

# Periodic Table of the Elements

(based on  $^{12}_6\text{C} = 12.0000$ )

Group		Transition Metals										Representative Elements						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1A	2A											3A	4A	5A	6A	7A	8A	
1	<b>H</b> Hydrogen 1.008																	<b>He</b> Helium 4.003
2	<b>Li</b> Lithium 6.941	<b>Be</b> Beryllium 9.012											<b>B</b> Boron 10.81	<b>C</b> Carbon 12.011	<b>N</b> Nitrogen 14.007	<b>O</b> Oxygen 15.999	<b>F</b> Fluorine 18.998	<b>Ne</b> Neon 20.180
3	<b>Na</b> Sodium 22.990	<b>Mg</b> Magnesium 24.305	<b>3B</b>	<b>4B</b>	<b>5B</b>	<b>6B</b>	<b>7B</b>	<b>8B</b>		<b>1B</b>	<b>2B</b>	<b>Al</b> Aluminum 26.982	<b>Si</b> Silicon 28.086	<b>P</b> Phosphorus 30.974	<b>S</b> Sulfur 32.06	<b>Cl</b> Chlorine 35.453	<b>Ar</b> Argon 39.948	
4	<b>K</b> Potassium 39.098	<b>Ca</b> Calcium 40.078	<b>Sc</b> Scandium 44.956	<b>Ti</b> Titanium 47.88	<b>V</b> Vanadium 50.942	<b>Cr</b> Chromium 51.996	<b>Mn</b> Manganese 54.938	<b>Fe</b> Iron 55.847	<b>Co</b> Cobalt 58.933	<b>Ni</b> Nickel 58.693	<b>Cu</b> Copper 63.546	<b>Zn</b> Zinc 65.39	<b>Ga</b> Gallium 69.723	<b>Ge</b> Germanium 72.61	<b>As</b> Arsenic 74.922	<b>Se</b> Selenium 78.96	<b>Br</b> Bromine 79.904	<b>Kr</b> Krypton 83.80
5	<b>Rb</b> Rubidium 85.468	<b>Sr</b> Strontium 87.62	<b>Y</b> Yttrium 88.906	<b>Zr</b> Zirconium 91.224	<b>Nb</b> Niobium 92.906	<b>Mo</b> Molybdenum 95.94	<b>Tc</b> Technetium 98	<b>Ru</b> Ruthenium 101.07	<b>Rh</b> Rhodium 102.906	<b>Pd</b> Palladium 106.42	<b>Ag</b> Silver 107.868	<b>Cd</b> Cadmium 112.411	<b>In</b> Indium 114.82	<b>Sn</b> Tin 118.710	<b>Sb</b> Antimony 121.757	<b>Te</b> Tellurium 127.60	<b>I</b> Iodine 126.905	<b>Xe</b> Xenon 131.29
6	<b>Cs</b> Cesium 132.905	<b>Ba</b> Barium 137.327	<b>La</b> Lanthanum 138.905	<b>Hf</b> Hafnium 178.49	<b>Ta</b> Tantalum 180.948	<b>W</b> Tungsten 183.85	<b>Re</b> Rhenium 186.207	<b>Os</b> Osmium 190.2	<b>Ir</b> Iridium 192.22	<b>Pt</b> Platinum 195.08	<b>Au</b> Gold 196.967	<b>Hg</b> Mercury 200.59	<b>Tl</b> Thallium 204.383	<b>Pb</b> Lead 207.2	<b>Bi</b> Bismuth 208.980	<b>Po</b> Polonium 208.982	<b>At</b> Astatine 210	<b>Rn</b> Radon 222
7	<b>Fr</b> Francium 223	<b>Ra</b> Radium 226.025	<b>Ac</b> Actinium 227.028	<b>Rf</b> Rutherfordium (261)	<b>Db</b> Dubnium (262)	<b>Sg</b> Seaborgium (263)	<b>Bh</b> Bohrium (264)	<b>Hs</b> Hassium (265)	<b>Mt</b> Meitnerium (268)									

14	Atomic number
<b>Si</b>	Symbol
Silicon	Name
28.086	Average Atomic Mass



## Inner Transition Metals

### Lanthanide series

58	59	60	61	62	63	64	65	66	67	68	69	70	71
<b>Ce</b> Cerium 140.12	<b>Pr</b> Praseodymium 140.908	<b>Nd</b> Neodymium 144.24	<b>Pm</b> Promethium 144.913	<b>Sm</b> Samarium 150.36	<b>Eu</b> Europium 151.96	<b>Gd</b> Gadolinium 157.25	<b>Tb</b> Terbium 158.925	<b>Dy</b> Dysprosium 162.50	<b>Ho</b> Holmium 164.930	<b>Er</b> Erbium 167.26	<b>Tm</b> Thulium 168.934	<b>Yb</b> Ytterbium 173.04	<b>Lu</b> Lutetium 174.967

90	91	92	93	94	95	96	97	98	99	100	101	102	103
<b>Th</b> Thorium 232.038	<b>Pa</b> Protactinium 231.036	<b>U</b> Uranium 238.029	<b>Np</b> Neptunium 237.048	<b>Pu</b> Plutonium 244.064	<b>Am</b> Americium 243.061	<b>Cm</b> Curium 247.070	<b>Bk</b> Berkelium 247.070	<b>Cf</b> Californium 251.080	<b>Es</b> Einsteinium 252.083	<b>Fm</b> Fermium 257.095	<b>Md</b> Mendelevium 258.099	<b>No</b> Nobelium 259.101	<b>Lr</b> Lawrencium 260.105

### Actinide series