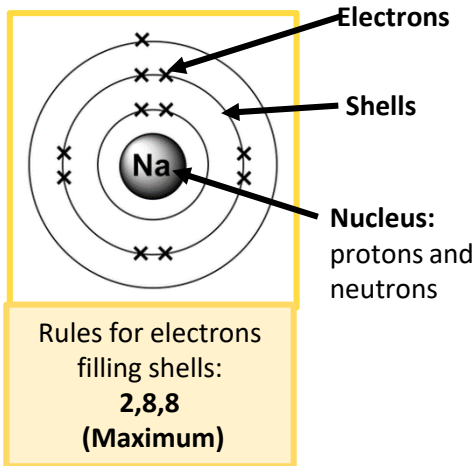


Chemistry: Atomic Structure, Elements & Compounds

Key word	Definition
Atom	The smallest part of an element that can exist. It is neutrally charged.
Nucleus	The positively charged centre of the atom consisting of protons and neutrons where all the mass is concentrated.
Shells	A grouping of electrons surrounding the nucleus of an atom
Subatomic particle	An extremely small piece of matter that is smaller than an atom or found inside an atom (proton, neutron, electron)
Electrostatic charge	This is a positive or negative electric charge which is at rest. Protons and electrons have these.
Element	Is made up of only one type of atom (or if a molecule, two of the same type of atom chemically joined) with the same proton number
Isotope	Different forms of the same element with a different number of neutrons and same number of protons.
Nuclear Symbol	An element is represented by a CAPITAL letter (& a lowercase letter) and two numbers. One number is the atomic mass, the other is the atomic number (also known as the proton number)
Compound	A substance made up of two or more different elements, chemically joined together in fixed proportions. Represented by chemical formulae



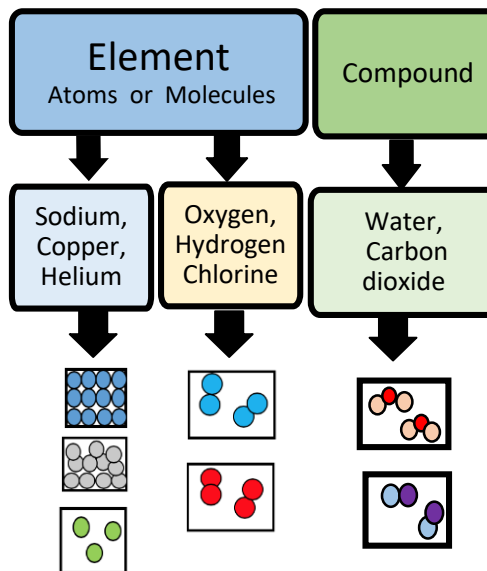
Subatomic particle	Location	Charge	Size/Mass
Proton	Nucleus	+1	1
Neutron	Nucleus	0	1
Electrons	Shells	-1	Very small

Mass number = Number of Protons **plus** neutrons → 23

Atomic number = Number of Protons (**or** electrons) → 11

Na

Number of Neutrons = mass number – atomic number



Isotopes:
Different mass number and same atomic number

${}^6_3\text{Li}$ ${}^7_3\text{Li}$ ${}^8_3\text{Li}$

Chemical formula

H_2 H_2O

Two hydrogen atoms No subscript means there's only one.

