Townville Academy

Maths Progression Document: Geometry: Properties of Shapes, Position and Direction



The progression maps are structured using the topic headings as they appear in the National Curriculum. Each 'topic' has been divided into sub categories to illustrate progression in key areas.

<u>Nursery</u>	<u>Reception</u>	<u>Year 1</u>	<u>Year 2</u>	
	Identifying shapes (and their properties		
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'	begin to recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].	recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 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 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]	
	Comparing	nd Classifuina		
Make communication		nd Classifying	commare and cont	
Make comparisons between objects relating to size, length, weight and capacity (also in measurement)	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.		compare and sort common 2-D and 3-D shapes and everyday objects	
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				
Position, Direction and Movement				
Understand position through words alone — for example, "The bag is under the table," — with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'.	Select, rotate and manipulate shapes to develop spatial reasoning skills.	describe position, direction and movement, including half, quarter and three- quarter turns.	use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)	
Pattern Pattern				
Talk about and identify the patterns around them.	Continue, copy and create repeating patterns		order and arrange combinations of	

For example: stripes on	(including AB, ABB and	mathematical objects in
clothes, designs on rugs	ABBC)	patterns and sequences
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		
Begin to describe a		
sequence of events, real		
or fictional, using words		
such as 'first', 'then'		

All programmes of study statements are included and some appear twice. This is indicated in the text. This occurs where:

- The statement has central relevance to more than one sub category within a topic;
- The statement has central relevance to more than one mathematics topic. This is done to reflect the aims of the curriculum that pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems (Mathematics programmes of study: key stages 1 and 2 page 3). However, the connections made are not intended to be exhaustive and teachers will seek to support pupils in making other connections.