

Cambridge IGCSE Chemistry

Topic 9: The Periodic Table

The Periodic Table

Notes



Describe the Periodic Table as a method of classifying elements and its use to predict properties of elements

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|-------------------|-------------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|---|--|--|--|--|--|---------|
| 1 | | 2 | | | | | | | | | | | | 3 | 4 | 5 | 6 | 7 | 0 | | | | | | |
| | | | | | | | | | | | | | | H 1 | | | | | | | | | | | He 2 |
| 7 3 Li | 8 4 Be | | | | | | | | | | | 11 5 B | 12 6 C | 14 7 N | 15 8 O | 16 9 F | 18 10 Ne | | | | | | | | |
| 19 9 Na | 20 10 Mg | | | | | | | | | | | 13 6 Al | 14 7 Si | 15 8 P | 16 9 S | 17 10 Cl | 18 10 Ar | | | | | | | | |
| 39 19 K | 40 20 Ca | 45 21 Sc | 46 22 Ti | 47 23 V | 48 24 Cr | 51 25 Mn | 52 26 Fe | 55 27 Co | 59 28 Ni | 63 29 Cu | 65 30 Zn | 75 31 Ga | 76 32 Ge | 77 33 As | 78 34 Se | 79 35 Br | 80 36 Kr | | | | | | | | |
| 85 37 Rb | 86 38 Sr | 89 39 Y | 90 40 Zr | 91 41 Nb | 92 42 Mo | 98 43 Tc | 101 44 Ru | 102 45 Rh | 106 46 Pd | 108 47 Ag | 112 48 Cd | 113 49 In | 114 50 Sn | 115 51 Sb | 116 52 Te | 117 53 I | 118 54 Xe | | | | | | | | |
| 133 55 Cs | 134 56 Ba | 137 57 La | 138 58 Hf | 141 59 Ta | 142 60 W | 146 61 Re | 150 62 Os | 155 63 Ir | 157 64 Pt | 163 65 Au | 166 66 Hg | 178 71 Tl | 179 72 Pb | 180 73 Bi | 182 74 Po | 183 75 At | 184 76 Rn | | | | | | | | |
| (223) 87 Fr | (226) 88 Ra | (227) 89 Ac | | | | | | | | | | | | | | | | | | | | | | | |

- The Periodic Table can be used to classify elements and predict properties of elements by the way that they are arranged in the table...
 - Elements are arranged in order of atomic (proton) number (bottom number) and so that elements with similar properties are in columns, known as groups.
 - Elements in the same periodic group have the same amount of electrons in their outer shell, which gives them similar chemical properties.
- You can deduce the electronic configurations of elements from their positions in the Periodic Table
 - Group 1 has 1 electron in its outer shell, group 2 has 2 etc...
 - Period 1 has 1 shell, period 2 has 2 shells etc...

