Term 2 Year 9 - Geometry

Year group 9	Subject: Geometry
Prior learning- linked to National curriculum	Students will have looked at 2d shapes at both KS2 and during years 7 and 8, and should have an understanding with regards to what 2d shapes are and the names for different types of shapes. Students should also have an understanding on how to calculate the area and perimeter of the most common 2d shapes.
Rationale	Students will expand upon their 2d shape knowledge and explore what 3d shapes are and how to calculate both the volume and surface area of 3d shapes. The topic allows students to deepen/master their knowledge of 2d shapes, whilst at the same time using this knowledge to understand how volume is calculated. Students will also use compasses and protractors to construct shapes, most notably triangles, along with biscetors.
Vocabulary:	**Keywords** Area, perimeter, line segment, angle, regular, parallel, perpendicular, bisector, construction.
Cultural Capital:	Once students have mastered the concept of calculating lengths, areas and volumes, they will then be able to apply this knowledge to problem solving skills required not only in real life situations but also to help understanding for problems often asked in their GSCEs. There is also a significant cross curriculum benefit of this unit.
Key assessments- name the assessments	Mini Assessment for: ● 3d shapes ● Constructions In addition for this a Unit wrapper for this Term.
What do children know/ can do now (EDSM)	**Emerging Students will:** Be able to recognise 3d shapes and draw/measure angles. **Developing students will:** Be able to calculate the volume of cuboids and understand the concept of loci. **Secure students will:** Be able to work out the volume of prisms and construct bisectors. **Mastered students will:**

	Be able to calculate the volume of cylinders and understand the concept of congruency and how to tell if triangles are congruent.
What **amendments** are you going to make following evaluation of this module?	

TERM 2		
Unit 4 - 3D Shapes	**Unit 5 - Construction and Congruency**	
Know names of 2D and 3D shapes	Draw and measure angles (R)	
Recognise prisms (including language of edges and vertices)	Construct and interpret scale drawings (R)	
Accurate nets of cuboids and other 3D shapes	Locus of distance from a point	
Sketch and recognise nets of cuboids and other 3D shapes	Locus of distance from a straight line	
Plans and elevations	Locus equidistant from two points	
Find area of 2D shapes (R)	Construct a perpendicular bisector	
Surface area of cubes and cuboids	Construct a perpendicular from a point	
Surface area of triangular prisms	Construct a perpendicular to a point	
Surface area of a cylinder	Locus of distance from two lines	
Volume of cubes and cuboids	Construct an angle bisector	

Volume of other 3D shapes - prisms and cylinders	Construct triangles from given information (R)	
Explore volumes of cones, pyramids and spheres (H)	Identify congruent figures	
	Explore congruent triangles	
	Identify congruent triangles	