

# Volume and Surface Area

## Surface Area and Volume



**Surface Area** - is the measure of total area of all the flat and curved surfaces of a three-dimensional figure.

**Units :**  $\text{mm}^2$ ,  $\text{cm}^2$ ,  $\text{dm}^2$ ,  $\text{m}^2$ ,  $\text{km}^2$

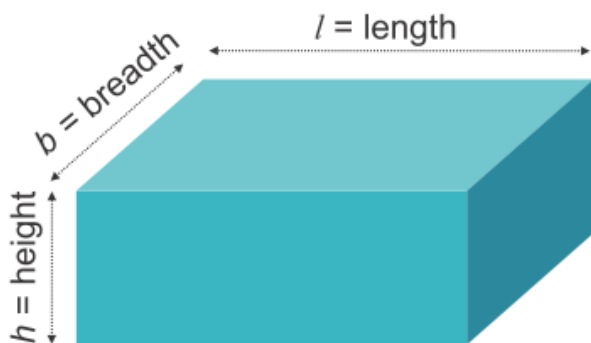
**Volume** - is the measure of the space occupied by a three-dimensional figure.

**Units :**  $\text{mm}^3$ ,  $\text{cm}^3$ ,  $\text{dm}^3$ ,  $\text{m}^3$ ,  $\text{km}^3$

## Cuboid

**Cuboid** - A three-dimensional figure that has six rectangular faces at right angles to each other.

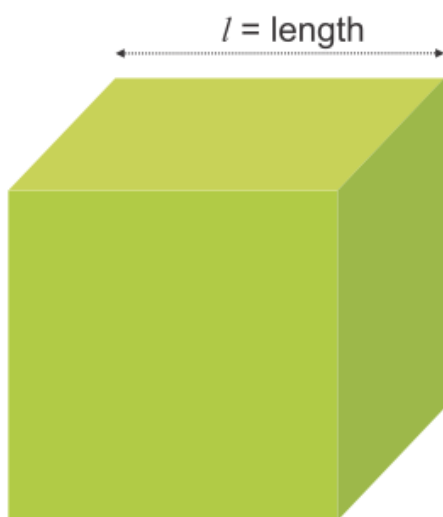
Vertices	Edges	Surface (Faces)	
		Total	Type
8	12	6	Rectangular



<b>Lateral Surface Area</b>	$2h(l + b)$
<b>Surface Area</b>	$2(l \times b) + 2(b \times h) + 2(l \times h)$
<b>Volume</b>	$l \times b \times h$

## Cube

**Cube** - A three-dimensional figure that has six equal square faces.



Vertices	Edges	Surface (Faces)	
		Total	Type
8	12	6	Square

<b>Lateral Surface Area</b>	$4 \times (l)^2$
<b>Surface Area</b>	$6 \times (l)^2$
<b>Volume</b>	$(l)^3$