils explore similarity and difference in grouping 3-D shapes in different ways.

? How secure is your own use of language associated with 3-D shape? How will you ensure all adults model this consistently?

## Identifying 2-D shapes

L3 Identify 2-D shapes  
L4 Describe and classify 2-D shapes

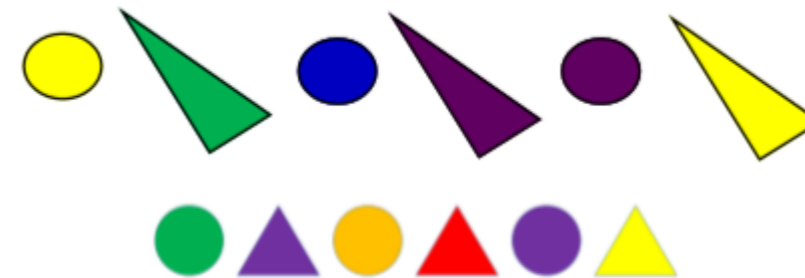
In these lessons, it is important that representations shown are 2-D: using representations drawn on paper or shown on a screen. 2-D shapes are on one plane and cannot be picked up or manipulated. Consider also how using a range of representations – different colours, sizes and orientations – can deepen understanding; providing non-examples can direct pupils to think carefully about the properties of each shape. Pupils begin by identifying common 2-D shapes using images such as the Big Picture, before building their own and describing the shapes used. In Lesson 4, pupils learn the properties of 2-D shapes and consider similarities and differences.

? What misconceptions might pupils have about naming and the properties of 2-D shapes? How might you plan for these?  
? How will you develop further opportunities to consolidate this language in Maths Meetings, Do Now activities and other parts of the curriculum?

There is one consolidation lesson in this unit, which should be used according to the needs of pupils.



Hansel and Gretel are **next to** the house.  
Hansel and Gretel are **to the right of** the house.



## Using the language of position, direction and movement

L7 Use the language of position  
L8&9 Use the language of position, direction and movement

The unit ends with pupils exploring the language associated with position, direction and movement beginning with a focus on positional language. Pupils should be provided with opportunities to use positional language in both 2-D and 3-D situations. Opportunities to consolidate shape and pattern understanding are provided through describing the position of shapes and patterns. In Lessons 8 and 9 the language of position and movement is introduced including left and right. Pupils should experience this linked to physical movement of themselves, their peers and programmable toys.

? What opportunities can you provide for pupils to program toys or ICT equipment?  
? How could you make use of positional language across the curriculum?

## Exploring patterns

L5 Recognise and create repeating patterns  
L6 Recognise and describe repeating patterns

These lessons provide a lot of opportunities for early mathematical thinking. Encourage pupils to articulate the patterns they see and make and explore what would come next if the pattern were to continue. Again, it is important to expose pupils to a range of repeating patterns using shape, colour and size. In Lesson 5, pupils identify repeating patterns and create their own, before applying this to describing patterns and identifying missing parts in patterns.