Introduction to volume

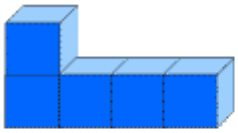
Volume is a measure of the space taken up by a solid object. We measure volume in cubic units, for example cubic centimetres (cm^3) or cubic metres (m^3). The imperial system uses different units, for example cubic feet (ft^3).

A solid like a cube or a cuboid is **three-dimensional** (3D). That means that you need **three measurements** in order to work out its volume: length, width and height. Sometimes height is called depth or thickness.

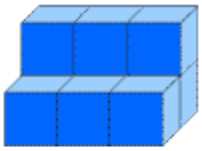
A unit cube has six square faces, and all three dimensions are the same, 1 cm. The volume of the cube is 1 cubic centimetre (1 cm^3).

In simple cases you can find the volume of an object by counting the number of unit cubes it contains.

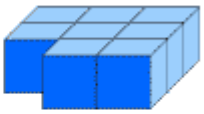
Each of the following diagrams represents a shape made from unit cubes.



Volume 5 cm^3



Volume 9 cm^3



Volume 8 cm^3

Volume and capacity are not quite the same thing. **Capacity is the amount of liquid a solid can contain.**

In the metric system, capacity is usually measured in litres. The imperial system uses gallons.

Remember: 1000 cm^3 = 1000 millilitres = 1 litre.