


Subject	Year	Month	
Mathematics	10	March	
Topic:			
Real straight-line graphs and coordinate geometry			4 lessons
Content (Intent)			
Prior Learning Year 9 Straight line graphs March Year 10 Straight line graphs February		Future Learning Year 11 Gradient of and area under curves December Year 12 Pure Chapter 5 Straight line graphs Mech Chapter 9 Constant acceleration	
Objectives <ul style="list-style-type: none"> Identify and plot points in all four quadrants; Draw and interpret straight-line graphs for real-life situations, including ready reckoner graphs, conversion graphs, fuel bills, fixed charge and cost per item; Draw distance-time and velocity-time graphs; Use graphs to calculate various measures (of individual sections), including: unit price (gradient), average speed, distance, time, acceleration; including using enclosed areas by counting squares or using areas of parallelograms, squares and triangles; Find the coordinates of the midpoint of a line segment with a diagram given and coordinates; Find the coordinates of the midpoint of a line segment from coordinates; Find the coordinates of points identified by geometrical information. Find the equation of the line through two given points. 			
Pedagogical notes (implementation)		How will understanding be assessed & recorded (Impact)	
Use various measures in the distance-time and velocity-time graphs, including miles, kilometres, seconds, and hours, and include large numbers in standard form. Ensure that you include axes with negative values to represent, for example, time before present time, temperature or depth below sea level. Metric-to-imperial measures are not specifically included in the programme of study, but it is a useful skill and ideal for conversion graphs. Emphasise that velocity has a direction. Coordinates in 3D can be used to extend students.		End of half term no End of Year Mocks in April	
		How can parents help at home?	
		MathsWatch clips (Qualification KS4)	
Further reading/discussion			
Reading / Enrichment http://passyworldofmathematics.com/straight-line-graphs/	Literacy	Numeracy Links	Careers Links Medicine – identify links Economist Meteorologists Actuaries graph risks Scientist