# SI Units

SI is the most commonly used system of units in the world. It is sometimes incorrectly referred to as the metric system. SI stands for the French phrase *Système International d'Unités.*

The SI system of units defines **seven basic units**. All other units can be derived from these basic units. The basic units are:

| Property | Name | Symbol |
|---|---|---|
| Length | metre | m |
| Mass | kilogram | kg |
| Time | second | s |
| Electric Current | ampere | A |
| Temperature | kelvin | K |
| Amount of Substance | mole | mol |
| Light Intensity | candela | cd |

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Scientists use a prefix in front of an SI unit to indicate its order of magnitude. For example the following three are the same:

0.000000000000001 m

$1 \times 10^{-15}$ m

1 fm

Which one would you prefer to write?

| Multiple | Prefix | Symbol |
|---|---|---|
| $10^{24}$ | yotta | Y |
| $10^{21}$ | zetta | Z |
| $10^{18}$ | exa | E |
| $10^{15}$ | peta | P |
| $10^{12}$ | tera | T |
| $10^{9}$ | giga | G |
| $10^{6}$ | mega | M |
| $10^{3}$ | kilo | k |
| $10^{2}$ | hecto | h |
| $10^{1}$ | deca | da |
| $10^{-1}$ | deci | d |
| $10^{-2}$ | centi | c |
| $10^{-3}$ | milli | m |
| $10^{-6}$ | micro | μ |
| $10^{-9}$ | nano | n |
| $10^{-12}$ | pico | p |
| $10^{-15}$ | femto | f |
| $10^{-18}$ | atto | a |
| $10^{-21}$ | zepto | z |
| $10^{-24}$ | yocto | y |