

Material that prevent radioactive emission from passing through it	Release of alpha particle from unstable nucleus(a 2+ helium ion or a helium nucleus)	The nucleus of a helium atom (two protons and two neutrons) emitted as radiation from a decaying heavy nucleus	The smallest unit of an element that can exist alone or in combination with other elements
Absorber	Alpha emission	Alpha particle	Atom
Spectral lines given out/absorbed by low pressure gases when they are excited	Relative mass unit (u) where one atomic mass unit (one u) is 1/12 the mass of a carbon-12 atom	The number of protons in the nucleus of an atom	Atoms are made up of 3 types of particles electrons, protons and neutrons. Each atom is a combination of these
Atomic line spectra	Atomic mass unit	Atomic number	Atomic structure
The number of carbon-12 atoms in 12.00 g of C i.e. 6.02×10^{23} atoms. It is the number in one mole of a substance	The nuclear radiation that arises naturally from cosmic rays and from radioactive isotopes in the soil and air	Visible light produced by excited Hydrogen electrons	The rate of disintegration of a radioactive substance
Avogadro's Number	Background radiation	Balmer series	Becquerel
An high-energy electron which is ejected from the nucleus; this release causes a neutron to convert into a proton	High-energy electron emitted as ionizing radiation from a decaying nucleus	The energy required to break a nucleus into its constituent protons and neutrons	Energy required to separate a nucleus into its nucleons divided by number of nucleons

Beta emission	Beta particle	Binding energy	Binding energy per nucleon
Model of the structure of the atom that attempted to correct the deficiencies of the Rutherford model for the atom	Negatively charged particles (electrons) that are emitted from a negative terminal in an evacuated glass tube	Separation of electromagnetic spectrum into its discrete frequencies with no gaps (missing frequencies)	Involves the slow and useful release of energy in a nuclear reactor.
Bohr model	Cathode rays	Continuous spectra	Controlled nuclear fission
Mass of fissionable material needed to sustain a chain reaction	Family of waves (e.g. Light) don't require medium, are transverse and travel at $3 \times 10^8 \text{ ms}^{-1}$ in a vacuum	Subatomic particle which is usually found orbiting an atom, but gained/lost when atoms become ions	The energy gained by an electron moving across a potential difference of one volt; equivalent to 1.60×10^{-19} Joules
Critical mass	Electromagnetic spectrum	Electron	Electron volt
A pure chemical substance that cannot be broken down into anything simpler by chemical or physical means	The amount of energy taken in by an electron when excited	Fixed quantities of energy which an electron can have in an atom	Referring to unstable materials; something that can readily be split or will split spontaneously.
Element	Energy Absorption	Energy Level	Fissile

Nuclear reaction where one big nucleus splits into two smaller nuclei	Nuclear reaction joining two smaller nuclei to make one bigger nucleus	Form of radioactive decay when an unstable nucleus emits extremely high frequency electromagnetic radiation	Energy state of an atom with electrons at the lowest energy state possible for that atom
Fission	Fusion	Gamma emission	Ground state
The time taken for half of the atoms in a sample of radioactive material to decay (disintegrate)	You cannot measure both the exact momentum and the exact position of a subatomic particle at the same time	The ability of nuclear radiation to take an electron off an atom, making it an ion.	When an electron is given enough energy to leave the atom
Half-life	Heisenberg uncertainty	Ionisation	Ionise
Atoms of an element with same chemical properties /same number of protons but with different masses/different number of neutrons	Narrow lines of color in an otherwise dark spectrum	Ultraviolet light produced by excited Hydrogen electrons	The difference between the sum of the masses of the individual nucleons forming a nucleus and the actual mass of that nucleus
Isotope	Line spectrum	Lyman series	Mass defect

The sum of the number of protons and neutrons in a nucleus	Atom or particle that has a surplus, or imbalance, of electrons and, thus, a negative charge	Uncharged particle found in the nucleus of atoms.	The form of energy from reactions involving the nucleus, the innermost part of an atom
Mass number	Negative ion	Neutron	Nuclear energy
Equation that describes the changes that occur during radioactive decay	Nuclear reaction of splitting a massive nucleus into more stable, less massive nuclei with an accompanying release of energy	Force of attraction between subatomic particles which binds the nucleus together	Nuclear reaction of low mass nuclei fusing together to form more stable and more massive nuclei
Nuclear equation	Nuclear fission	Nuclear force	Nuclear fusion
Steel vessel in which a controlled chain reaction of fissionable materials releases energy	Name used to refer to both the protons and neutrons in the nucleus of an atom	Tiny, relatively massive/dense and positively charged center of an atom containing protons and neutrons	The region of space around the nucleus of an atom where an electron is likely to be found
Nuclear reactor	Nucleons	Nucleus	Orbital

An unstable nucleus that decays and splits into two or more lighter nuclei. The lighter nuclei are called daughter nuclides.	Infrared Light produced by excited Hydrogen electrons	Effect where metal surface releases electrons when struck by photons	Packet of energy
Parent nuclide	Paschen series	Photoelectric effect	Photon
Constant in the relationship between the energy of vibrating molecules and their frequency of vibration	Fixed amounts; usually referring to fixed amounts of energy absorbed or emitted by matter	Model of the atom based on the wave nature of subatomic particles	Emission of energy as particles (α , β) or waves (γ)
Planck's constant	Quanta	Quantum Mechanics	Radiation
An effect which changes the value of a quantity e.g. Mass at high velocities	Separation of electromagnetic spectrum into its discrete frequencies (e.g. ROYGBIV for visible light)	The minimum frequency of photons that cause electrons to be emitted from a metal surface	A nucleus that spontaneously undergoes change, which involves emission of radiation from the nucleus.
Relativistic	Spectra	Threshold frequency	Unstable nucleus

Minimum energy needed for electrons to escape a metal surface during photoelectric effect			
Work function			