

Transition Elements

https://upload.wikimedia.org/wikipedia/commons/thumb/8/84/Periodic_table.svg/779px-Periodic_table.svg.png?20171004221501

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

Transition Elements are highlighted in RED

Properties

Good conductors of both heat and electricity

Dense, strong and shiny

Less reactive than Group 1 metals

have higher melting points than Group 1 metals

Compared to Group 1 metals they are denser, stronger and harder

Compounds

different ions form different coloured compounds

e.g. Copper (II) sulfate is blue

e.g. Potassium manganate is purple

Colours in gemstones are all due to the transition metals

e.g. blue sapphires

e.g. green emeralds

lons

Often have more than one ion

e.g. Fe^{2+} , Fe^{3+}

e.g. Cr^{2+} , Cr^{3+}

Good Catalysts

e.g. Iron is the catalyst in the Haber process

for making ammonia

e.g. Nickel is useful for turning oils into fats

for making margarine