

Cambridge IGCSE Chemistry

Topic 9: The Periodic Table

Periodic trends

Notes





Describe the change from metallic to non-metallic character across a period

1		2												3	4	5	6	7	0
H 1												B 5	C 6	N 7	O 8	F 9	Ne 10		
Li 3		Be 4												Al 13	Si 14	P 15	S 16	Cl 17	Ar 18
Na 11		Mg 12												Ga 31	Ge 32	As 33	Se 34	Br 35	Kr 36
K 19		Ca 20		Sc 21	Ti 22	V 23	Cr 24	Mn 25	Fe 26	Co 27	Ni 28	Cu 29	Zn 30	Ga 31	Ge 32	As 33	Se 34	Br 35	Kr 36
Rb 37		Sr 38	Y 39	Zr 40	Nb 41	Mo 42	Tc 43	Ru 44	Rh 45	Pd 46	Ag 47	Cd 48	In 49	Sn 50	Sb 51	Te 52	I 53	Xe 54	
Cs 55		Ba 56	La 57	Hf 72	Ta 73	W 74	Re 75	Os 76	Ir 77	Pt 78	Au 79	Hg 80	Tl 81	Pb 82	Bi 83	Po 84	At 85	Rn 86	
(223) Fr 87		(226) Ra 88	(227) Ac 89											(113) Nh 113	(114) Fl 114	(115) Mc 115	(116) Lv 116	(117) Ts 117	(118) Og 118

- From left to right elements change from metallic to non-metallic character
- Metallic character/properties:
 - Shiny
 - Conductive
 - Dense
 - Malleable
- On either side of the red line, you have some elements known as “metalloids” that have both metallic and nonmetallic properties, such as silicon (which forms silicon dioxide...)

(Extended only) Describe and explain the relationship between Group number, number of outer shell electrons and metallic/non-metallic character

- Group number- shows the number of electrons in the outer shell
- Metallic /nonmetallic- metals form positive ions by losing electrons and nonmetals form negative ions by gaining electrons. All of group 1 and 2 are metals, all of group 7 and 8 (0) are nonmetals. In groups 3,4,5,6 there is a transition between metals and nonmetals.

