

# Maths Knowledge and Skills Progression

## Geometry: Properties of Shape

### Key of Text Colours

National Curriculum Objectives

NC Objective appears elsewhere within the same topic progression document

NC Objective also appears in another topic progression document

| Year 1                                                                                                                                                                                                        | Year 2                                                                                                                 | Year 3                                                                                                                          | Year 4                                                                         | Year 5                                                                           | Year 6                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| IDENTIFYING SHAPES AND THEIR PROPERTIES                                                                                                                                                                       |                                                                                                                        |                                                                                                                                 |                                                                                |                                                                                  |                                                                                                                                   |
| recognise and name common 2-D and 3-D shapes, including:<br>* 2-D shapes [e.g. rectangles (including squares), circles and triangles]<br>* 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. | identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line |                                                                                                                                 | identify lines of symmetry in 2-D shapes presented in different orientations   | identify 3-D shapes, including cubes and other cuboids, from 2-D representations | recognise, describe and build simple 3-D shapes, including making nets (appears also in Drawing and Constructing)                 |
|                                                                                                                                                                                                               | identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces                  |                                                                                                                                 |                                                                                |                                                                                  | illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |
|                                                                                                                                                                                                               | identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]    |                                                                                                                                 |                                                                                |                                                                                  |                                                                                                                                   |
| DRAWING AND CONSTRUCTION                                                                                                                                                                                      |                                                                                                                        |                                                                                                                                 |                                                                                |                                                                                  |                                                                                                                                   |
|                                                                                                                                                                                                               |                                                                                                                        | draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them | complete a simple symmetric figure with respect to a specific line of symmetry | draw given angles, and measure them in degrees (°)                               | draw 2-D shapes using given dimensions and angles                                                                                 |
|                                                                                                                                                                                                               |                                                                                                                        |                                                                                                                                 |                                                                                |                                                                                  | recognise, describe and build simple 3-D shapes, including making nets (Also shown in Identifying Shapes and Their Properties)    |

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## Geometry: Properties of Shape

| COMPARING AND CLASSIFYING |                                                                 |                                                                                                                                                                                                            |                                                                                                                    |                                                                                                                                                                                                        |                                                                                                                                                          |
|---------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | compare and sort common 2-D and 3-D shapes and everyday objects |                                                                                                                                                                                                            | compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes | use the properties of rectangles to deduce related facts and find missing lengths and angles<br><br>distinguish between regular and irregular polygons based on reasoning about equal sides and angles | compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons |
| ANGLES                    |                                                                 |                                                                                                                                                                                                            |                                                                                                                    |                                                                                                                                                                                                        |                                                                                                                                                          |
|                           |                                                                 | recognise angles as a property of shape or a description of a turn                                                                                                                                         |                                                                                                                    | know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles                                                                                                              |                                                                                                                                                          |
|                           |                                                                 | 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 acute and obtuse angles and compare and order angles up to two right angles by size                       | identify:<br>* angles at a point and one whole turn (total $360^\circ$ )<br>* angles at a point on a straight line and $\frac{1}{2}$ a turn (total $180^\circ$ )<br>* other multiples of $90^\circ$    | recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles                                 |
|                           |                                                                 | identify horizontal and vertical lines and pairs of perpendicular and parallel lines                                                                                                                       |                                                                                                                    |                                                                                                                                                                                                        |                                                                                                                                                          |