

## Thinking Metric

Here is a list of the commonly used units with some helpful think metric examples for each. Notice that no period is used in the symbols since these are not abbreviations.

Units Of length	Symbol	Example
Kilometer	km	Used in place of miles it is approximately 0.6 miles
Hectometer	hm	Used to measure land. One square hectometer is approximately 2.5 acres
Decameter	dam	Approximately 30 feet or 10 meter sticks
Meter	M	A little longer than a yard, distance from doorknob to the floor, mid-chest to fingertip
Decimeter	dm	Approximate the width of adult fist
Centimeter	cm	Approximate width of little finger, a little less than one half an inch
Millimeter	mm	Approximate thickness of a dime

NOTICE: Metric units of area and volume are written using exponents while English units sometimes use abbreviations Example:  $\text{cm}^3$  versus cu. in.

Unit of Mass	Symbol	Example
kilogram	kg	Approximately 2.2 lbs., this why your metric weight is always less than half your English weight
gram	g	Weight of a paperclip, used in place of ounces, 1 ml of water weigh 1 g
milligram	mg	Used in medicine and science, 1 aspirin is 325 mg
metric ton	t	1000 kg used to express weight of heavy items, larger than our customary ton of 2000 lbs.

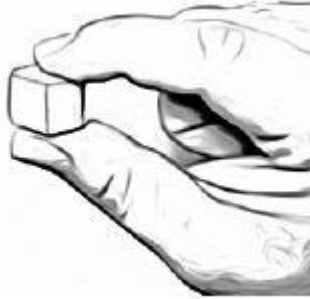
The gram actually measures mass, not weight. However, in everyday language these terms are interchangeable.

Weight is used when the idea of gravity is implied. For example, a weight of 220 lbs. on earth occupies a mass of 100kg.

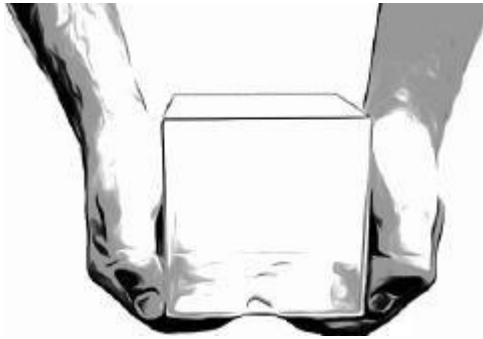
Countries that are not metric: US, Cambodia, Burma, Brunei, Liberia, Yemen

## Relationship between length volume and mass

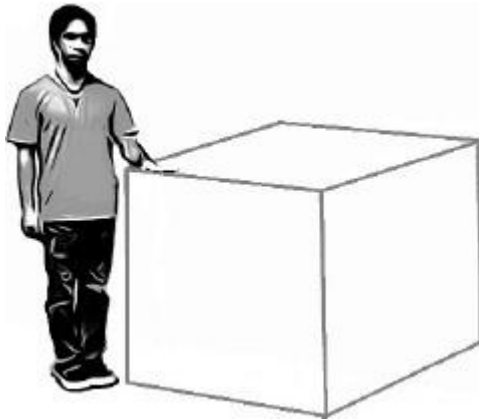
A cube measuring 1 centimeter by 1 centimeter by 1 centimeter has a volume of 1 milliliter and, when filled with water weighs has a mass of 1 gram



A cube measuring 1 decimeter by 1 decimeter by 1 decimeter has a volume of liter and, when filled with water weighs has a mass of 1 kilogram



A cube measuring 1 meter by 1 meter by 1 meter has a volume of kiloliter and, when filled with water weighs has a mass of 1 metric ton



Note: Technically, these relationships assume the boxes are being filled with water at a standard temperature and pressure.