

Measuring in Science

☑ To be practical, a measurement unit must always mean the same thing to everyone

☑ A standard unit is a **defined measurement** used and understood by everyone

☺ All scientists use the International System (SI) of units as their standard measurement system

(Also referred to as the metric system)

☑ The base units used for measuring are:

* Meter – for distance

* Liter – for volume

* Gram – for mass

☑ The SI system is based on the number 10

Prefixes are used to make the base units larger or smaller by multiples of 10

kilo	hecto	deka	deci	centi	milli
↓	↓	↓	↓	↓	↓
1000	100	10	0.1	0.01	0.001

☑ Changing from *larger to smaller units* simply involves moving the decimal point to the *right*

Example: Changing meters to decimeters:

$$2. \text{ meters} = 20. \text{ decimeters}$$

☑ Changing from *smaller to larger units* simply involves moving the decimal point to the *left*

Example: Changing centimeters to meters:

$$2. \text{ decimeters} = .2 \text{ meter}$$

SI UNITS

Prefixes	Symbol	Meaning	
kilo	k	1000	thousand
hecto	h	100	hundred
deka	da	10	ten
meter, liter, gram	m, L, g		base unit
deci	d	0.1	tenth <u>th</u> 1/10
centi	c	0.01	hundredth <u>th</u> 1/100
milli	m	0.001	thousandth <u>th</u> 1/1000

So what's an EASY way to remember how to make conversions??

