## Periodic Table of the Elements

|   | 1                               |                      |                           |                        |                      |                                |                             |                      |  |                     |                          |                              |                     |                        |                            |                                 |                            | 18                   |
|---|---------------------------------|----------------------|---------------------------|------------------------|----------------------|--------------------------------|-----------------------------|----------------------|--|---------------------|--------------------------|------------------------------|---------------------|------------------------|----------------------------|---------------------------------|----------------------------|----------------------|
| 1 | <sup>1</sup> H                  |                      | <u>Legend:</u>            |                        |                      | Ordinal black = nonradioactive |                             |                      | Group  alkaline metals metals                                |                     |                          |                              |                     |                        |                            |                                 |                            | <sup>2</sup> He      |
|   | 1.008                           | group ordinal        |                           |                        |                      | green = radioactive<br>Symbol  |                             |                      | alkaline-earth metals metaloids transition metals non-metals |                     |                          | loids                        | 13<br>5 B           | 14<br>6 C              | 15                         | 16<br>8                         | 17                         | 4.003                |
| 2 | <sup>3</sup> <b>Li</b><br>6.941 | <b>Be</b> 9.012      | -A!                       |                        |                      | black = solid<br>blue = liquid |                             |                      | lanthanides halogenes actinides noble gases                  |                     |                          | genes                        | <b>B</b> 10.811     | 12.011                 | 14.007                     | 8<br>0<br>15.999                | 9<br>F<br>18.998           | 20.180               |
| 3 | 11<br>Na<br>22.990              | 12<br>Mg<br>24.305   |                           |                        |                      | red = g                        |                             |                      |  |                     |                          |                              | 13 Al<br>26.982     | 14<br>Si<br>28.085     | 15 P<br>30.974             | <sup>16</sup> S<br>32.065       | 17 CI<br>35.453            | 18 Ar<br>39.948      |
| 4 | 19<br>K<br>39.098               | 20 Ca<br>40.078      | 21<br>Sc<br>44.955        | <b>22 Ti</b> 47.867    | 23 V<br>50.941       | 24 Cr<br>51.996                | 25 Mn<br>54.938             | 26 Fe<br>55.845      | 27<br>Co<br>58.933   | 28 <b>Ni</b> 58.693 | 29<br>Cu<br>63.546       | 30 <b>Zn</b> 65.380          | 31 <b>Ga</b> 69.723 | 32 <b>Ge</b><br>72.640 | 33<br>As<br>74.922         | 34 Se<br>78.971                 | 35<br>Br<br>79.904         | 36 Kr<br>83.798      |
| 5 | 37<br><b>Rb</b><br>85.468       | 38 Sr<br>87.620      | <sup>39</sup> Y<br>88.906 | 40 <b>Zr</b><br>91.224 | 41 Nb<br>92.906      | 42 <b>Mo</b> 95.950            | 43 Tc<br>98.906             | 44 Ru<br>101.070     | 45 Rh<br>102.905   | 46 Pd<br>106.420    | 47<br>Ag<br>107.868      | 48 Cd<br>112.411             | 49 In<br>114.818    | 50 Sn<br>118.710       | 51<br>Sb<br>121.760        | <sup>52</sup> Te<br>127.600     | <sup>53</sup> I<br>126.904 | <b>54</b> Xe 131.293 |
| 6 | 55 Cs<br>132.905                | <b>56 Ba</b> 137.327 |                           | 72<br>Hf<br>178.490    | <b>73 Ta</b> 180.948 | <b>74</b> W 183.840            | <b>75 Re</b> 186.207        | <b>76 Os</b> 190.230 | 77<br>Ir<br>192.217  | 78 Pt<br>195.084    | <b>79</b> Au<br>196.967  | 80<br>Hg<br>200.590          | 81 TI<br>204.383    | 82 Pb<br>207.200       | 83<br><b>Bi</b><br>208.980 | 84 <b>Po</b> 208.982            | 85 At<br>209.987           | 86 Rn<br>222.018     |
| 7 | 87 Fr<br>223.020                | 88 Ra<br>226.025     |                           | 104<br>Rf<br>261.109   | 105<br>Db<br>262.114 | 106<br>Sg<br>263.118           | 107<br>Bh<br>262.123        | 108<br>Hs<br>270.000 | 109<br>Mt<br>268.000   | 110 Ds<br>281.000   | 111 <b>Rg</b><br>280.000 | <sup>112</sup> Cn<br>277.000 | 113 Nh<br>287.000   | 114 FI<br>289.000      | 115 Mc<br>288.000          | 116<br>LV<br>293.000            | 117<br>Ts<br>292.000       | 118 Og<br>294.000    |
|   |                                 |                      | E7                        | 58 _                   | Ε0                   | 60                             |                             | 62 _                 | 63   | 64                  | 65                       | 66                           | 67                  | 60                     | 60                         | 70                              | 74                         |                      |
|   |                                 |                      | <b>57 La</b> 138.905      | <b>Ce</b> 140.116      | 59<br>Pr<br>140.908  | 60 Nd<br>144.242               | <sup>61</sup> Pm<br>146.915 | <b>Sm</b> 150.360    | 63<br>Eu<br>151.964  | 157.250             | 65 <b>Tb</b> 158.925     | 66 <b>Dy</b><br>162.500      | <b>Ho</b> 164.930   | 68 Er<br>167.259       | <b>69 Tm</b> 168.934       | <sup>70</sup> <b>Yb</b> 173.054 | 71<br>Lu<br>174.967        |                      |
|   |                                 |                      | 89 Ac<br>227.028          | 90 Th<br>232.038       |                      |                                | 93<br>Np<br>237.048         | 94<br>Pu<br>244.064  | 95<br>Am<br>243.000  | <sup>96</sup> Cm    | 97<br>Bk<br>247.000      |                              |                     | 100 Fm<br>257.000      | 101 Md<br>258.000          | 102 No<br>259.000               |                            |                      |