

Material that prevent radioactive emission from passing through it	Number of radioactive emissions/counts per second – also known as “rate of decay”	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
Absorber	Activity	Alpha emission	Alpha particle
The smallest unit of an element that can exist alone or in combination with other elements	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 made of these	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
Atom	Atomic number	Atomic structure	Avogadro's Number
The nuclear radiation that arises naturally from cosmic rays and from radioactive isotopes in the soil and air	The rate of disintegration of a radioactive substance	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
Background radiation	Becquerel	Beta emission	Beta particle
Negatively charged particles (electrons) that are emitted from a negative terminal in an evacuated glass tube	A change in the function of a living cell, sometimes caused by ionizing radiation.	A self-sustaining reaction where some of the products are able to produce more reactions of the same kind	Control rods are used in a nuclear reactor to slow down the rate of nuclear fission or to stop the fission process completely.
Cathode rays	Cell mutation	Chain reaction	Control rods

Involves the slow and useful release of energy in a nuclear reactor.	The number of counts on a Geiger counter(each count is caused by radiation causing ionisation)	Mass of fissionable material needed to sustain a chain reaction	Each element is made of indivisible particles called atoms. Atoms of a given element are identical
Controlled nuclear fission	Count rate	Critical mass	Dalton's model
Subatomic particle which is usually found orbiting an atom, but gained/lost when atoms become ions	A pure chemical substance that cannot be broken down into anything simpler by chemical or physical means	Referring to unstable materials; something that can readily be split or will split spontaneously.	Nuclear reaction joining two smaller nuclei to make one bigger nucleus
Electron	Element	Fissile	Fusion
Form of radioactive decay that occurs when an unstable nucleus emits extremely high frequency electromagnetic radiation	A gas filled metal tube that detects radiation by counting electric pulses carried by gas ionized by radiation	Rutherford's experiment where he bombarded a thin gold foil with alpha particles in a vacuum	The time taken for half of the atoms in a sample of radioactive material to decay (disintegrate)
Gamma emission	Geiger counter	Gold foil experiment	Half-life
The ability of nuclear radiation to take an electron off an atom, making it an ion.	A measure of the ability to remove electrons	Atoms with same chemical properties /same number of protons but with different masses/different number of neutrons	A sheet of lead used to absorb alpha and beta and limit gamma
Ionisation	Ionising ability	Isotope	Lead screen

The sum of the number of protons and neutrons in a nucleus	A material used in nuclear reactors to produce 'slow' neutrons needed to trigger nuclear fission	Atom or particle that has a surplus, or imbalance, of electrons and, thus, a negative charge	Uncharged particle found in the nucleus of atoms.
Mass number	Moderator	Negative ion	Neutron
The form of energy from reactions involving the nucleus, the innermost part of an atom	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 energy	Nuclear equation	Nuclear fission	Nuclear force
Nuclear reaction of low mass nuclei fusing together to form more stable and more massive nuclei	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
Nuclear fusion	Nuclear reactor	Nucleons	Nucleus
An unstable nucleus that decays and splits into two or more lighter nuclei. The lighter nuclei are called daughter nuclides.	Ability of radioactive emissions to pass through materials	J.J Thomson's model of an atom; electrons were randomly distributed within a positively charged cloud	Emission of energy as particles (α , β) or waves (γ)
Parent nuclide	Penetration ability	Plum pudding model	Radiation

The natural spontaneous disintegration of nuclei where radioactive isotopes break down into stable isotopes	Series of decays where one radioactive nucleus decays to a second nucleus etc. until a stable nucleus is reached	Source(point of origin) of radioactive emissions	Spontaneous emission of particles or energy from an atomic nucleus as it disintegrates
Radioactive decay	Radioactive decay series	Radioactive source	Radioactivity
Number of radioactive emissions/counts per second	An atom with a dense positive nucleus around which tiny electrons moved in a space that was otherwise empty.	The way the model suggests the atom is arranged (Dalton, Thomson, Rutherford, Bohr)	Alpha, Beta or Gamma
Rate of decay	Rutherford's model of the	Structure of the Atom	Type of radiation
A nucleus that spontaneously undergoes change, which involves emission of radiation from the nucleus.	Chamber with no particles inside it		
Unstable nucleus	Vacuum chamber		

