


Subject	Year	Month	
Mathematics	11	October	
Topic:			
Constructions, loci and bearings			6 lessons
Content (Intent)			
Prior Learning Year 9 Constructions and loci October Year 10 Angles on parallel lines March	Future Learning		
Objectives			
<ul style="list-style-type: none"> • Understand congruence, as two shapes that are the same size and shape; visually identify congruent shapes • Use straight edge and a pair of compasses to do standard constructions: <ul style="list-style-type: none"> ○ understand, from the experience of constructing them, that triangles satisfying SSS, SAS, ASA and RHS are unique, but SSA triangles are not; ○ construct the perpendicular bisector of a given line; ○ construct the perpendicular from a point to a line; ○ construct the bisector of a given angle; ○ construct angles of 90°, 45°; • Draw and construct diagrams from given instructions, including the following: <ul style="list-style-type: none"> ○ a region bounded by a circle and an intersecting line; ○ a given distance from a point and a given distance from a line; ○ equal distances from two points or two line segments; ○ regions may be defined by 'nearer to' or 'greater than'; • Find and describe regions satisfying a combination of loci; • Use constructions to solve loci problems (2D only); • Use and interpret maps and scale drawings; • Estimate lengths using a scale diagram; • Make an accurate scale drawing from a diagram; • Use three-figure bearings to specify direction; • Mark on a diagram the position of point <i>B</i> given its bearing from point <i>A</i>; • Give a bearing between the points on a map or scaled plan; • Given the bearing of a point <i>A</i> from point <i>B</i>, work out the bearing of <i>B</i> from <i>A</i>; • Use accurate drawing to solve locus and bearings problems; 			
Pedagogical notes (implementation)	How will understanding be assessed & recorded (Impact)		
<ul style="list-style-type: none"> • Drawings should be done in pencil. • Relate loci problems to real-life scenarios, including mobile phone masts and coverage. • Construction lines should not be erased. 	End of half term no End of Year Year 11 mocks in November		
	How can parents help at home?		
	MathsWatch clips Qualification KS3: G26abc, G27, G31 Qualification KS4: 12b, 124, 145abc, 146, 147, 166		
Further reading/discussion			
Reading / Enrichment	Literacy	Numeracy Links	Careers Links Architect, Designer Sailor/Fisherman