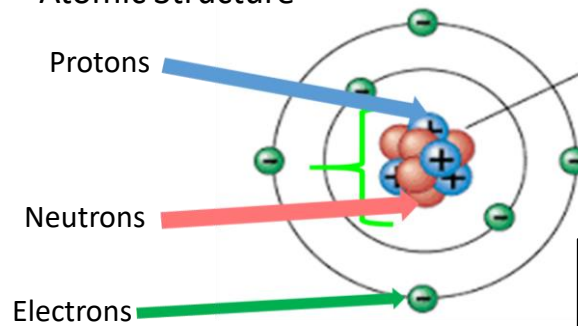


Particle Theory

State	Solid	Liquid	Gas
Closeness of particles	Very close	Close	Far apart
Arrangement of particles	Regular pattern	Randomly arranged	Randomly arranged
Movement of particles	Vibrate around a fixed position	Move around each other	Move quickly in all directions
Energy of particles	Low energy	Greater energy	Highest energy
2D diagram			

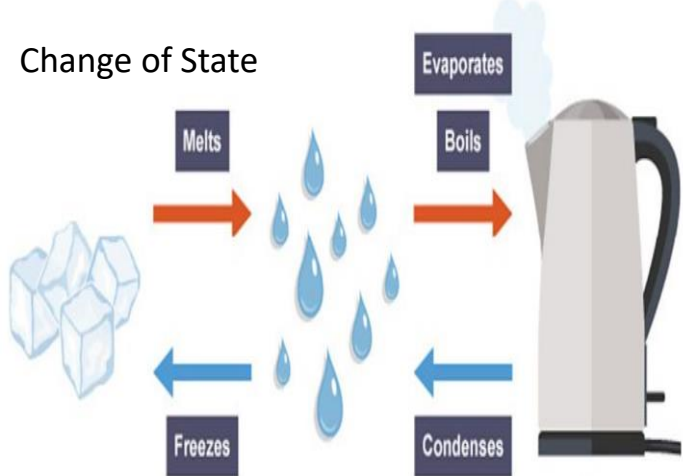
Atomic Structure



	Relative Mass	Relative Charge
Proton	1	+1
Neutron	1	0
Electron	negligible	-1

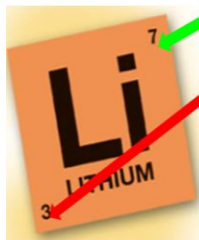
1st shell holds 2 electrons
2nd shell holds 8 electrons
3rd shell hold 8 electrons

Change of State



Lithium

P = 3
E = 3
N = 4



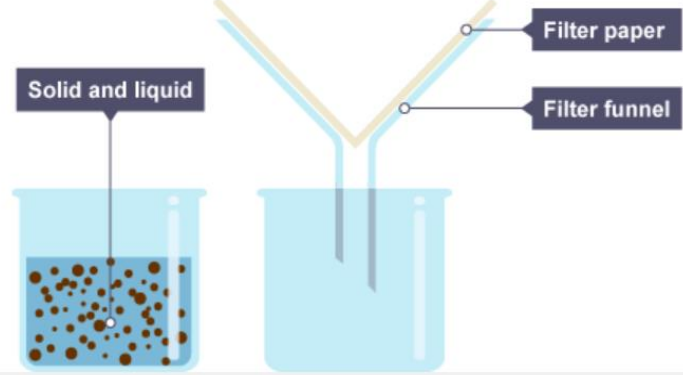
The smaller number is called the **atomic number (also known as the proton number)** it tells you the number of protons

The larger number is the mass number. This is the number of protons and neutrons added together.
TIP: Think mass number is the massive number!

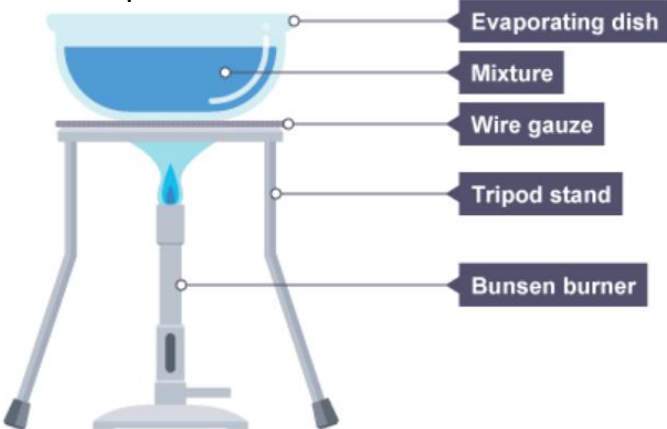
metals and non-metals

Groups	1	2							3	4	5	6	7	0	Periods				
																1			
	Li	Be								B	C	N	O	F	Ne	2			
	Na	Mg								Al	Si	P	S	Cl	Ar	3			
	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	4
	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	5
	Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	6
	Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og	7
	Metals										Non-metals								

Filtration



Evaporation



Chromatography



Particle Theory

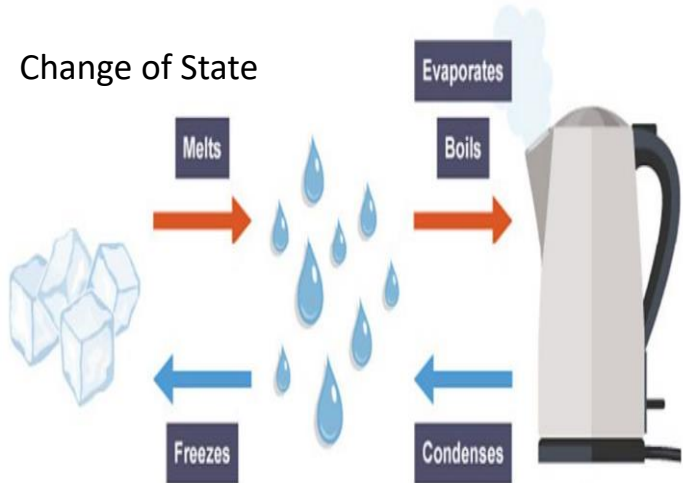
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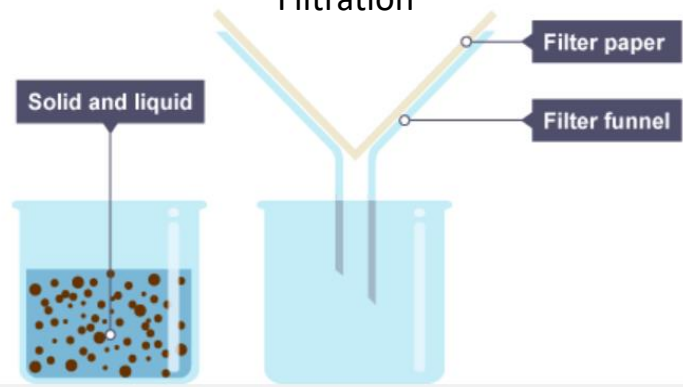
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metals and non-metals

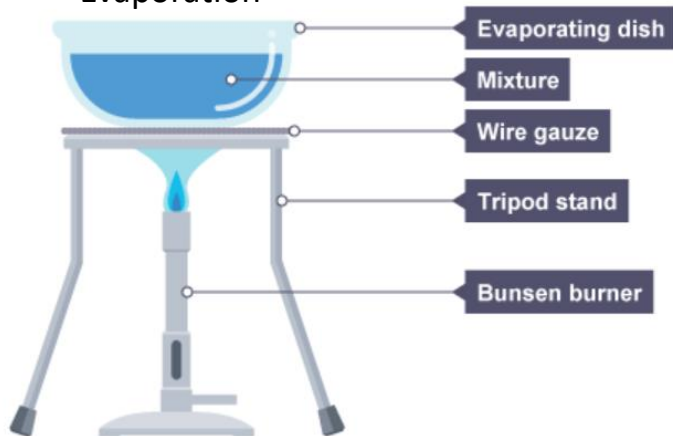
Groups	metals and non-metals										Periods							
1	2							3	4	5	6	7	0					
							H							He	1			
Li	Be							B	C	N	O	F	Ne		2			
Na	Mg							Al	Si	P	S	Cl	Ar		3			
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	4
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	5
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	6
Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og	7

Metals Non-metals

Filtration



Evaporation



Chromatography

