

# PERIODIC TABLE OF THE ELEMENTS

1 IA																	18 VIIIA						
1 <b>H</b> Hydrogen 1.008 1																	2 <b>He</b> Helium 4.003 2						
2 IIA																	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA		
3 <b>Li</b> Lithium 6.941 2	4 <b>Be</b> Beryllium 9.012 22																	5 <b>B</b> Boron 10.811 23	6 <b>C</b> Carbon 12.011 24	7 <b>N</b> Nitrogen 14.007 25	8 <b>O</b> Oxygen 15.999 26	9 <b>F</b> Fluorine 18.998 27	10 <b>Ne</b> Neon 20.180 28
3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8 VIII	9 VIII	10 VIII	11 IB	12 IIB									13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	
11 <b>Na</b> Sodium 22.990 281	12 <b>Mg</b> Magnesium 24.305 282																	13 <b>Al</b> Aluminum 26.982 283	14 <b>Si</b> Silicon 28.086 284	15 <b>P</b> Phosphorus 30.974 285	16 <b>S</b> Sulfur 32.066 286	17 <b>Cl</b> Chlorine 35.453 287	18 <b>Ar</b> Argon 39.948 288
4 <b>K</b> Potassium 39.098 2881	20 <b>Ca</b> Calcium 40.078 2882	21 <b>Sc</b> Scandium 44.956 2892	22 <b>Ti</b> Titanium 47.867 28102	23 <b>V</b> Vanadium 50.942 28112	24 <b>Cr</b> Chromium 51.996 28132	25 <b>Mn</b> Manganese 54.938 28132	26 <b>Fe</b> Iron 55.845 28142	27 <b>Co</b> Cobalt 58.933 28152	28 <b>Ni</b> Nickel 58.693 28162	29 <b>Cu</b> Copper 63.546 28181	30 <b>Zn</b> Zinc 65.38 28182	31 <b>Ga</b> Gallium 69.723 28183	32 <b>Ge</b> Germanium 72.631 28184	33 <b>As</b> Arsenic 74.922 28185	34 <b>Se</b> Selenium 78.971 28186	35 <b>Br</b> Bromine 79.904 28187	36 <b>Kr</b> Krypton 83.798 28188						
5 <b>Rb</b> Rubidium 85.468 281881	38 <b>Sr</b> Strontium 87.62 281882	39 <b>Y</b> Yttrium 88.906 281892	40 <b>Zr</b> Zirconium 91.224 2818102	41 <b>Nb</b> Niobium 92.906 2818121	42 <b>Mo</b> Molybdenum 95.95 2818131	43 <b>Tc</b> Technetium 98.907 2818132	44 <b>Ru</b> Ruthenium 101.07 2818151	45 <b>Rh</b> Rhodium 102.906 2818161	46 <b>Pd</b> Palladium 106.42 281818	47 <b>Ag</b> Silver 107.868 2818181	48 <b>Cd</b> Cadmium 112.414 2818182	49 <b>In</b> Indium 114.818 2818183	50 <b>Sn</b> Tin 118.711 2818184	51 <b>Sb</b> Antimony 121.760 2818185	52 <b>Te</b> Tellurium 127.6 2818186	53 <b>I</b> Iodine 126.904 2818187	54 <b>Xe</b> Xenon 131.293 2818188						
6 <b>Cs</b> Cesium 132.905 28181881	56 <b>Ba</b> Barium 137.328 28181882	57-71 Lanthanoids	72 <b>Hf</b> Hafnium 178.49 2818132102	73 <b>Ta</b> Tantalum 180.948 2818132112	74 <b>W</b> Tungsten 183.84 2818132122	75 <b>Re</b> Rhenium 186.207 2818132132	76 <b>Os</b> Osmium 190.23 2818132142	77 <b>Ir</b> Iridium 192.217 2818132152	78 <b>Pt</b> Platinum 195.085 2818132171	79 <b>Au</b> Gold 196.967 2818132181	80 <b>Hg</b> Mercury 200.592 2818132182	81 <b>Tl</b> Thallium 204.383 2818132183	82 <b>Pb</b> Lead 207.2 2818132184	83 <b>Bi</b> Bismuth 208.980 2818132185	84 <b>Po</b> Polonium [208.982] 2818132186	85 <b>At</b> Astatine 209.987 2818132187	86 <b>Rn</b> Radon 222.018 2818132188						
7 <b>Fr</b> Francium 223.020 2818321881	88 <b>Ra</b> Radium 226.025 2818321882	89-103 Actinoids	104 <b>Rf</b> Rutherfordium [261] 28183232102	105 <b>Db</b> Dubnium [262] 28183232112	106 <b>Sg</b> Seaborgium [266] 28183232122	107 <b>Bh</b> Bohrium [264] 28183232132	108 <b>Hs</b> Hassium [269] 28183232142	109 <b>Mt</b> Meitnerium [278] 28183232152	110 <b>Ds</b> Darmstadtium [281] 28183232162	111 <b>Rg</b> Roentgenium [280] 28183232172	112 <b>Cn</b> Copernicium [285] 28183232182	113 <b>Nh</b> Nihonium [286] 28183232183	114 <b>Fl</b> Flerovium [289] 28183232184	115 <b>Mc</b> Moscovium [289] 28183232185	116 <b>Lv</b> Livermorium [293] 28183232186	117 <b>Ts</b> Tennessine [294] 28183232187	118 <b>Og</b> Oganesson [294] 28183232188						

**Group (IUPAC)** — 11  
**Group (CAS)** — IB

**Atomic Number** — 79  
**Symbol** — Au  
**Name** — Gold  
**Atomic Mass** — 196.967

**Oxidation States** — +3, +1

**Electron Shell Configuration** — 2 8 18 32 18 1

**ELECTRON SHELLS**

Energy Level	1	2	3	4	5	6	7	8
Shell Name	K	L	M	N	O	P	Q	R
Max. Electrons	2	8	18	32	32	18	8	2
s	2	2	2	2	2	2	2	2
p		6	6	6	6	6		
d			10	10	10	10		
f				14	14			

Lanthanoids

57 <b>La</b> Lanthanum 138.905 28181892	58 <b>Ce</b> Cerium 140.116 28181992	59 <b>Pr</b> Praseodymium 140.908 28182182	60 <b>Nd</b> Neodymium 144.243 28182282	61 <b>Pm</b> Promethium 144.913 28182382	62 <b>Sm</b> Samarium 150.36 28182482	63 <b>Eu</b> Europium 151.964 28182582	64 <b>Gd</b> Gadolinium 157.25 28182592	65 <b>Tb</b> Terbium 158.925 28182782	66 <b>Dy</b> Dysprosium 162.500 28182882	67 <b>Ho</b> Holmium 164.930 28182982	68 <b>Er</b> Erbium 167.259 28183082	69 <b>Tm</b> Thulium 168.934 28183182	70 <b>Yb</b> Ytterbium 173.055 28183282	71 <b>Lu</b> Lutetium 174.967 28183292
---	--	--	---	--	---	--	---	---	--	---	--	---	---	--

Actinoids

89 <b>Ac</b> Actinium 227.028 2818321892	90 <b>Th</b> Thorium 232.038 28183218102	91 <b>Pa</b> Protactinium 231.036 2818322092	92 <b>U</b> Uranium 238.029 2818322192	93 <b>Np</b> Neptunium 237.048 2818322292	94 <b>Pu</b> Plutonium 244.064 2818322482	95 <b>Am</b> Americium 243.061 2818322582	96 <b>Cm</b> Curium 247.070 2818322592	97 <b>Bk</b> Berkelium 247.070 2818322782	98 <b>Cf</b> Californium 251.080 2818322882	99 <b>Es</b> Einsteinium [254] 2818322982	100 <b>Fm</b> Fermium 257.095 2818323082	101 <b>Md</b> Mendelevium 258.1 2818323182	102 <b>No</b> Nobelium 259.101 2818323282	103 <b>Lr</b> Lawrencium [262] 2818323283
--	--	--	--	---	---	---	--	---	---	---	--	--	---	---