


Subject	Year	Month	
Mathematics	11	December	
Topic:			
Circles, cylinders, cones & spheres			5 lessons
Content (Intent)			
Prior Learning Year 10 3D forms and volume		Future Learning	
Objectives <ul style="list-style-type: none"> Recall the definition of a circle; Identify, name and draw parts of a circle including tangent, chord and segment; Recall and use formulae for the circumference of a circle and the area enclosed by a circle circumference of a circle = $2\pi r = \pi d$, area of a circle = πr^2; Find circumferences and areas enclosed by circles; Use $\pi \approx 3.142$ or use the π button on a calculator; Give an answer to a question involving the circumference or area of a circle in terms of π; Find radius or diameter, given area or perimeter of a circles; Find the perimeters and areas of semicircles and quarter-circles; Calculate perimeters and areas of composite shapes made from circles and parts of circles; Calculate arc lengths, angles and areas of sectors of circles; Find the surface area of a cylinder; Find the volume of a cylinder; Find the surface area and volume of spheres, pyramids, cones and composite solids; Round answers to a given degree of accuracy. 			
Pedagogical notes (implementation)		How will understanding be assessed & recorded (Impact)	
Emphasise the need to learn the circle formulae. Formulae for curved surface area and volume of a sphere, and surface area and volume of a cone, will be given on the formulae sheet in the examination. Ensure that students know it is more accurate to leave answers in terms of π but only when asked to do so.		End of half term no End of Year 2nd mocks in Feb & March	
		How can parents help at home? MathsWatch clips Qualification KS3: G2, G22ab, G25b, G32, G33, Qualification KS4: 116, 117, 118, 119, 149, 167, 169, 170, 171	
Further reading/discussion			
Reading / Enrichment http://passyworldofmathematics.com/interesting-circles/		Literacy	Numeracy Links
			Careers Links Painter& decorator Chemist Architect