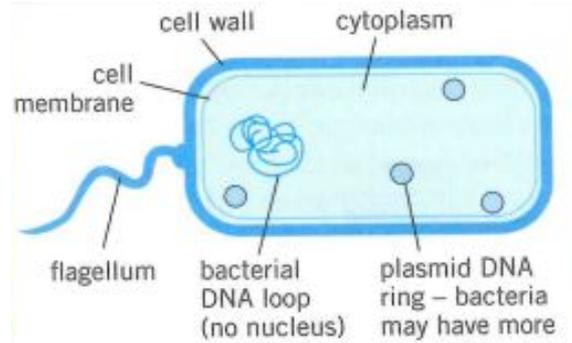


Biology

GCSE Cell Biology

1

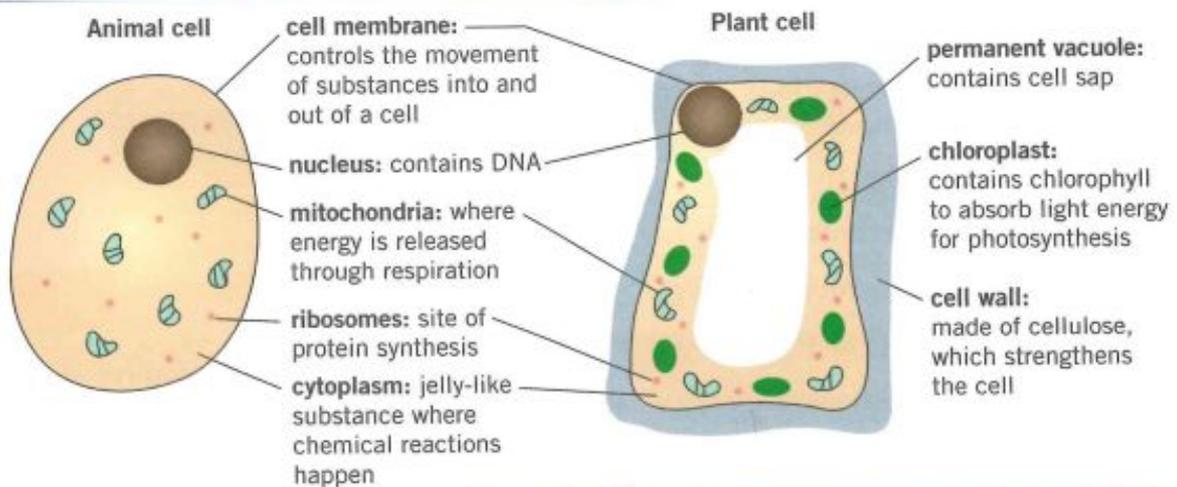
Bacterium



Learned	Revised	Confident
_____ % Achieved: _____		

N°	Keyword	Definition
2	Cell cycle	A process that all body cells use to grow and divide - it includes the stages "cell growth and DNA replication", "mitosis" and "cell division"
3	Chromosome	A long molecule of DNA found in the nucleus, which carries genes
4	Eukaryotic cell	A complex cell that has a nucleus, e.g. plant and animal cells
5	Meristem	Unspecialised cells in plants that are capable of cell division
6	Mitosis	When a cell reproduces itself by splitting to form two identical offspring
7	Prokaryotic cell	A simple cell with no "true nucleus", e.g. a bacterium
8	Specialised cell	A cell that is adapted to a particular function
9	Stem cells	A cell that has not yet become specialised
10	Therapeutic cloning	A type of cloning where the embryo is made to have the same genetic information as the patient

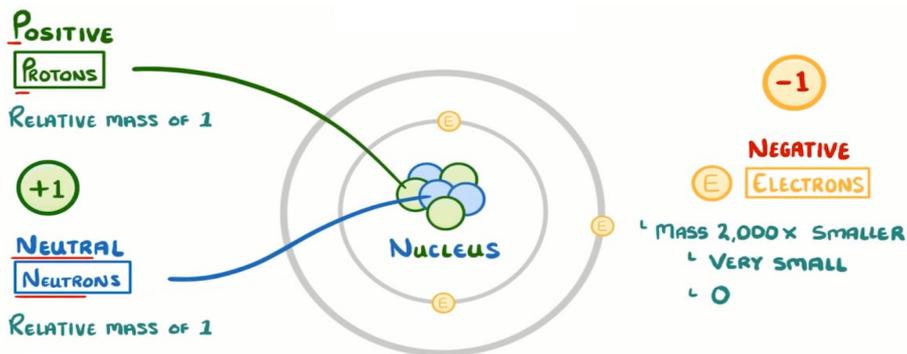
11



N°	Cell transport	
12	Diffusion	Movement of particles from a high concentration to a low concentration
13	Osmosis	Diffusion of water from a dilute solution to a concentrated solution through a partially permeable membrane
14	Active transport	Movement of particles from a low concentration to a high concentration - needs energy from respiration

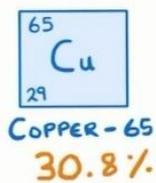
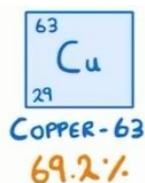
Chemistry

GCSE Atomic structure



Learned	Revised	Confident
_____ % Achieved: _____		

Nº	Keyword	Definition
1	Atom	The smallest part of an element that can exist
2	Element	A substance made from only one type of atom
3	Compound	A substance made from two or more different types of atoms that are chemically bonded
4	Mixture	Two or more different substances that are mixed but not chemically bonded
5	Ion	A charged particle formed from losing or gaining electrons
6	Isotope	Atoms of the same elements, with the same number of protons but a different number of neutrons
7	Electronic configuration	How the electrons are arranged in the shells on an atom
8	Relative atomic mass	The number of protons and neutrons in the nucleus of an atom
9	Atomic (proton) number	The number of protons in the nucleus of an atom



Sum of (ISOTOPE ABUNDANCE x ISOTOPE MASS)

Sum of ABUNDANCE OF ALL ISOTOPES

$$(69.2 \times 63) + (30.8 \times 65)$$

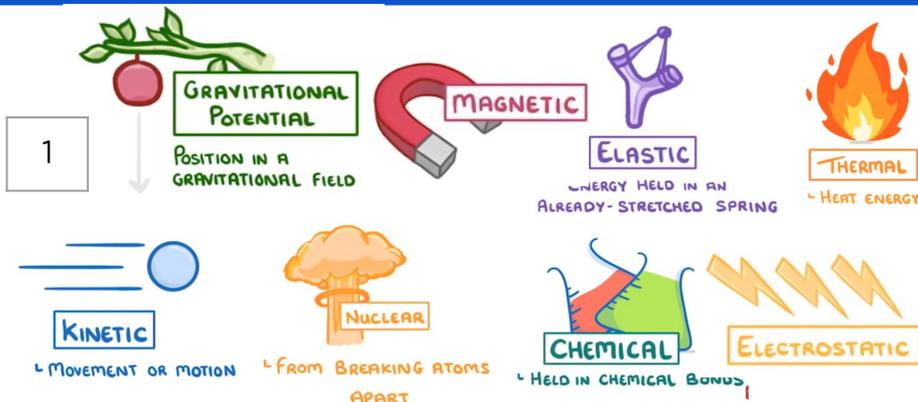
$$69.2 + 30.8$$

Subatomic particle	Relative mass	Relative charge	Location in atom
Proton	1	+1	Nucleus
Neutron	1	0 / neutral	Nucleus
Electron	1/2000	-1	Shells

Nº	Fact
10	Mixtures can be easily separated through physical processes such as filtration, distillation, chromatography and crystallisation - compounds cannot.
11	When an element loses electrons it forms a positive ion, when it gains electrons it forms a negative ion.

Physics

GCSE Energy



Learned	Revised	Confident
_____ % Achieved: _____		

N°	Keyword	Definition
2	Conduction	The process by which vibrating particles in solids transfer energy to neighbouring particles.
3	Convection	Where more energetic particles in fluids move apart, become less dense, and rise through the fluid (from hot to cold)
4	Non renewable	An energy resource that is finite (cannot be replaced as quickly as it is used) - it will run out
5	Renewable	An energy resource that can be replaced as quickly as it is being used - it will not run out
6	System	An object or group of objects
7	Work done	Energy transferred

N°	Facts
8	Energy can be transferred usefully, stored, or dissipated, but never created or destroyed
9	Specific heat capacity is the amount of energy needed to raise the temperature of a substance of a 1kg substance by 1°C
10	Efficiency can be increased by streamlining and lubricating.
11	Energy resources are used for generating electricity, heating and transport.

N°	Equations to learn
12	$\text{Kinetic energy} = 0.5 \times \text{mass} \times \text{speed}^2$
13	$\text{Gravitational potential energy} = \text{mass} \times \text{gravitational field strength} \times \text{height}$
14	$\text{Power} = \frac{\text{energy transferred}}{\text{time}}$
15	$\text{Power} = \frac{\text{work done}}{\text{time}}$
16	$\text{Efficiency} = \frac{\text{useful power output}}{\text{total power input}}$
17	$\text{Efficiency} = \frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$