

Metric System

What is the Metric System

- Based on “10” so it’s EASY (conversions)
- It is used universally, except in the US (J Carter)
 - Milk, gasoline, soda, shoes??
- S.I. stands for “*Système Internationale*” (French)
- The metric system is used to measure everything

Measurements and units

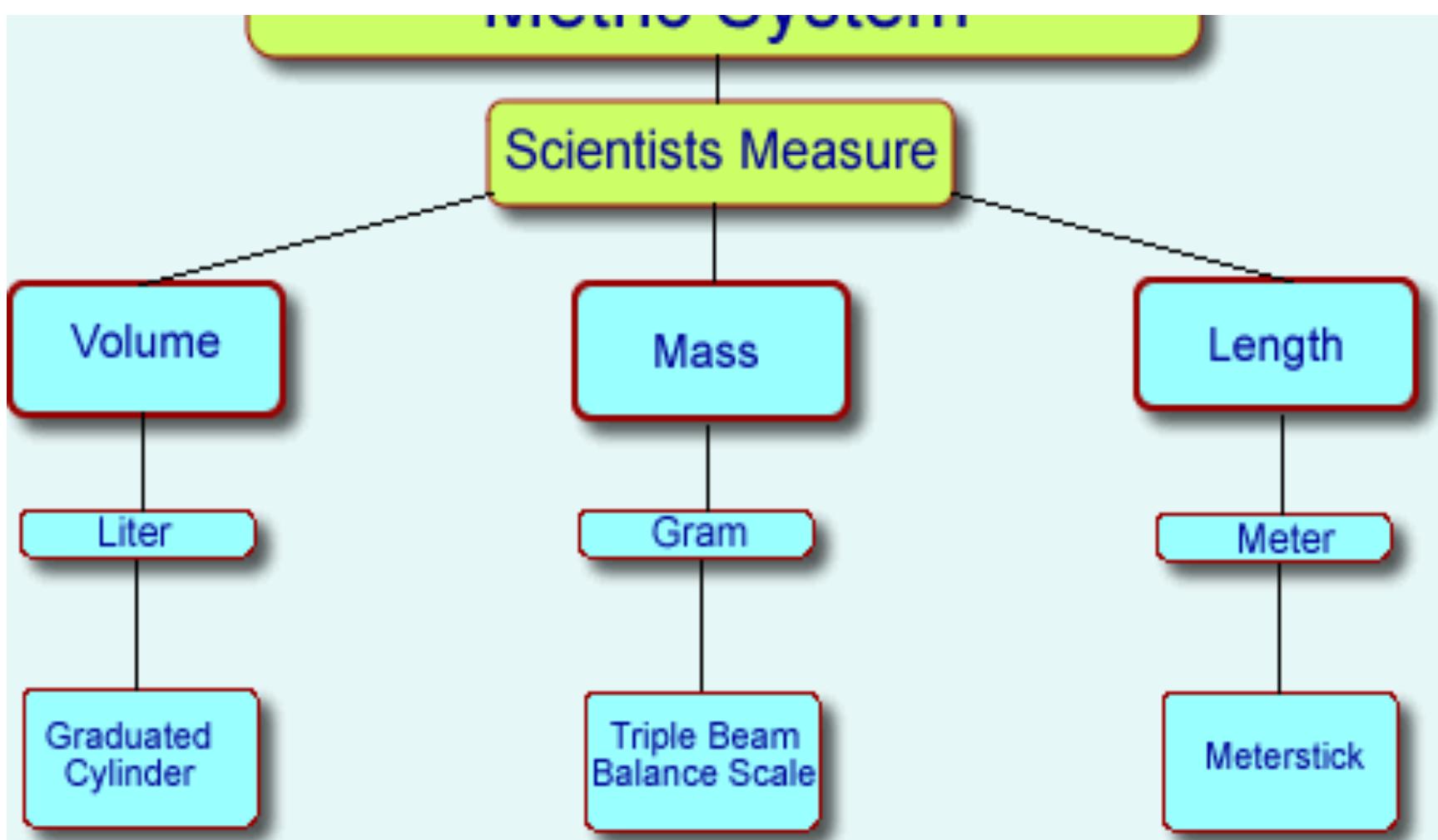
Measurements	SI Unit
Length	Meter (m), centimeter (cm), millimeter (mm)
Mass	Gram (g), kilogram (kg), milligram (mg)
Volume	Liter (L), milliliter (ml), cubic centimeter (cm^3)
Time	Seconds (s)
Temperature	Celsius ($^{\circ}\text{C}$) (not Fahrenheit) Kelvin ($^{\circ}\text{K}$) no negative numbers

The Metric System Prefixes

Prefix	Label	Decimal Value	Scientific	Colloquial
yocto	y	0.000 000 000 000 000 000 000 001	10^{-24}	septillionth
zepto	z	0.000 000 000 000 000 000 001	10^{-21}	sexillionth
atto	a	0.000 000 000 000 000 001	10^{-18}	quintillionth
femto	f	0.000 000 000 000 001	10^{-15}	quadrillionth
pico	p	0.000 000 000 001	10^{-12}	trillionth
nano	n	0.000 000 001	10^{-9}	billionth
micro	μ	0.000 001	10^{-6}	millionth
milli	m	0.001	10^{-3}	thousandth
centi	c	0.01	10^{-2}	hundredth
deci	d	0.1	10^{-1}	tenth
---	---	1	10^0	one
deka	da	10	10^1	ten
hecto	h	100	10^2	hundred
kilo	k	1 000	10^3	thousand
mega	M	1 000 000	10^6	million
giga	G	1 000 000 000	10^9	billion
tera	T	1 000 000 000 000	10^{12}	trillion
peta	P	1 000 000 000 000 000	10^{15}	quadrillion
exa	E	1 000 000 000 000 000 000	10^{18}	quintillion
zetta	Z	1 000 000 000 000 000 000 000	10^{21}	sextrillion
yotta	Y	1 000 000 000 000 000 000 000 000	10^{24}	septillion



METRIC SYSTEM



Standard vs Metric

Standard

- Gallons, pints, quarts
- Inches, feet, yards, miles
- Cups, teaspoon.
Tablespoon
- Fahrenheit,
- Pounds (lbs), ounces

Metric

- Liters, cubic centimeters (cc), milliliters
- Millimeters, centimeters, meters, kilometers
- Celsius
- Kilograms, grams

How to do metric conversions

- [metric conversions video](#)