1 1 Hydrogen															4 He Helium		
1 7 Lithium 3	9 Be Beryllium											3 11 <b>B</b> Boron 5	12 C Carbon	14 N Nitrogen	16 Oxygen 8	7 19 Fluorine 9	20 Neon 10
Na Sodium	Mg Magnesium											Aluminium 13	Si Silicon 14	Phosphorus	32 <b>S</b> Sulfur 16	35.5 Cl Chlorine 17	40 Ar Argon 18
4 K Potassium	Ca Calcium	Scandium 21	48 <b>Ti</b> Titanium 22	Vanadium 23	Cr	Mn	Fe Iron 26	Co Cobalt 27	59 <b>Ni</b> Nickel 28		65 <b>Zn</b> <sup>Zinc</sup> 30	70 <b>Ga</b> Gallium 31	73 <b>Ge</b> Germanium 32	75 <b>As</b> Arsenic 33	79 <b>Se</b> Selenium 34	Br Bromine 35	Kr Krypton 36
5 <b>Rb</b> Rubidium 37	88 Sr Stronium	89 Y Yttrium 39	91 <b>Zr</b> Zirconium 40	93 <b>Nb</b> Niobium	96 Mo Molybdenum 42	99 TC Technetium 43	Ru Ruthenium	Rhodium	Palladium	Ag Silver	Cd Cadmium	Indium	119 <b>Sn</b> Tin 50	Sb Antimony	Te Tellurium	127 I Iodine 53	Xe Xenon
133 Cs Ceasium	Ba Barium	57-71	178 <b>Hf</b> Hafnium 72	Ta Tantalum		Re Rhenium	190 Os Osmium	192 Ir Iridium 77	195 Pt Platinum 78	197 <b>Au</b> Gold 79	201 Hg Mercury 80	TL Thallium	207 <b>Pb</b> Lead 82	Bi Bismuth	(209) Po Polonium 84	(210) At Astatine 85	(222) Rn Radon 86
(223) Fr Francium 87	(226) Ra Radium 88	89-103	(261) Rf Rutherfordium 104	(262) Db Dubnium 105	(266) Seaborgium	(264) Bh Bohrium	(269) HS Hassium 108	(268)  Mt  Meitnerium 109	(269) <b>DS</b>	(272) Roentgenium 111	(285) Cn Copernicium 112	(286) Nh Nihomium 113	(289) Flerovium 114	(289) MC Moscovium 115	(293) LV Livermorium 116	(294) TS Tennessine 117	(294) Oganessor 118

Lanthanide Series	La Lanthanum	Ce Carium	Proceed mixing	Nadymium	(145) Pm Promethium	150 <b>Sm</b>	Europium	Gadolinium	Tb	Dy	Но	167 <b>Er</b> Erbium	Tm Thulium	Уb	Lu Lutetium
	57	58	59	60	61	62	63	64	65	Dysprosium 66	67	68	69	70	71
Actinide Series	(227)	232 <b>TL</b>	231	238	(237)	(244)	(243)	(247)	(247)	(251) <b>C£</b>	(252)	(257)	(258)	(259)	(266)
	AC	I IL	Pa	U	ир	Pu	Am	CIII	DK	Californium	ES		I <sup>V</sup> I Q	Nobelium	Lr
	Actinium 89	Thorium 90	Protractinium 91	92	Neptunium 93	94	Americium 95	Curium 96	Berkelium 97	Californium 98	99	100	Mendelevium 101		Lawrencium 103



Alkali Metal Alkaline Earth Transition Metal Basic Metal

Semi Metal Non Metal Halogen

Noble Gas Lanthanide

Actinide

Solid

d Liquid

id C

Unknown

