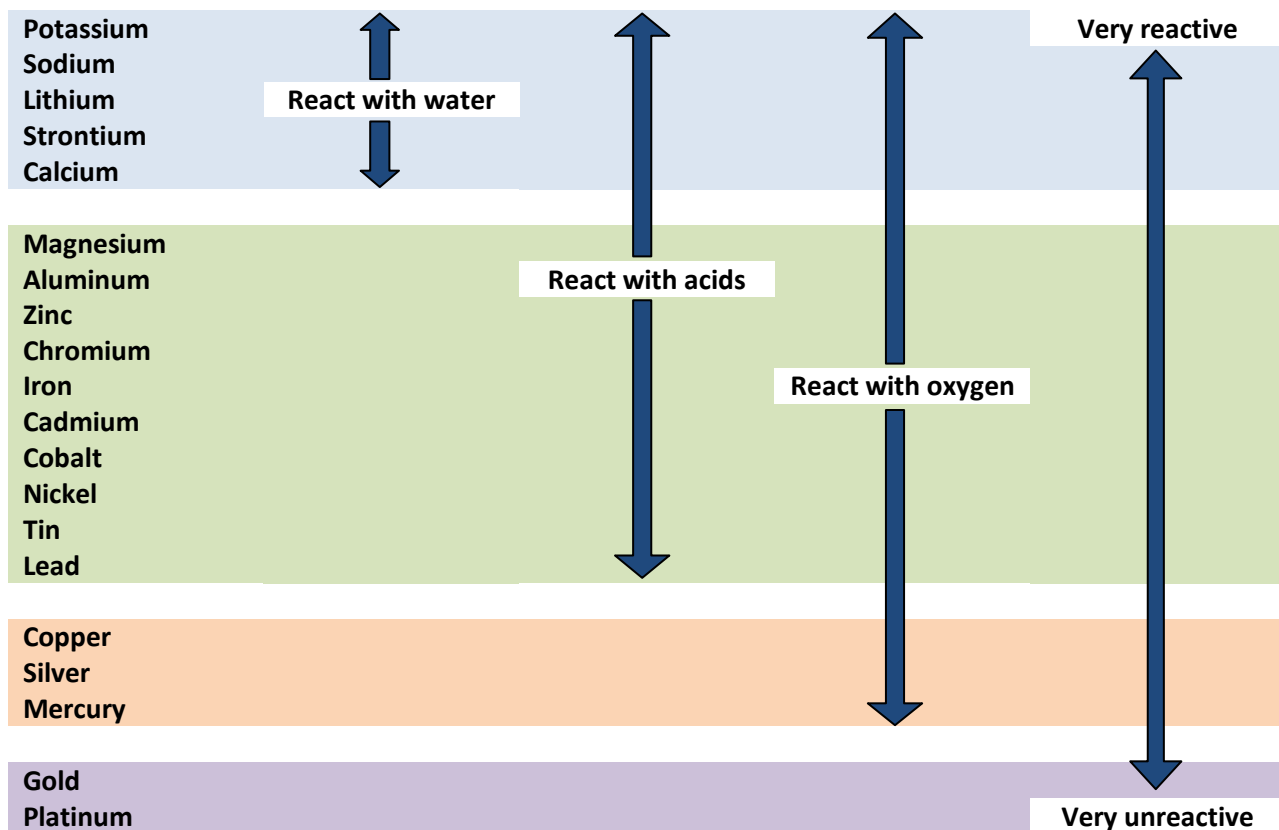


# The Periodic Table of the Elements

IA												VIIIA																																	
1 <b>H</b> 1.008	IIA										5 <b>B</b> 10.81	6 <b>C</b> 12.01	7 <b>N</b> 14.01	8 <b>O</b> 16.00	9 <b>F</b> 19.00	10 <b>Ne</b> 20.18																													
3 <b>Li</b> 6.941	4 <b>Be</b> 9.012											13 <b>Al</b> 26.98	14 <b>Si</b> 28.09	15 <b>P</b> 30.97	16 <b>S</b> 32.07	17 <b>Cl</b> 35.45	18 <b>Ar</b> 39.95																												
11 <b>Na</b> 22.99	12 <b>Mg</b> 24.31	IIIB	IVB	VB	VIB	VIIIB	VIII			IB	IIIB	31 <b>Ga</b> 69.72	32 <b>Ge</b> 72.61	33 <b>As</b> 74.92	34 <b>Se</b> 78.96	35 <b>Br</b> 79.90	36 <b>Kr</b> 83.80																												
19 <b>K</b> 39.10	20 <b>Ca</b> 40.08	21 <b>Sc</b> 44.96	22 <b>Ti</b> 47.87	23 <b>V</b> 50.94	24 <b>Cr</b> 52.00	25 <b>Mn</b> 54.94	26 <b>Fe</b> 55.85	27 <b>Co</b> 58.93	28 <b>Ni</b> 58.69	29 <b>Cu</b> 63.55	30 <b>Zn</b> 65.39	49 <b>In</b> 114.8	50 <b>Sn</b> 118.7	51 <b>Sb</b> 121.8	52 <b>Te</b> 127.6	53 <b>I</b> 126.9	54 <b>Xe</b> 131.3																												
37 <b>Rb</b> 85.47	38 <b>Sr</b> 87.62	39 <b>Y</b> 88.91	40 <b>Zr</b> 91.22	41 <b>Nb</b> 92.91	42 <b>Mo</b> 95.94	43 <b>Tc</b> (98)	44 <b>Ru</b> 101.1	45 <b>Rh</b> 102.9	46 <b>Pd</b> 106.4	47 <b>Ag</b> 107.9	48 <b>Cd</b> 112.4	81 <b>Tl</b> 204.4	82 <b>Pb</b> 207.2	83 <b>Bi</b> 209.0	84 <b>Po</b> (209)	85 <b>At</b> (210)	86 <b>Rn</b> (222)																												
55 <b>Cs</b> 132.9	56 <b>Ba</b> 137.3	57 <b>La</b> 138.9	72 <b>Hf</b> 178.5	73 <b>Ta</b> 180.9	74 <b>W</b> 183.8	75 <b>Re</b> 186.2	76 <b>Os</b> 190.2	77 <b>Ir</b> 192.2	78 <b>Pt</b> 195.1	79 <b>Au</b> 197.0	80 <b>Hg</b> 200.6																																		
87 <b>Fr</b> (223)	88 <b>Ra</b> (226)	89 <b>Ac</b> (227)	104 <b>Rf</b> (261)	105 <b>Db</b> (262)	106 <b>Sg</b> (266)	107 <b>Bh</b> (264)	108 <b>Hs</b> (269)	109 <b>Mt</b> (268)	110 <b>Uun</b> (271)	111 <b>Uuu</b> (272)	112 <b>Uub</b> (277)																																		
<table border="1"> <tbody> <tr> <td>58 <b>Ce</b> 140.1</td> <td>59 <b>Pr</b> 140.9</td> <td>60 <b>Nd</b> 144.2</td> <td>61 <b>Pm</b> (145)</td> <td>62 <b>Sm</b> 150.4</td> <td>63 <b>Eu</b> 152.0</td> <td>64 <b>Gd</b> 157.3</td> <td>65 <b>Tb</b> 158.9</td> <td>66 <b>Dy</b> 162.5</td> <td>67 <b>Ho</b> 164.9</td> <td>68 <b>Er</b> 167.3</td> <td>69 <b>Tm</b> 168.9</td> <td>70 <b>Yb</b> 173.0</td> <td>71 <b>Lu</b> 175.0</td> </tr> <tr> <td>90 <b>Th</b> 232.0</td> <td>91 <b>Pa</b> (231)</td> <td>92 <b>U</b> 238.0</td> <td>93 <b>Np</b> (237)</td> <td>94 <b>Pu</b> (244)</td> <td>95 <b>Am</b> (243)</td> <td>96 <b>Cm</b> (247)</td> <td>97 <b>Bk</b> (247)</td> <td>98 <b>Cf</b> (251)</td> <td>99 <b>Es</b> (252)</td> <td>100 <b>Fm</b> (257)</td> <td>101 <b>Md</b> (258)</td> <td>102 <b>No</b> (259)</td> <td>103 <b>Lr</b> (262)</td> </tr> </tbody> </table>																		58 <b>Ce</b> 140.1	59 <b>Pr</b> 140.9	60 <b>Nd</b> 144.2	61 <b>Pm</b> (145)	62 <b>Sm</b> 150.4	63 <b>Eu</b> 152.0	64 <b>Gd</b> 157.3	65 <b>Tb</b> 158.9	66 <b>Dy</b> 162.5	67 <b>Ho</b> 164.9	68 <b>Er</b> 167.3	69 <b>Tm</b> 168.9	70 <b>Yb</b> 173.0	71 <b>Lu</b> 175.0	90 <b>Th</b> 232.0	91 <b>Pa</b> (231)	92 <b>U</b> 238.0	93 <b>Np</b> (237)	94 <b>Pu</b> (244)	95 <b>Am</b> (243)	96 <b>Cm</b> (247)	97 <b>Bk</b> (247)	98 <b>Cf</b> (251)	99 <b>Es</b> (252)	100 <b>Fm</b> (257)	101 <b>Md</b> (258)	102 <b>No</b> (259)	103 <b>Lr</b> (262)
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**TABLE OF POLYATOMIC IONS**

<b>Acetate</b>	<b>CH<sub>3</sub>COO<sup>-</sup></b>	Chlorite	ClO <sub>2</sub> <sup>-</sup>	Oxalate	O <sup>-</sup> OC <sup>-</sup> COO <sup>2-</sup>	Hydrogen sulfate or bisulfate	HSO <sub>4</sub> <sup>-</sup>
<b>Ammonium</b>	<b>NH<sub>4</sub><sup>+</sup></b>	Hypochlorite	ClO <sup>-</sup>	<b>Permanganate</b>	<b>MnO<sub>4</sub><sup>-</sup></b>		
Benzoate	C <sub>6</sub> H <sub>5</sub> COO <sup>-</sup>	<b>Chromate</b>	<b>CrO<sub>4</sub><sup>2-</sup></b>	<b>Phosphate</b>	<b>PO<sub>4</sub><sup>3-</sup></b>	Hydrogen sulfite or bisulfate	HSO <sub>3</sub> <sup>-</sup>
Borate	BO <sub>3</sub> <sup>-</sup>	<b>Dichromate</b>	<b>Cr<sub>2</sub>O<sub>7</sub><sup>2-</sup></b>	Hydrogen phosphate	HPO <sub>4</sub> <sup>2-</sup>		
Tetraborate	B <sub>4</sub> O <sub>7</sub> <sup>2-</sup>	Cyanide	CN <sup>-</sup>	Dihydrogen phosphate	H <sub>2</sub> PO <sub>4</sub> <sup>-</sup>	Thiocyanate	SCN <sup>-</sup>
<b>Bromate</b>	<b>BrO<sub>3</sub><sup>-</sup></b>	Glutamate	C <sub>5</sub> H <sub>8</sub> NO <sub>4</sub> <sup>-</sup>	Triphosphosphate	P <sub>3</sub> O <sub>10</sub> <sup>5-</sup>	Thiosulfate	S <sub>2</sub> O <sub>3</sub> <sup>2-</sup>
<b>Carbonate</b>	<b>CO<sub>3</sub><sup>2-</sup></b>	<b>Hydroxide</b>	<b>OH<sup>-</sup></b>	Silicate	SiO <sub>3</sub> <sup>2-</sup>	<b>* Bold ions are used often!</b>	
<b>Hydrogen carbonate or bicarbonate</b>	<b>HCO<sub>3</sub><sup>-</sup></b>	<b>Iodate</b>	<b>IO<sub>3</sub><sup>-</sup></b>	<b>Sulfate</b>	<b>SO<sub>4</sub><sup>2-</sup></b>		
<b>Chlorate</b>	<b>ClO<sub>3</sub><sup>-</sup></b>	<b>Nitrate</b>	<b>NO<sub>3</sub><sup>-</sup></b>	Sulfite	SO <sub>3</sub> <sup>2-</sup>		
Perchlorate	ClO <sub>4</sub> <sup>-</sup>	Nitrite	NO <sub>2</sub> <sup>-</sup>	Hydrogen sulfide or bisulfide	HS <sup>-</sup>		