Stage 8 – Geometry: Calculating space

Know it!

Knowledge	
I know...	Circle definitions and properties, including: centre, radius, chord, diameter, circumference
I know...	How to calculate the circumference of a circle when radius or diameter is given
I know...	How to calculate the area of a circle when radius or diameter
I know...	How to calculate the area and perimeter of composite shapes that include sections of a circle
I know...	How to calculate the volume of right prisms and cylinders

Link it!

Backward	Forward
Area of triangles, parallelograms and trapeziums. Know how to find the area of compound shapes	Calculating volumes and surface areas of complex solids Arc, sector and segment areas

Prove it!

Convince me C = 2πr = πd.
What is wrong with this statement? How can you correct it?
The area of a circle with radius 7 cm is approximately 441 cm^2 because $(3 × 7)^2 = 441$.
Convince me that a cylinder is not a prism.

Say it!

Vocabulary	Definition
Circle	A 2-dimensional shape made by drawing a curve that is always the same distance from a centre.
Radius	The distance from the centre to the circumference of a circle. It is half of the circle's diameter.
Diameter	The distance from one point on a circle **through the centre** to another point on the circle. It is twice the radius.
Chord	A line connecting two points on a circle's circumference is a chord.
Circumference	The distance around the edge of a circle (or any curvy shape). It is a type of perimeter.
Pi (π)	π = 3.14159265358979323846... (the digits go on forever without repeating). Pi is found by dividing any circle's circumference by its diameter.
Cross-section	A view into the inside of something made by cutting through it.
Prism	A solid object with two identical ends and flat sides.

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