Unit 7b: 3D Forms and Volume	Year 9 Road Map

In this unit you will learn about number. The aims are as follows:

LG1: Knowledge **LG2: Application** **LG3: Skills**

S/N	Level	Learning Goals/Outcomes/Content	Dr Frost Videos	R	A	G
7b) 3D Forms and Volume						
1	S	Identify and name common solids: cube, cuboid, cylinder, prism, pyramid, sphere and cone;	142a 143a			
2	S	Draw sketches of 3D solids;	229			
3	SC	Sketch nets of cuboids and prisms;	143d 143e			
4	S	Find the volume of a prism, including a triangular prism, cube and cuboid;	145 231d			
5	SCE	Calculate volumes of right prisms and shapes made from cubes and cuboids;	144 231a			
6	SCE	Convert between metric measures of volume and capacity e.g. 1ml = 1cm^3.	323			
7	SCE	Find the surface area of prisms using the formulae for triangles and rectangles, and other (simple) shapes with and without a diagram;	231h			
8	CE	Identify planes of symmetry of 3D solids, and sketch planes of symmetry;	142b			
9	CE	Use volume to solve problems;	407h			
10	CE	Estimating surface area, perimeter and volume by rounding measurements to 1 significant figure to check reasonableness of answers.	405n			
11	CE	Find the volume and surface area of a cylinder;	233a 234a			
12	CE	Recall and use the formula for volume of pyramid;	405a			
13	CE	Find the surface area of a pyramid;	406a			
14	CE	Use the formulae for volume and surface area of spheres and cones;	405c 405f 406e 406k			
15	CE	Solve problems involving more complex shapes and solids, including segments of circles and frustums of cones;	408f			
16	CE	Find the surface area and volumes of compound solids constructed from cubes, cuboids, cones, pyramids, spheres, hemispheres, cylinders;	407a 407c			
17	CE	Give answers in terms of π;	209c 210c			
18	CE	Form equations involving more complex shapes and solve these equations	263e			

Student's comments and questions: