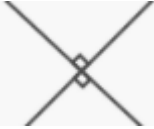


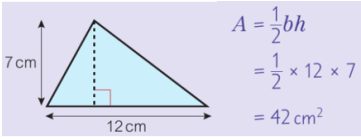
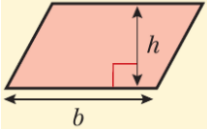
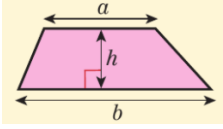

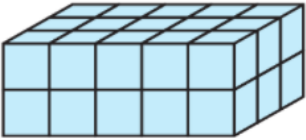
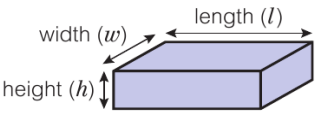
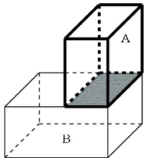
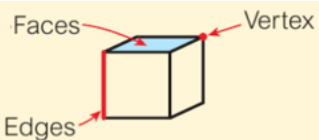


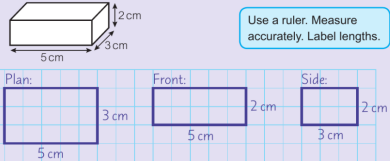
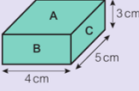


Core Knowledge			
1	Perpendicular	 <p>Two lines are perpendicular if they meet at a right angle.</p>	
2	Parallel	 <p>Lines are parallel if they are always the same distance apart and will never meet when extended. Parallel lines are marked with matching arrows.</p>	
3	Congruent	<p>Same shape and same size.</p>	
4	Perimeter		The distance around a shape.
5	Area		The size a surface takes up, measured in square units. e.g. cm ² , m ² , km ²
6	Area of a triangle	 <p>Area of triangle = $\frac{1}{2} \times \text{base} \times \text{perpendicular height}$ $A = \frac{1}{2}bh$ $= \frac{1}{2} \times 12 \times 7$ $= 42 \text{ cm}^2$</p>	
7	Area of a parallelogram	 <p>Area of parallelogram = base x perpendicular height $A = bh$</p>	
8	Area of a trapezium	 <p>Area of a trapezium: Add the parallel sides, multiply by the perpendicular height then half it. $A = \frac{1}{2}(a + b)h$</p>	
9	Compound shapes	 <p>Compound shapes can be divided into standard shapes. To find the area, work out the area of each part and add together (or subtract if necessary).</p>	
10	Volume	 <p>The volume of a 3D solid is the amount of 3D space it takes up. Volume is measured in cubic units eg mm³, cm³ or m³</p>	
11	Volume of a cuboid	 <p>Volume = length x width x height $V = lwh$</p>	
12	Compound solids	 <p>Compound solids can be split into cubes and cuboids. To find the volume, work out the volume of each part and add together.</p>	
13	Face		The side
14	Edge		Where two sides meet
15	Vertex (pl. vertices)		Where edges meet
16	Net	 <p>A net is a 2D shape that folds to make a 3D shape</p>	

17	Isometric paper		You can draw 3D solids on isometric paper. Draw vertical and diagonal lines, do not draw horizontal lines.
18	Plan		The view from the top
19	Front elevation		The view from the front
20	Side elevation		The view from the side
21	Surface area	<p>area of A = $4 \times 5 = 20 \text{ cm}^2$ area of B = $4 \times 3 = 12 \text{ cm}^2$ area of C = $5 \times 3 = 15 \text{ cm}^2$</p> <p>surface area = $2 \times 20 + 2 \times 12 + 2 \times 15$ = $40 + 24 + 30$ = 94 cm^2</p> 	Surface area of a 3D solid is the total area of all its faces.
22	Capacity		The capacity of an object is the volume it can hold.
23	Metric conversions	<p>1 litre (l) = 1000 millilitres (ml) 1 ml = 1 cm^3 1 l = 1000 cm^3</p> <p>1tonne (t) = 1000 kg</p> <p>1 $\text{cm}^2 = 100 \text{ mm}^2$ 1 $\text{m}^2 = 10\,000 \text{ cm}^2$</p> <p>1 hectare (ha) = $10\,000 \text{ m}^2$</p>	Convert all lengths to the same units before calculating areas or volumes.
24	Imperial units	<p>1 foot (ft) $\approx 30 \text{ cm}$ 1 mile $\approx 1.6 \text{ km}$ 1 kg $\approx 2.2 \text{ pounds (lb)}$ 1 litre $\approx 1.75 \text{ pints}$ 1 gallon $\approx 4.5 \text{ litres}$</p>	You should learn these conversions.