



CURRICULUM CORE KNOWLEDGE PLAN

SUBJECT: Mathematics

YEAR GROUP: Year 10

DATE: HT1

Term and unit	Core knowledge	Core vocabulary	Revisiting prior knowledge	Links to Walney Ways & Employability skills/Careers
Autumn Term 1.1 – Congruence, similarity and Enlargement (3 weeks)	• Enlarge a shape by a negative scale factor • Identify similar shapes • Use parallel line rules to work out missing angles • Establish a pair of triangles are similar. • Explore areas of similar shapes • Explore volumes of similar shapes • Solve mixed problems involving similar shapes • Understand the difference between congruence and similarity • Understand and use conditions for congruent triangles • Prove a pair of triangles are congruent • Bold = Higher content	Enlarge Scale Factor Centre of Enlargement Similar Congruent Corresponding Parallel	• Enlarge a shape by a positive integer scale factor • Enlarge a shape by a fractional negative scale factor • Work out missing sides and angles in a pair of given similar shapes	
Autumn Term 1.2 – Trigonometry (3 weeks)	• Explore ratio in similar right-angled triangles • Work fluently with the hypotenuse, opposite and adjacent sides • Use the tangent ratio to find missing side lengths • Use the sine and cosine ratio to find missing side lengths • Use sine, cosine and tangent to find missing side lengths • Use sine, cosine and tangent to find missing angles	Enlarge Scale Factor Constant Cosine ratio Sine ratio Tangent ratio Inverse	• Calculate sides in right-angled triangle using Pythagoras' Theorem	



	• Select the appropriate method to solve right angled triangle problems • Work with key angles in right-angled triangles • Use trigonometry in 3-D shapes • Use the formula $\frac{1}{2}ab\sin C$ to find the area of a triangle • Understand and use the sine rule to find missing lengths • Understand and use the sine rule to find missing angles • Understand and use the cosine rule to find missing lengths • Understand and use the cosine rule to find missing angles • Choosing and using the sine and cosine rules • Bold = Higher content	Hypotenuse		
--	--	------------	--	--