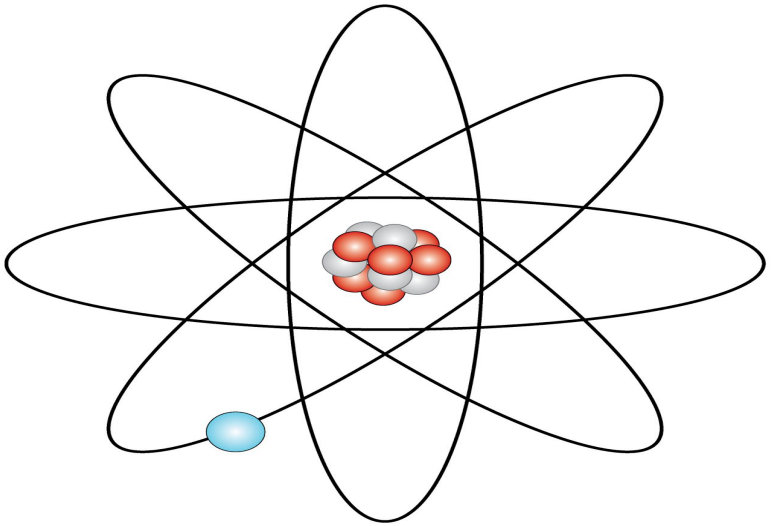
# Models and Properties of Atoms

## Picture Vocabulary

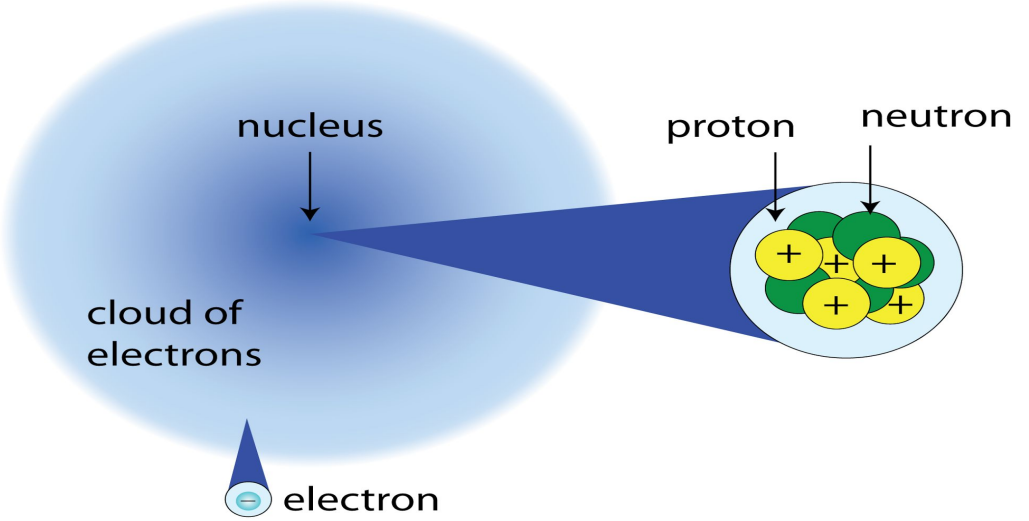
C1ABD Models and Properties of Atoms

# Atom



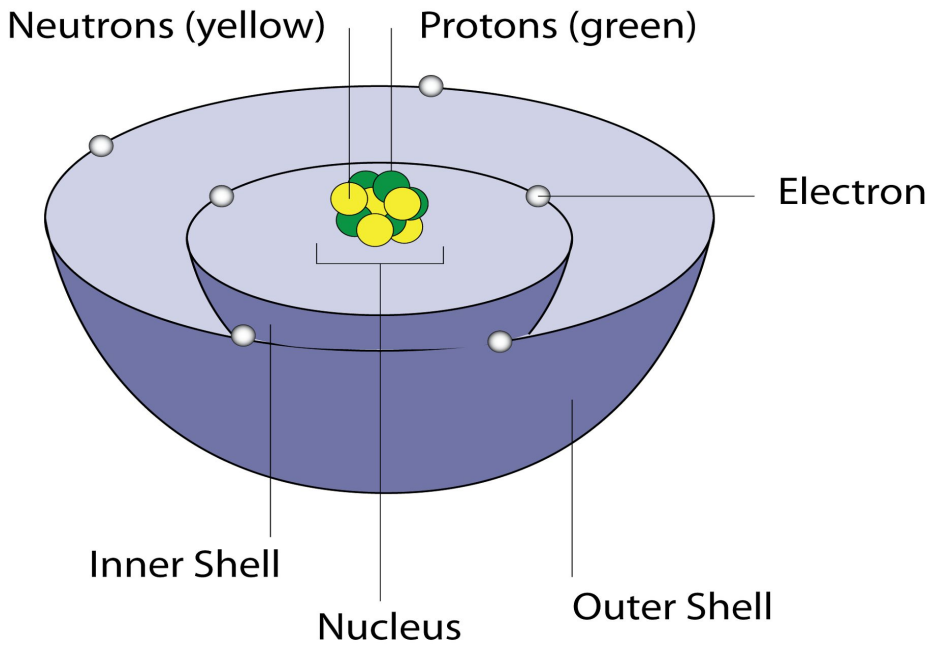
The smallest particle of an element maintaining the chemical identity of that element

# Electron



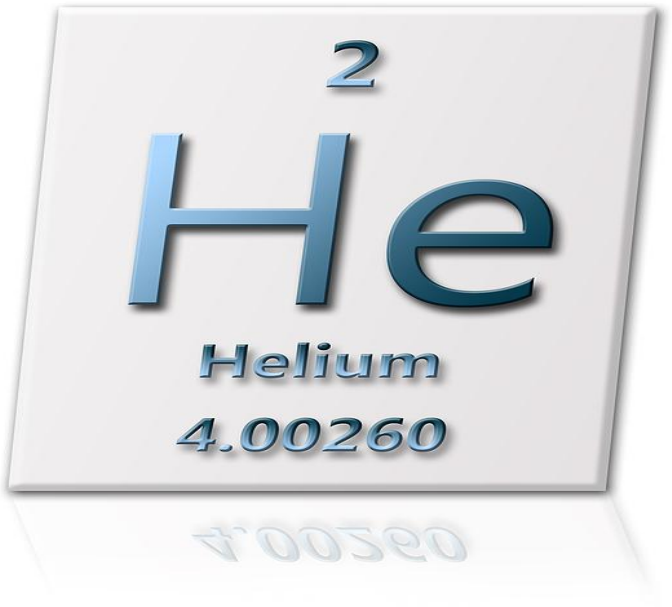

A negatively-charged subatomic particle of the electron cloud; involved in the formation of chemical bonds

# Neutron



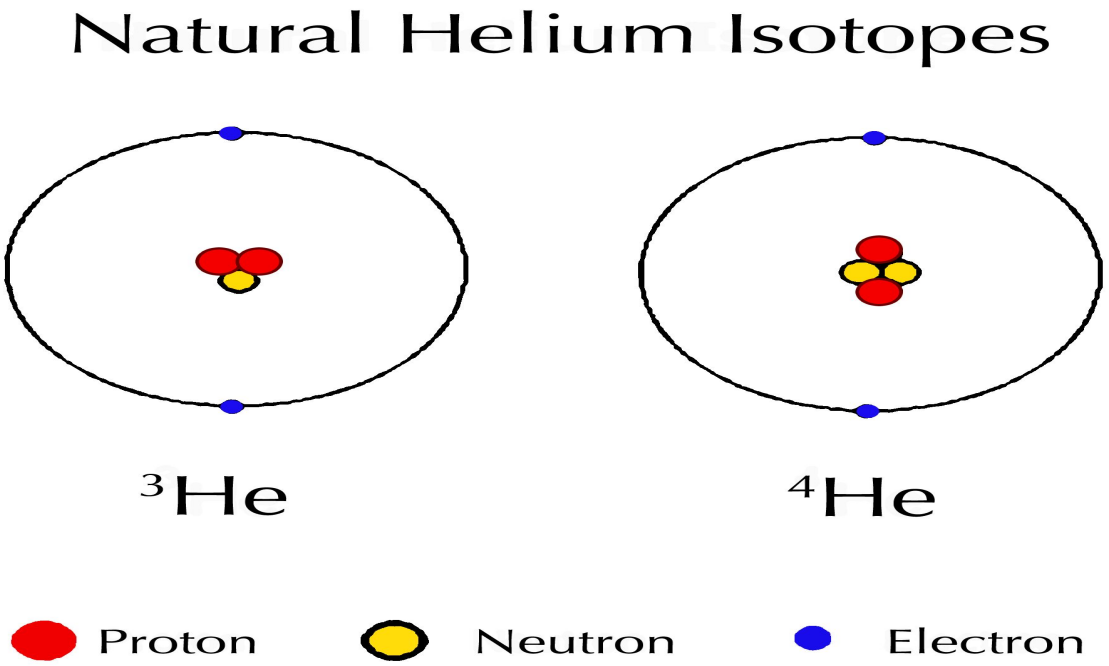

A subatomic particle of the nucleus of an atom that is without charge and contributes to the mass of an atom

# Element



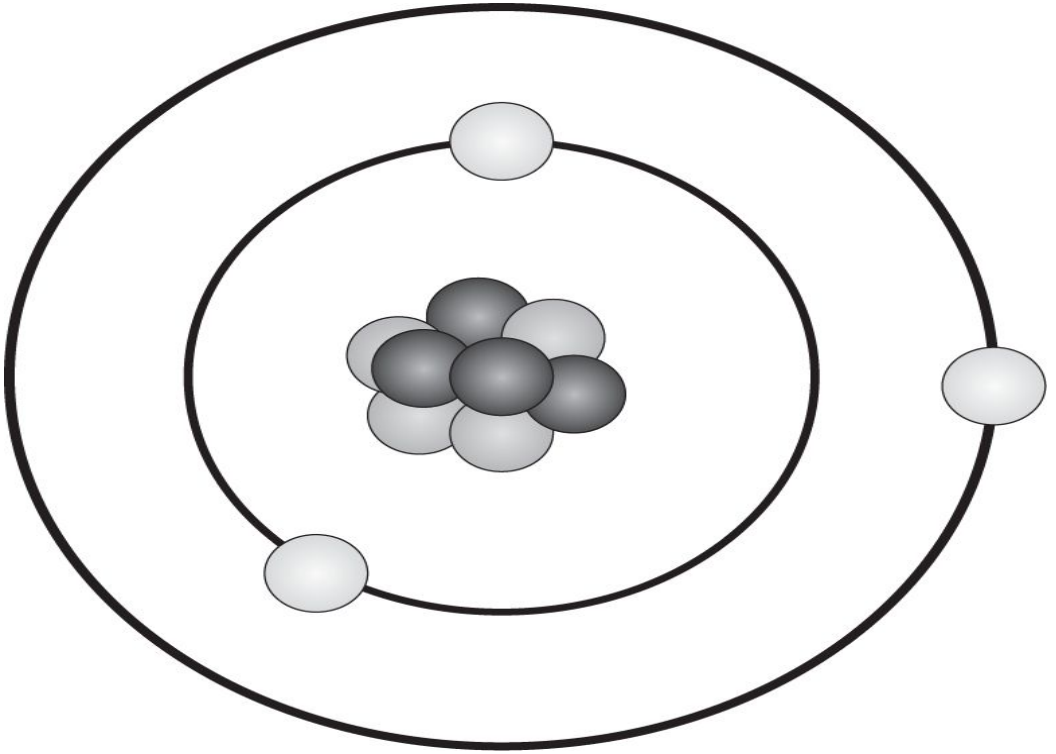

A pure substance that cannot be separated into simpler substances by physical or chemical means

# Isotope



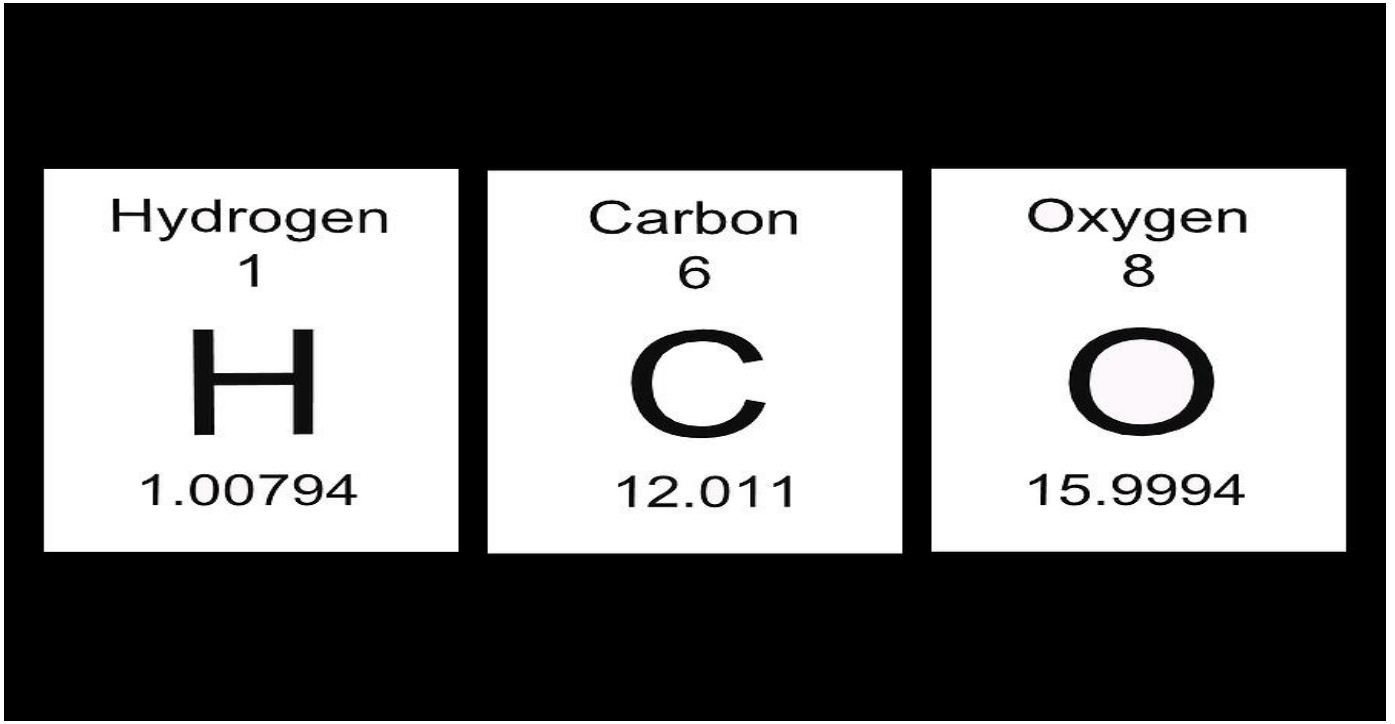

Any two or more forms of an element with the same number of protons in the nucleus, but a different number of neutrons

# Ion



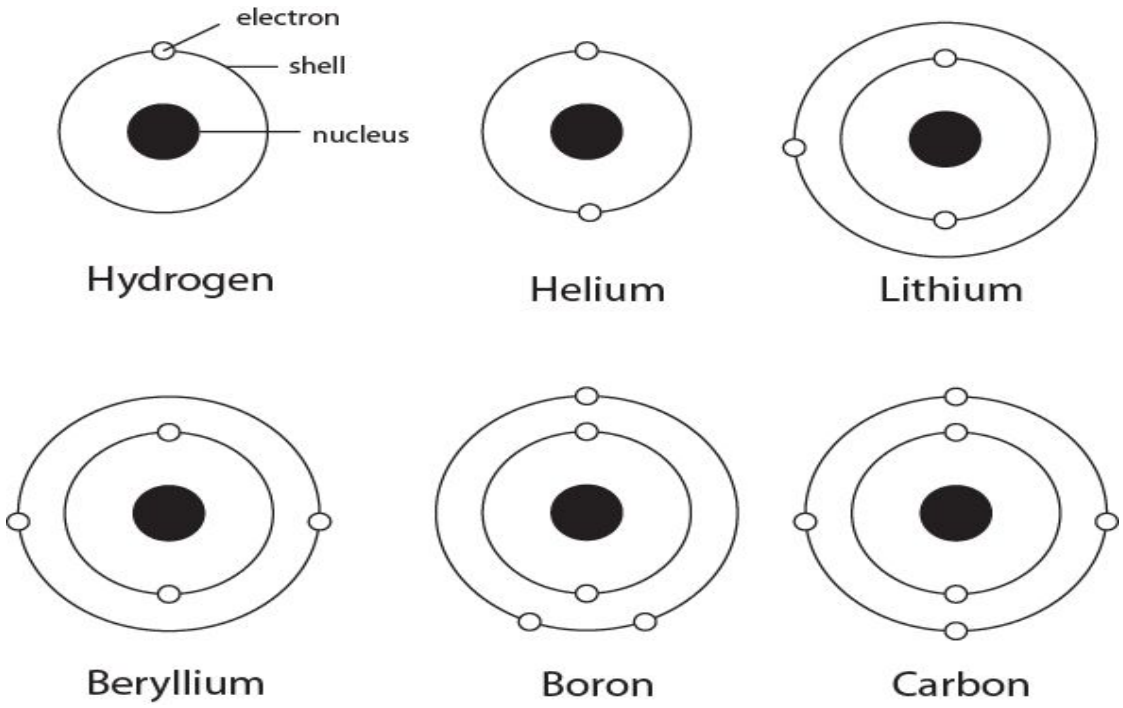
Atoms (or groups of atoms) that have an electrical charge due to unequal numbers of protons and electrons

# Atomic mass



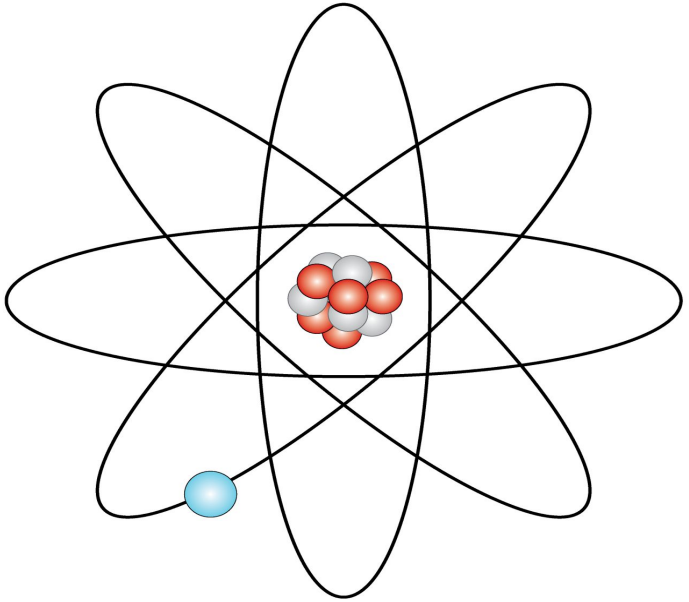

The mass of an atom, approximately equal to the number of protons and neutrons in the atom

# Atomic number



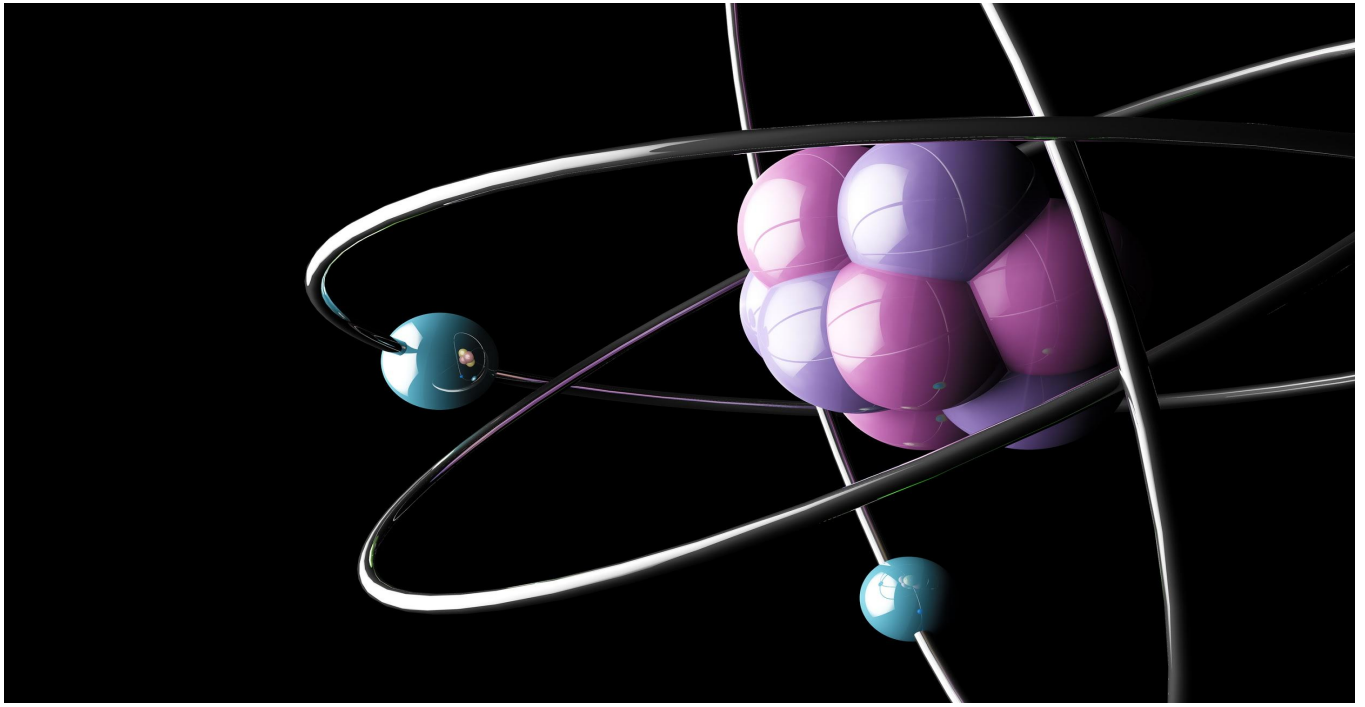

The number of protons found in the nucleus of an element, represented by the letter Z

# Electron orbital



The specific regions around the nucleus of an atom in which electrons travel

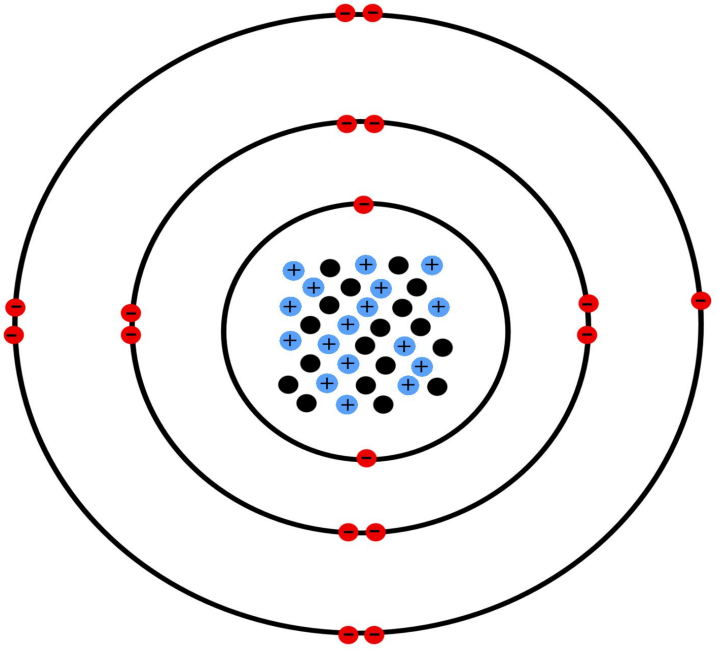
# Nuclear model



This model, also known as the planetary model, was defined by Ernest Rutherford in 1911 and shows a dense, positively-charged core surrounded by negative charges.

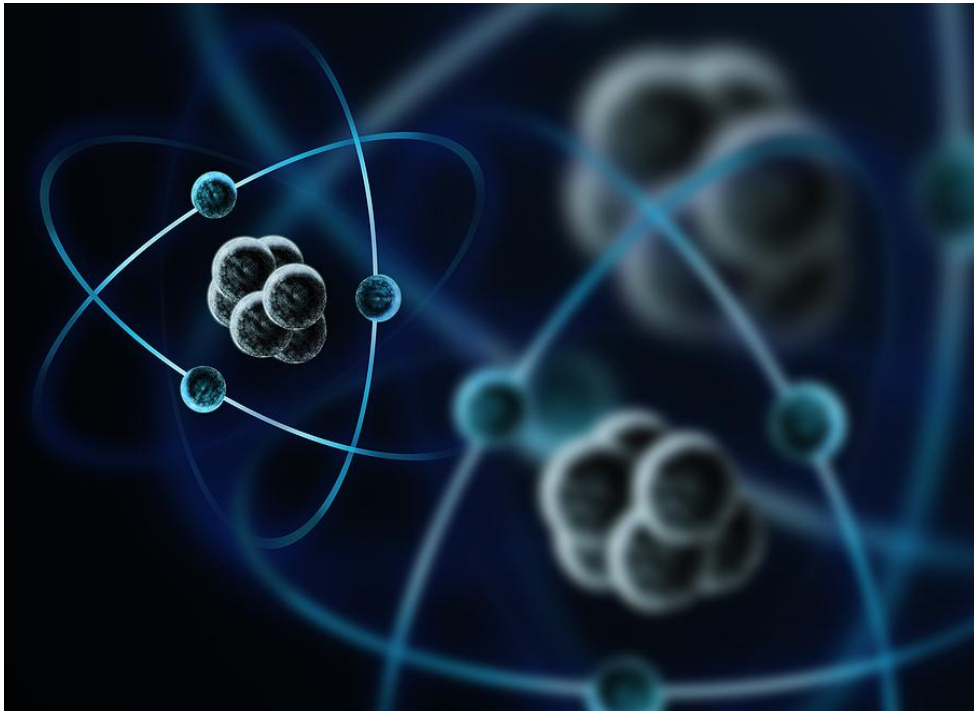
# Bohr model

## Chlorine



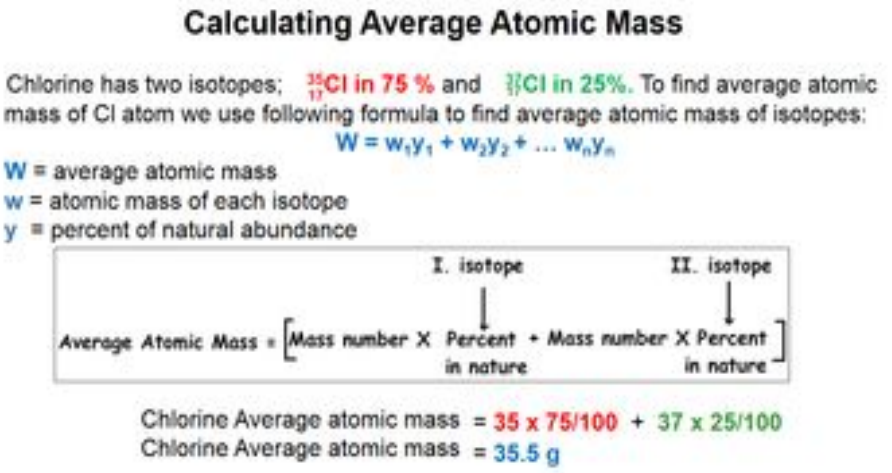
This model was defined by Niels Bohr in 1913 and shows the negatively-charged electrons of the atom travelling around the positively-charged nucleus in discrete circular orbits, much like the structure of the solar system.

# Subatomic particles



Particles that are smaller than the atom

# Average atomic mass




Average mass of all known isotopes of an element based upon the abundance of the isotopes