

# Periodic Table of the Elements

Period number tells you the number of electron shells. Eg. the Period 4 elements (K, Ca, etc.) all have 4 electron shells.

|                                                                                                                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <p><b>Group 1</b><br/>1 outer-shell electron</p> <p><b>hydrogen</b><br/><b>1</b><br/><b>H</b><br/>1.008</p>               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 2</b><br/>2 outer-shell electrons</p> <p><b>beryllium</b><br/><b>4</b><br/><b>Be</b><br/>9.01</p>             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 3</b><br/>3 outer-shell electrons</p> <p><b>sodium</b><br/><b>11</b><br/><b>Na</b><br/>22.99</p>              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 4</b><br/>4 outer-shell electrons</p> <p><b>potassium</b><br/><b>19</b><br/><b>K</b><br/>39.10</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 5</b><br/>5 outer-shell electrons</p> <p><b>rubidium</b><br/><b>37</b><br/><b>Rb</b><br/>85.47</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 6</b><br/>6 outer-shell electrons</p> <p><b>caesium</b><br/><b>55</b><br/><b>Cs</b><br/>132.91</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 7</b><br/>7 outer-shell electrons</p> <p><b>francium</b><br/><b>87</b><br/><b>Fr</b><br/>(223)</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 8</b><br/>8 outer-shell electrons (except He)</p> <p><b>helium</b><br/><b>2</b><br/><b>He</b><br/>4.00</p>    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 9</b><br/>9 outer-shell electrons</p> <p><b>boron</b><br/><b>5</b><br/><b>B</b><br/>10.81</p>                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 10</b><br/>10 outer-shell electrons</p> <p><b>carbon</b><br/><b>6</b><br/><b>C</b><br/>12.01</p>              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 11</b><br/>11 outer-shell electrons</p> <p><b>nitrogen</b><br/><b>7</b><br/><b>N</b><br/>14.01</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 12</b><br/>12 outer-shell electrons</p> <p><b>oxygen</b><br/><b>8</b><br/><b>O</b><br/>16.00</p>              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 13</b><br/>13 outer-shell electrons</p> <p><b>aluminium</b><br/><b>13</b><br/><b>Al</b><br/>26.98</p>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 14</b><br/>14 outer-shell electrons</p> <p><b>silicon</b><br/><b>14</b><br/><b>Si</b><br/>28.09</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 15</b><br/>15 outer-shell electrons</p> <p><b>phosphorus</b><br/><b>15</b><br/><b>P</b><br/>30.97</p>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 16</b><br/>16 outer-shell electrons</p> <p><b>sulfur</b><br/><b>16</b><br/><b>S</b><br/>32.06</p>             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 17</b><br/>17 outer-shell electrons</p> <p><b>chlorine</b><br/><b>17</b><br/><b>Cl</b><br/>35.45</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 18</b><br/>18 outer-shell electrons (except He)</p> <p><b>argon</b><br/><b>18</b><br/><b>Ar</b><br/>39.95</p> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 19</b><br/>19 outer-shell electrons</p> <p><b>potassium</b><br/><b>19</b><br/><b>K</b><br/>39.10</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 20</b><br/>20 outer-shell electrons</p> <p><b>calcium</b><br/><b>20</b><br/><b>Ca</b><br/>40.08</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 21</b><br/>21 outer-shell electrons</p> <p><b>scandium</b><br/><b>21</b><br/><b>Sc</b><br/>44.96</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 22</b><br/>22 outer-shell electrons</p> <p><b>titanium</b><br/><b>22</b><br/><b>Ti</b><br/>47.87</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 23</b><br/>23 outer-shell electrons</p> <p><b>vanadium</b><br/><b>23</b><br/><b>V</b><br/>50.94</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 24</b><br/>24 outer-shell electrons</p> <p><b>chromium</b><br/><b>24</b><br/><b>Cr</b><br/>52.00</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 25</b><br/>25 outer-shell electrons</p> <p><b>manganese</b><br/><b>25</b><br/><b>Mn</b><br/>54.94</p>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 26</b><br/>26 outer-shell electrons</p> <p><b>iron</b><br/><b>26</b><br/><b>Fe</b><br/>55.85</p>              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 27</b><br/>27 outer-shell electrons</p> <p><b>cobalt</b><br/><b>27</b><br/><b>Co</b><br/>58.93</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 28</b><br/>28 outer-shell electrons</p> <p><b>nickel</b><br/><b>28</b><br/><b>Ni</b><br/>58.69</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 29</b><br/>29 outer-shell electrons</p> <p><b>copper</b><br/><b>29</b><br/><b>Cu</b><br/>63.55</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 30</b><br/>30 outer-shell electrons</p> <p><b>zinc</b><br/><b>30</b><br/><b>Zn</b><br/>65.38</p>              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 31</b><br/>31 outer-shell electrons</p> <p><b>gallium</b><br/><b>31</b><br/><b>Ga</b><br/>69.72</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 32</b><br/>32 outer-shell electrons</p> <p><b>germanium</b><br/><b>32</b><br/><b>Ge</b><br/>72.63</p>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 33</b><br/>33 outer-shell electrons</p> <p><b>arsenic</b><br/><b>33</b><br/><b>As</b><br/>74.92</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 34</b><br/>34 outer-shell electrons</p> <p><b>selenium</b><br/><b>34</b><br/><b>Se</b><br/>78.97</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 35</b><br/>35 outer-shell electrons</p> <p><b>bromine</b><br/><b>35</b><br/><b>Br</b><br/>79.90</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 36</b><br/>36 outer-shell electrons</p> <p><b>krypton</b><br/><b>36</b><br/><b>Kr</b><br/>83.80</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 37</b><br/>37 outer-shell electrons</p> <p><b>rubidium</b><br/><b>37</b><br/><b>Rb</b><br/>85.47</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 38</b><br/>38 outer-shell electrons</p> <p><b>strontium</b><br/><b>38</b><br/><b>Sr</b><br/>87.62</p>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 39</b><br/>39 outer-shell electrons</p> <p><b>yttrium</b><br/><b>39</b><br/><b>Y</b><br/>88.91</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 40</b><br/>40 outer-shell electrons</p> <p><b>zirconium</b><br/><b>40</b><br/><b>Zr</b><br/>91.22</p>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 41</b><br/>41 outer-shell electrons</p> <p><b>niobium</b><br/><b>41</b><br/><b>Nb</b><br/>92.91</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 42</b><br/>42 outer-shell electrons</p> <p><b>molybdenum</b><br/><b>42</b><br/><b>Mo</b><br/>95.95</p>        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 43</b><br/>43 outer-shell electrons</p> <p><b>technetium</b><br/><b>43</b><br/><b>Tc</b><br/>(98)</p>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 44</b><br/>44 outer-shell electrons</p> <p><b>ruthenium</b><br/><b>44</b><br/><b>Ru</b><br/>101.07</p>        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 45</b><br/>45 outer-shell electrons</p> <p><b>rhodium</b><br/><b>45</b><br/><b>Rh</b><br/>102.91</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 46</b><br/>46 outer-shell electrons</p> <p><b>palladium</b><br/><b>46</b><br/><b>Pd</b><br/>106.42</p>        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 47</b><br/>47 outer-shell electrons</p> <p><b>silver</b><br/><b>47</b><br/><b>Ag</b><br/>107.87</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 48</b><br/>48 outer-shell electrons</p> <p><b>cadmium</b><br/><b>48</b><br/><b>Cd</b><br/>112.41</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 49</b><br/>49 outer-shell electrons</p> <p><b>indium</b><br/><b>49</b><br/><b>In</b><br/>114.82</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 50</b><br/>50 outer-shell electrons</p> <p><b>tin</b><br/><b>50</b><br/><b>Sn</b><br/>118.71</p>              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 51</b><br/>51 outer-shell electrons</p> <p><b>antimony</b><br/><b>51</b><br/><b>Sb</b><br/>121.76</p>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 52</b><br/>52 outer-shell electrons</p> <p><b>tellurium</b><br/><b>52</b><br/><b>Te</b><br/>127.60</p>        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 53</b><br/>53 outer-shell electrons</p> <p><b>iodine</b><br/><b>53</b><br/><b>I</b><br/>126.90</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 54</b><br/>54 outer-shell electrons</p> <p><b>xenon</b><br/><b>54</b><br/><b>Xe</b><br/>131.29</p>            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 55</b><br/>55 outer-shell electrons</p> <p><b>caesium</b><br/><b>55</b><br/><b>Cs</b><br/>132.91</p>          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 56</b><br/>56 outer-shell electrons</p> <p><b>barium</b><br/><b>56</b><br/><b>Ba</b><br/>137.33</p>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 57-71</b><br/>Lanthanides</p>                                                                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 72</b><br/>Hafnium</p>                                                                                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 73</b><br/>Tantalum</p>                                                                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 74</b><br/>Tungsten</p>                                                                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 75</b><br/>Rhenium</p>                                                                                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 76</b><br/>Osmium</p>                                                                                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 77</b><br/>Iridium</p>                                                                                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 78</b><br/>Platinum</p>                                                                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <p><b>Group 79</b><br/>Gold&lt;/</p>                                                                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |