SI Units

* System of measurement used by most countries; used by scientific communities
* Uses base units for different types of measurements, and prefixes to indicate different quantities of these units

Ex: Distance 🡪 metre (m)

Volume 🡪 litre (L)

These are the base units

🡪 cubic metre (m3)

Mass 🡪 gram (g)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Prefix | Symbol | Quantity | Example | Steps |
| giga  decimal moves left | G | 1 000 000 000 | Gg | 3  decimal moves right |
| mega | M | 1 000 000 | Mg | 3 |
| kilo | k | 1 000 | kg | 1 |
| hecto | h | 100 | hg | 1 |
| deca | da | 10 | dag | 1 |
| base unit |  | 1 | gram (g) |  |
| deci | d | 0.1 | dg | 1 |
| centi | c | 0.01 | cg | 1 |
| milli | m | 0.001 | mg | 1 |
| micro | μ | 0.000 001 | μg | 3 |
| nano | n | 0.000 000 001 | ng | 3 |

* Based on quantities that increase or decrease by factors of 10
  + Means that when changing between quantity sizes, all you have to do is move the decimal
    - When going up in prefixes, the quantity size gets bigger, so there is less numbers of them 🡪 decimal moves left.
    - When going down in prefixes, the quantity size gets smaller, so there is more of them 🡪 decimal moves right.
    - For each step, move the decimal one place.

# Converting Units

The above method works as a short cut for simple conversions. For more complicated conversions, it is easier to use a conversion factor.

Ex: Convert 1730 grams to kilograms.



The same process works for multi-unit conversions.

Ex: A cheetah can run 110 km/hour. Convert this to m/s.



HW Fun Conversion Worksheets

Did you hear about …

Find the message