



CURRICULUM CORE KNOWLEDGE PLAN

SUBJECT: Mathematics

YEAR GROUP: Year 11

DATE: HT1

Term and unit	Core knowledge	Core vocabulary	Revisiting prior knowledge	Links to Walney Ways & Employability skills/Careers
Autumn Term 1.1 – Straight Line Graphs (2 weeks)	- Equations of lines parallel to the axis (R) - Plot Straight line graphs (R) - Interpret $y=mx + c$ (R) - Find the equation of a straight line from a graph (1) (R) - Find the equation of a straight line from a graph (2) - Equation of straight line graph given one point and gradient - Equation of straight line graph given two points - Determine whether a point is on the line - Solve linear simultaneous equations graphically (R) Recognise when straight lines are perpendicular (H) Find the equations of perpendicular lines (H) Bold = higher content	Parallel Horizontal Vertical Y intercept Linear Equation Gradient Co-ordinates Substitute Simultaneous Intersection Solutions Perpendicular Product Reciprocal Negative reciprocal	Prior knowledge topics are identified with (R)	
Autumn Term 1.2 – Non Linear Graphs (2 weeks)	- Plot and read from quadratic graphs - Plot and read from cubic graphs - Plot and read from reciprocal graphs - Recognise graph shapes	Quadratic Curve Cubic Asymptote Infinity		



	- Identify and determine roots (solutions) and intercepts of quadratic graphs Understand and use exponential graphs (H) Find and use the equation of a circle with centre (0, 0) (H) Find the equation of a tangent to any curve (H) Bold = Higher content	Tend towards Roots Solutions Exponential Growth Decay Radius Origin Pythagoras' theorem Tangent		
Autumn Term 1.3 – Using Graphs (2 weeks)	- Reflect shapes in given lines (R) - Construct and interpret conversion graphs (R) - Construct and interpret other real life straight line graphs - Interpret distance/time graphs - Construct distance/time graphs - Construct and interpret speed/time graphs - Construct and interpret piece wise graphs - Recognise and interpret graphs that illustrate direct and inverse proportion - Find approximate solutions to equations using graphs Estimate the area under a curve (H) Bold = higher content	Convert Gradient Intercept Direct Proportion Interpret Speed Distance Time Constant Acceleration Inverse Root Solutions Estimate	Prior knowledge topics are identified with (R)	