



Units of Measurement

Standard units are a universal set of measurements that help scientists measure things in the same way, allowing everybody to understand and compare collected data. One unit describes one measurement of a particular quantity. Here are some metric units.

Weight

Scales are used to measure something's weight in grams or kilograms.



Volume

Beakers are used to measure the volume of liquids in cubic centimeters or cubic meters.



Mole

Unique beakers are used to measure the mole, which is both the mass and volume of substances (see page 109).



Quantity	Base unit
mole	mole (mol)

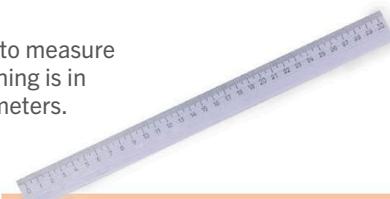


Key Facts

- ✓ Units help scientists measure things using certain equipment.
- ✓ Using the same units helps scientists compare data with each other.
- ✓ Different pieces of equipment measure things using different units.

Length

Rulers are used to measure how long something is in centimeters or meters.



Quantity	Base unit
length	centimeter (cm) meter (m)

Time

Stopwatches and timers can be used to measure time in seconds, minutes, or hours.



Quantity	Base unit
time	seconds (s) minutes (m)



Converting Units

Units can be converted between different levels using a number called a conversion factor.

$\xrightarrow{\times 1,000}$	
g	kg
mm	m
m ³	dm ³
mol/dm ³	mol/cm ³

$\xleftarrow{\div 1,000}$