

C1 Atomic Structure

Knowledge Organiser

Atom—Smallest part of an element that can exist.

Molecule—Two or more atoms chemically bonded.

Element—Only one type of atom present. Can be single atoms or molecules.

Compound—Two or more different elements chemically bonded.

Nuclear Atom Model—Electrons orbit. Protons & neutrons in nucleus. Number of protons = number of electrons.

Nucleus—The center of the atom. Contains neutrons & protons.

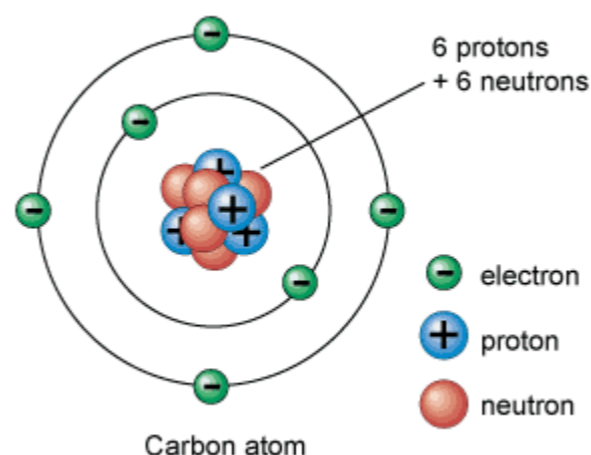
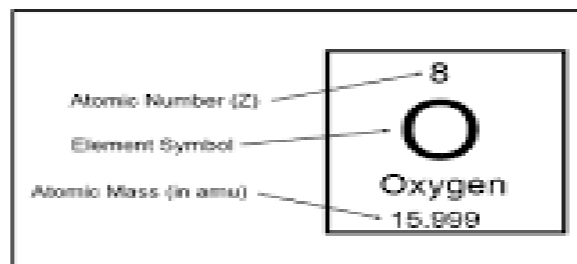
Proton—Charge of +1. Mass of 1. Found inside the nucleus.

Neutron—Charge of 0. Mass of 1. Found inside the nucleus.

Electron—Charge of -1. Mass of almost 0. Found orbiting the nucleus.

Isotope—same number of protons, different number of neutrons.

Ion—Atom where number of protons is not equal to electrons.



Mixture—Two or more chemicals not chemically bonded.

Separation Techniques—Used to separate mixtures:

Filtration—get an insoluble solid from a liquid.

Crystallisation—get a soluble solid from a liquid by evaporating liquid off.

Distillation—get a pure liquid from a mixture of liquids.

Chromatography—separate mixtures of coloured compounds.

Electron energy levels—Where electrons are found. The shells each hold this many electrons maximum: 2, 8, 8.

Periodic Table—A list of all the elements in order of atomic number. Columns called groups. Rows called periods.

Conservation of Mass—In a chemical reaction the total mass of reactants = total mass of products.

Mass Number—number of neutrons + protons.

Atomic Number—Number of protons.

Plum Pudding Atomic Model—Early model. Ball of positive charge with electrons in it.