

# Curriculum & Knowledge Map: Shape (Properties)



Draw 2-D shapes using given dimensions and angles  
 Recognise, describe and build simple 3-D shapes, including making nets  
 Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

Identify 3-D shapes, including cubes and other cuboids, from 2-D representations  
 Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles  
 Draw given angles, and measure them in degrees (o)  
 Identify: angles at a point and one whole turn (total 360o)

Year  
6

Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius  
 Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Angles at a point on a straight line and  $\frac{1}{2}$  a turn (total 180o) other multiples of 90o  
 Use the properties of rectangles to deduce related facts and find missing lengths and angles  
 Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Year  
5

Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes  
 Identify acute and obtuse angles and compare and order angles up to two right angles by size  
 Identify lines of symmetry in 2-D shapes presented in different orientations

Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them  
 Recognise angles as a property of shape or a description of a turn

Year  
4

Complete a simple symmetric figure with respect to a specific line of symmetry.

Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle  
 Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

Year  
3

Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line  
 Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces  
 Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]

Year  
2

Compare and sort common 2-D and 3-D shapes and everyday objects.

Recognise and name common 2-D and 3-D shapes, including:  
 2-D shapes [for example, rectangles (including squares), circles and triangles]  
 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].

Year  
1

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## EYFS

### Three to four Years

- Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.
- Describe a familiar route.
- Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc.
- Combine shapes to make new ones – an arch, a bigger triangle, etc.
- Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc.
- Extend and create ABAB patterns – stick, leaf, stick, leaf.
- Notice and correct an error in a repeating pattern.

### Reception

- Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
- Continue, copy and create repeating patterns.