



St John Fisher RC Primary School

Year 6 Maths Knowledge Organiser

Summer – Geometry: Position & Direction

Objectives	Teacher
<ul style="list-style-type: none"> I can identify describe positions in all four quadrants on a full coordinate graph. 	
<ul style="list-style-type: none"> I can draw and translate simple shapes on the coordinate plane and reflect these in the axis. 	

Positions on a graph	Completing Shapes	Reflections & Translation
<p>Coordinates can use positive and negative numbers. Whether positive or negative, the x-axis coordinate is written first, followed by the y-axis coordinate.</p> <p>● (3,-4) ■ (1,2) ▲ (-3,-2)</p> <p>Look at the circle. It is 3 units along the x-axis and 4 down the y-axis. Its coordinates are (3,-4).</p>	<p>Using the properties of a shape, a polygon can be completed on a grid.</p> <p>To make a square, think of the square's properties.</p> <p>All of a square's sides are the same length. If the completed sides are 2 units in length, the missing point must complete two more sides of 2 units.</p> <p>To make a right-angled triangle, think of the triangle's properties.</p> <p>A right-angled triangle should have three sides with one 90° angle.</p>	<p>A shape is reflected when it is flipped over a line which acts as a mirror. Every point on the original shape is the same distance from the mirror line as the same point on the reflected shape. The original triangle has been reflected in the x-axis and in the y-axis.</p> <p>A shape is translated when it is moved without being rotated or resized. Every point of the shape moves the same distance and in the same direction.</p> <p>Shape 1 has been translated 4 units left and 3 units down.</p>

Key Vocabulary

coordinate	A point on a grid represented by 2 numbers e.g. (3.4)
quadrant	A quarter of a graph divided by an x and y axis
x-axis	A line separating a graph going from left to right.
y-axis	A line separating a graph going from top to bottom.
horizontal	A line going from left to right.
vertical	A line going from top to bottom (up and down).
translation	Moving a shape from one position on a graph to another (without altering the shape)
reflect	An image or shape as it would be seen in a mirror.

Assessment

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