



Cambridge IGCSE Chemistry

Topic 3: atoms, elements and compounds

Atomic structure and the Periodic Table

Notes



State the relative charges and approximate relative masses of protons, neutrons and electrons

sub-atomic particle	relative mass	relative charge
proton	1	+1
neutron	1	0
electron	1/1836	-1

Define proton number (atomic number)...

- The number of protons in the nucleus of an atom

Define nucleon number (mass number)...

- The total number of protons and neutrons in the nucleus of an atom

Use proton number and the simple structure of atoms to explain the basis of the Periodic Table with special reference to the elements of proton number 1 to 20

- 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.
- Elements are arranged in order of increasing atomic number, in rows called periods and elements, with similar properties are placed in the same vertical columns called groups

Define isotopes...

- Atoms of the same element which have the same proton number but a different nucleon number (different number of neutrons)



