

# 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)



