

# The Periodic Table of the Elements

|                                 |                                  |                                   |                                     |                                  |                                  |                                    |                                 |                                  |                                 |                                |                                |                                   |                                |                                    |                                 |                                  |                              |
|---------------------------------|----------------------------------|-----------------------------------|-------------------------------------|----------------------------------|----------------------------------|------------------------------------|---------------------------------|----------------------------------|---------------------------------|--------------------------------|--------------------------------|-----------------------------------|--------------------------------|------------------------------------|---------------------------------|----------------------------------|------------------------------|
| 1<br>H<br>Hydrogen<br>1.00794   |                                  |                                   |                                     |                                  |                                  |                                    |                                 |                                  |                                 |                                |                                |                                   |                                |                                    |                                 |                                  | 2<br>He<br>Helium<br>4.003   |
| 3<br>Li<br>Lithium<br>6.941     | 4<br>Be<br>Beryllium<br>9.012182 |                                   |                                     |                                  |                                  |                                    |                                 |                                  |                                 |                                |                                | 5<br>B<br>Boron<br>10.811         | 6<br>C<br>Carbon<br>12.0107    | 7<br>N<br>Nitrogen<br>14.00674     | 8<br>O<br>Oxygen<br>15.9994     | 9<br>F<br>Fluorine<br>18.9984032 | 10<br>Ne<br>Neon<br>20.1797  |
| 11<br>Na<br>Sodium<br>22.989770 | 12<br>Mg<br>Magnesium<br>24.3050 |                                   |                                     |                                  |                                  |                                    |                                 |                                  |                                 |                                |                                | 13<br>Al<br>Aluminum<br>26.981538 | 14<br>Si<br>Silicon<br>28.0855 | 15<br>P<br>Phosphorus<br>30.973761 | 16<br>S<br>Sulfur<br>32.066     | 17<br>Cl<br>Chlorine<br>35.4527  | 18<br>Ar<br>Argon<br>39.948  |
| 19<br>K<br>Potassium<br>39.0983 | 20<br>Ca<br>Calcium<br>40.078    | 21<br>Sc<br>Scandium<br>44.955910 | 22<br>Ti<br>Titanium<br>47.867      | 23<br>V<br>Vanadium<br>50.9415   | 24<br>Cr<br>Chromium<br>51.9961  | 25<br>Mn<br>Manganese<br>54.938049 | 26<br>Fe<br>Iron<br>55.845      | 27<br>Co<br>Cobalt<br>58.933200  | 28<br>Ni<br>Nickel<br>58.6934   | 29<br>Cu<br>Copper<br>63.546   | 30<br>Zn<br>Zinc<br>65.39      | 31<br>Ga<br>Gallium<br>69.723     | 32<br>Ge<br>Germanium<br>72.61 | 33<br>As<br>Arsenic<br>74.92160    | 34<br>Se<br>Selenium<br>78.96   | 35<br>Br<br>Bromine<br>79.904    | 36<br>Kr<br>Krypton<br>83.80 |
| 37<br>Rb<br>Rubidium<br>85.4678 | 38<br>Sr<br>Strontium<br>87.62   | 39<br>Y<br>Yttrium<br>88.90585    | 40<br>Zr<br>Zirconium<br>91.224     | 41<br>Nb<br>Niobium<br>92.90638  | 42<br>Mo<br>Molybdenum<br>95.94  | 43<br>Tc<br>Technetium<br>(98)     | 44<br>Ru<br>Ruthenium<br>101.07 | 45<br>Rh<br>Rhodium<br>102.90550 | 46<br>Pd<br>Palladium<br>106.42 | 47<br>Ag<br>Silver<br>107.8682 | 48<br>Cd<br>Cadmium<br>112.411 | 49<br>In<br>Indium<br>114.818     | 50<br>Sn<br>Tin<br>118.710     | 51<br>Sb<br>Antimony<br>121.760    | 52<br>Te<br>Tellurium<br>127.60 | 53<br>I<br>Iodine<br>126.90447   | 54<br>Xe<br>Xenon<br>131.29  |
| 55<br>Cs<br>Cesium<br>132.90545 | 56<br>Ba<br>Barium<br>137.327    | 57<br>La<br>Lanthanum<br>138.9055 | 72<br>Hf<br>Hafnium<br>178.49       | 73<br>Ta<br>Tantalum<br>180.9479 | 74<br>W<br>Tungsten<br>183.84    | 75<br>Re<br>Rhenium<br>186.207     | 76<br>Os<br>Osmium<br>190.23    | 77<br>Ir<br>Iridium<br>192.217   | 78<br>Pt<br>Platinum<br>195.078 | 79<br>Au<br>Gold<br>196.96655  | 80<br>Hg<br>Mercury<br>200.59  | 81<br>Tl<br>Thallium<br>204.3833  | 82<br>Pb<br>Lead<br>207.2      | 83<br>Bi<br>Bismuth<br>208.98038   | 84<br>Po<br>Polonium<br>(209)   | 85<br>At<br>Astatine<br>(210)    | 86<br>Rn<br>Radon<br>(222)   |
| 87<br>Fr<br>Francium<br>(223)   | 88<br>Ra<br>Radium<br>(226)      | 89<br>Ac<br>Actinium<br>(227)     | 104<br>Rf<br>Rutherfordium<br>(261) | 105<br>Db<br>Dubnium<br>(262)    | 106<br>Sg<br>Seaborgium<br>(263) | 107<br>Bh<br>Bohrium<br>(262)      | 108<br>Hs<br>Hassium<br>(265)   | 109<br>Mt<br>Meitnerium<br>(266) | 110<br>(269)                    | 111<br>(272)                   | 112<br>(277)                   | 113                               | 114                            |                                    |                                 |                                  |                              |

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| 58<br>Ce<br>Cerium<br>140.116   | 59<br>Pr<br>Praseodymium<br>140.90765 | 60<br>Nd<br>Neodymium<br>144.24 | 61<br>Pm<br>Promethium<br>(145) | 62<br>Sm<br>Samarium<br>150.36 | 63<br>Eu<br>Europium<br>151.964 | 64<br>Gd<br>Gadolinium<br>157.25 | 65<br>Tb<br>Terbium<br>158.92534 | 66<br>Dy<br>Dysprosium<br>162.50 | 67<br>Ho<br>Holmium<br>164.93032 | 68<br>Er<br>Erbium<br>167.26  | 69<br>Tm<br>Thulium<br>168.93421  | 70<br>Yb<br>Ytterbium<br>173.04 | 71<br>Lu<br>Lutetium<br>174.967  |
| 90<br>Th<br>Thorium<br>232.0381 | 91<br>Pa<br>Protactinium<br>231.03588 | 92<br>U<br>Uranium<br>238.0289  | 93<br>Np<br>Neptunium<br>(237)  | 94<br>Pu<br>Plutonium<br>(244) | 95<br>Am<br>Americium<br>(243)  | 96<br>Cm<br>Curium<br>(247)      | 97<br>Bk<br>Berkelium<br>(247)   | 98<br>Cf<br>Californium<br>(251) | 99<br>Es<br>Einsteinium<br>(252) | 100<br>Fm<br>Fermium<br>(257) | 101<br>Md<br>Mendelevium<br>(258) | 102<br>No<br>Nobelium<br>(259)  | 103<br>Lr<br>Lawrencium<br>(262) |