

MATHS PROGRESSIONS

Geometry- Shape

Key:

Counting

Reading & Writing Numbers/ terms and symbols

Identifying, Reading, Representing & Estimating in different scenarios

Comparing & recognising Numbers /size / orientation

Drawing/modelling accurately

Problem solving & Reasoning

Mental arithmetic and known facts

YEAR 4

- ◆ Identify and draw different lines of symmetry on a variety of 2-D shapes presented in different orientations

- ◆ Complete a symmetrical shape/ pattern according to the specific line of symmetry (inc. diagonal)
- ◆ Compare and classify geometric shapes according to their properties
- ◆ Order angles up to 2-right angles in size
- ◆ Use mathematical vocabulary to reason and problem solve (with acute and obtuse angles)

YEAR 1

- ◆ Recognise and name fluently, common 2-D (squares, rectangles, circles and triangles) and 3-D shapes including cubes/ cuboids, pyramids and spheres
- ◆ Recognise the shapes in different sizes/ orientations

- ◆ Sort and organise the common 2-D and 3-D shapes according to different criteria
- ◆ Describe the properties of the 2-D and 3-D shapes

- ◆ Make further links to real-life use of 2-D and 3-D shape and justify its use in relation to the properties they adopt
- ◆ Make comparisons between different shapes and recognise where shapes have similarities

YEAR 3

- ◆ Draw and make 2-D and 3-D shape models
- ◆ Describe the shapes in different orientations and sizes

- ◆ Begin to recognise angles within a shape
- ◆ See that angles measure the degree of turn
- ◆ Draw accurate straight lines using a ruler (length to nearest cm/mm)
- ◆ When describing angles use correct terminology;-acute, obtuse angles

YEAR 5

- ◆ Identify 3-D shapes from 2-D representations
- ◆ Draw given angles and measure them in degrees

- ◆ Find missing lengths and angles using known facts about given shapes
- ◆ Distinguish between regular and irregular shapes and use definitions to solve problems based on equal sides and equal angles

- ◆ Estimate and compare different angles categorised as acute, obtuse and reflex
- ◆ Identify and calculate angles up to a whole turn and on a straight 180 degree line
- ◆ Link angles to degree of turn and solve problems where direction of turn is evident

- ◆ Identify a right-angle as a quarter turn and two right angles as a half turn (3 quarter turns = 3 right-angles) . Show this clock and anti-clockwise
- ◆ Identify angles that are less than and greater than a right-angle (use right-angle checker if possible)
- ◆ Identify and understand where vertical, diagonal, parallel and perpendicular lines are on a range of shapes

YEAR 6

- ◆ Find unknown angles in any triangle, quadrilateral and regular polygon
- ◆ Reason when classifying shapes in different orientations and sizes (inc. scale factors)

- ◆ Recognise angles where they meet at a point; understand that vertically opposite angles are equal.
- ◆ Find missing angles where there a number of straight lines and known/unknown facts

- ◆ Recognise, draw and make simple 3-D constructions using nets
- ◆ Reason with nets; explaining why or why not a net would work for a particular shape

- ◆ Label and identify the different parts in a circle and know that the radius is half of the diameter; solve problems involving circles
- ◆ Draw 2-D shapes based on given dimensions

- ◆ Identify and describe 2-D shapes in terms of the numbers of sides and lines of symmetry

- ◆ Describe 3-D shapes in greater detail; in terms of the number of edges/vertices and faces

- ◆ Make explicit links from 2-D to 3-D shapes i.e. a cube has square faces, a triangle appears on a pyramid

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

YEAR 2

- ◆ Recognise and begin to draw common 2-D shapes
- ◆ Sort and organise common shapes in terms of their properties

- ◆ Use shape to represent pattern and sequence that establishes rule

- ◆ Describe common 2-D shapes

- ◆ Link to real-life use of shape and identify examples within / around the school

RECEPTION