



I Can Statement - Year 8 Maths

Topic Overview - Working in the Cartesian Plane	Pre-taught Vocabulary	
In this unit, we will formalise our understanding of coordinates by working confidently across all four quadrants of the Cartesian plane. We will develop strong algebraic and graphical fluency as we investigate the mathematical rules that generate straight lines. Beginning with simple lines parallel to the axes, we will progress to general linear equations of the form $y = kx$, $y = x + a$, and eventually the complete linear form $y = mx + c$. Through this exploration, we will discover how coordinate lines connect directly to linear sequences and how algebraic equations can be linked to direct proportion problems. For the higher strand, we will expand our graphical skills to explore non-linear curves and determine the exact midpoints of line segments.	Cartesian Plane A two-dimensional coordinate grid defined by a horizontal x-axis and a vertical y-axis.	Quadrant
	Linear Sequence	Intercept
	Substitution	Parallel
	Midpoint	Gradient

RAG Rating:		Start	End	Teacher
1.	I can read, plot, and write coordinates accurately across all four quadrants of a coordinate grid.			
2.	I can identify, write equations for, and draw straight lines that are perfectly parallel to the axes.			
3.	I can recognise, plot, and use basic linear equations of the form $y = x$ and $y = kx$			
4.	I can explain the mathematical link between linear equations of the form $y = kx$ and direct proportion contexts.			
5.	I can recognise, plot, and use linear equations of the form $y = x + a$.			
6.	I can sketch and explore linear graphs that feature a negative gradient, such as $y = -kx$ or $x + y = a$.			
7.	I can connect numerical coordinate relationships and linear graphs directly to linear sequences.			
8.	I can substitute numerical values into formulas to plot and construct straight-line graphs of the form $y = mx + c$.			
9.	Higher: I can find and calculate the exact midpoint coordinate of any given line segment.			
10.	Higher: I can recognise, plot, and explore the mathematical features of non-linear graphs.			