

# Periodic Table of Elements

|                               |                                |                               |                                |                                   |                                 |                                |                                |                              |                                |                                  |                                 |                                 |                                |                               |                                  |                                 |                                  |                                 |                            |                               |                            |
|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-----------------------------------|---------------------------------|--------------------------------|--------------------------------|------------------------------|--------------------------------|----------------------------------|---------------------------------|---------------------------------|--------------------------------|-------------------------------|----------------------------------|---------------------------------|----------------------------------|---------------------------------|----------------------------|-------------------------------|----------------------------|
| 1<br>H<br>1.008<br>Hydrogen   |                                |                               |                                |                                   |                                 |                                |                                |                              |                                |                                  |                                 |                                 |                                |                               |                                  |                                 | 2<br>He<br>4.003<br>Helium       |                                 |                            |                               |                            |
| 3<br>Li<br>6.941<br>Lithium   | 4<br>Be<br>9.012<br>Beryllium  |                               |                                |                                   |                                 |                                |                                |                              |                                |                                  |                                 |                                 |                                |                               |                                  | 5<br>B<br>10.81<br>Boron        | 6<br>C<br>12.01<br>Carbon        | 7<br>N<br>14.01<br>Nitrogen     | 8<br>O<br>16<br>Oxygen     | 9<br>F<br>19<br>Fluorine      | 10<br>Ne<br>20.18<br>Neon  |
| 11<br>Na<br>22.99<br>Sodium   | 12<br>Mg<br>24.31<br>Magnesium |                               |                                |                                   |                                 |                                |                                |                              |                                |                                  |                                 |                                 |                                |                               |                                  | 13<br>Al<br>26.98<br>Aluminum   | 14<br>Si<br>28.09<br>Silicon     | 15<br>P<br>30.97<br>Phosphorus  | 16<br>S<br>32.07<br>Sulfur | 17<br>Cl<br>35.45<br>Chlorine | 18<br>Ar<br>39.95<br>Argon |
| 19<br>K<br>39.1<br>Potassium  | 20<br>Ca<br>40.08<br>Calcium   | 21<br>Sc<br>44.96<br>Scandium | 22<br>Ti<br>47.87<br>Titanium  | 23<br>V<br>50.94<br>Vanadium      | 24<br>Cr<br>52<br>Chromium      | 25<br>Mn<br>54.94<br>Manganese | 26<br>Fe<br>55.85<br>Iron      | 27<br>Co<br>58.93<br>Cobalt  | 28<br>Ni<br>58.69<br>Nickel    | 29<br>Cu<br>63.55<br>Copper      | 30<br>Zn<br>65.41<br>Zinc       | 31<br>Ga<br>69.72<br>Gallium    | 32<br>Ge<br>72.64<br>Germanium | 33<br>As<br>74.92<br>Arsenic  | 34<br>Se<br>78.96<br>Selenium    | 35<br>Br<br>79.9<br>Bromine     | 36<br>Kr<br>83.8<br>Krypton      |                                 |                            |                               |                            |
| 37<br>Rb<br>85.47<br>Rubidium | 38<br>Sr<br>87.62<br>Strontium | 39<br>Y<br>88.91<br>Yttrium   | 40<br>Zr<br>91.22<br>Zirconium | 41<br>Nb<br>92.91<br>Niobium      | 42<br>Mo<br>95.94<br>Molybdenum | 43<br>Tc<br>98<br>Technetium   | 44<br>Ru<br>101.1<br>Ruthenium | 45<br>Rh<br>102.9<br>Rhodium | 46<br>Pd<br>106.4<br>Palladium | 47<br>Ag<br>107.9<br>Silver      | 48<br>Cd<br>112.4<br>Cadmium    | 49<br>In<br>114.8<br>Indium     | 50<br>Sn<br>118.7<br>Tin       | 51<br>Sb<br>121.8<br>Antimony | 52<br>Te<br>127.6<br>Tellurium   | 53<br>I<br>126.9<br>Iodine      | 54<br>Xe<br>131.3<br>Xenon       |                                 |                            |                               |                            |
| 55<br>Cs<br>132.9<br>Cesium   | 56<br>Ba<br>137.3<br>Barium    |                               |                                | 72<br>Hf<br>178.5<br>Hafnium      | 73<br>Ta<br>180.9<br>Tantalum   | 74<br>W<br>183.8<br>Tungsten   | 75<br>Re<br>186.2<br>Rhenium   | 76<br>Os<br>190.2<br>Osmium  | 77<br>Ir<br>192.2<br>Iridium   | 78<br>Pt<br>195.1<br>Platinum    | 79<br>Au<br>197<br>Gold         | 80<br>Hg<br>200.6<br>Mercury    | 81<br>Tl<br>204.4<br>Thallium  | 82<br>Pb<br>207.2<br>Lead     | 83<br>Bi<br>209<br>Bismuth       | 84<br>Po<br>209<br>Polonium     | 85<br>At<br>210<br>Astatine      | 86<br>Rn<br>222<br>Radon        |                            |                               |                            |
| 87<br>Fr<br>223<br>Francium   | 88<br>Ra<br>226<br>Radium      |                               |                                | 104<br>Rf<br>261<br>Rutherfordium | 105<br>Db<br>262<br>Dubnium     | 106<br>Sg<br>266<br>Seaborgium | 107<br>Bh<br>264<br>Bohrium    | 108<br>Hs<br>277<br>Hassium  | 109<br>Mt<br>268<br>Meitnerium | 110<br>Ds<br>281<br>Darmstadtium | 111<br>Rg<br>272<br>Roentgenium | 112<br>Cn<br>285<br>Copernicium | 113<br>Uut<br>284<br>Ununtrium | 114<br>Fl<br>289<br>Flerovium | 115<br>Uup<br>288<br>Ununpentium | 116<br>Lv<br>292<br>Livermorium | 117<br>Uus<br>293<br>Ununseptium | 118<br>Uuo<br>294<br>Ununoctium |                            |                               |                            |

|                                |                             |                                   |                                |                               |                               |                              |                                 |                              |                                 |                                |                             |                                 |                              |                                |
|--------------------------------|-----------------------------|-----------------------------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|---------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------|---------------------------------|------------------------------|--------------------------------|
| 57<br>La<br>138.9<br>Lanthanum | 58<br>Ce<br>140.1<br>Cerium | 59<br>Pr<br>140.9<br>Praseodymium | 60<br>Nd<br>144.2<br>Neodymium | 61<br>Pm<br>145<br>Promethium | 62<br>Sm<br>150.4<br>Samarium | 63<br>Eu<br>152<br>Europium  | 64<br>Gd<br>157.3<br>Gadolinium | 65<br>Tb<br>158.9<br>Terbium | 66<br>Dy<br>162.5<br>Dysprosium | 67<br>Ho<br>164.9<br>Holmium   | 68<br>Er<br>167.3<br>Erbium | 69<br>Tm<br>168.9<br>Thulium    | 70<br>Yb<br>173<br>Ytterbium | 71<br>Lu<br>175<br>Lutetium    |
| 89<br>Ac<br>227<br>Actinium    | 90<br>Th<br>232<br>Thorium  | 91<br>Pa<br>231<br>Protactinium   | 92<br>U<br>238<br>Uranium      | 93<br>Np<br>237<br>Neptunium  | 94<br>Pu<br>239<br>Plutonium  | 95<br>Am<br>243<br>Americium | 96<br>Cm<br>247<br>Curium       | 97<br>Bk<br>247<br>Berkelium | 98<br>Cf<br>251<br>Californium  | 99<br>Es<br>252<br>Einsteinium | 100<br>Fm<br>257<br>Fermium | 101<br>Md<br>258<br>Mendelevium | 102<br>No<br>259<br>Nobelium | 103<br>Lr<br>262<br>Lawrencium |