Biology

GCSE Ecology

Learned	Revised	Confident

_____ % Achieved:_____

Maintaining biodiversity

Breeding programmes

Protection and regeneration of rare species

Reintroduction of field margins and hedgerows.

Reduction of deforestation and carbon dioxide emissions

Recycling resources rather than dumping waste in landfill.

N°	Keyword	Definition
1	Abiotic factor	A non-living factor that can affect a community, e.g. light intensity and temperature
2	Adaptation	Special features that allow living organisms to survive and be successful in their habitat.
3	Biodiversity	The variety of all the different species of organisms on Earth, or within an ecosystem.
4	Biotic factor	A living factor that can affect a community, e.g. availability of food and new predators.
5	Community	Two or more populations of organisms occupying the same area.
6	Ecosystem	The interaction of a community of living organisms (biotic) and the non-living (abiotic) parts of their environment.
7	Interdependence	The dependence of each species on other species for food, shelter, pollination, seed dispersal etc. If one species is removed it can affect the whole community.
8	Quadrat	A square frame used to take a representative sample of plants or slow-moving animals in an area.
9	Transect	A line across a habitat or part of a habitat used to sample the number of organisms at regular intervals.

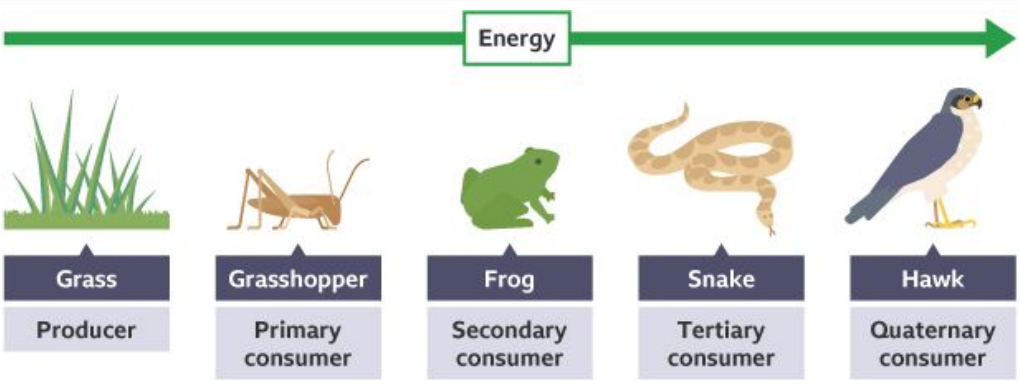
Facts

Carbon cycle - the main process involved are respiration, combustion and photosynthesis.

Water cycle - evaporation, condensation, precipitation, percolation, transpiration, respiration.

Global warming impacts living things by causing changes in the distribution of organisms, rising sea levels and habitat loss, changing weather patterns and changing migration patterns.

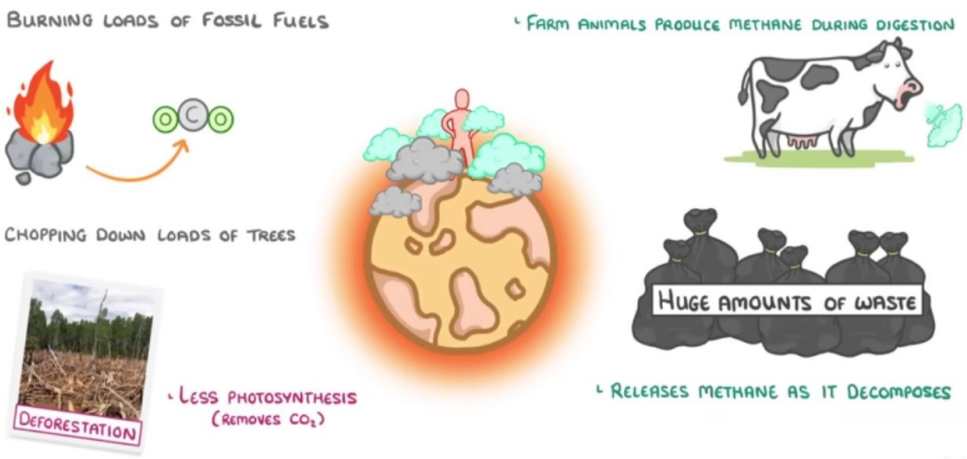
Land use for dumping waste, quarrying, farming and building - this reduces biodiversity.



Chemistry

GCSE Chemistry of the atmosphere

Learned	Revised	Confident
_____ % Achieved:_____		



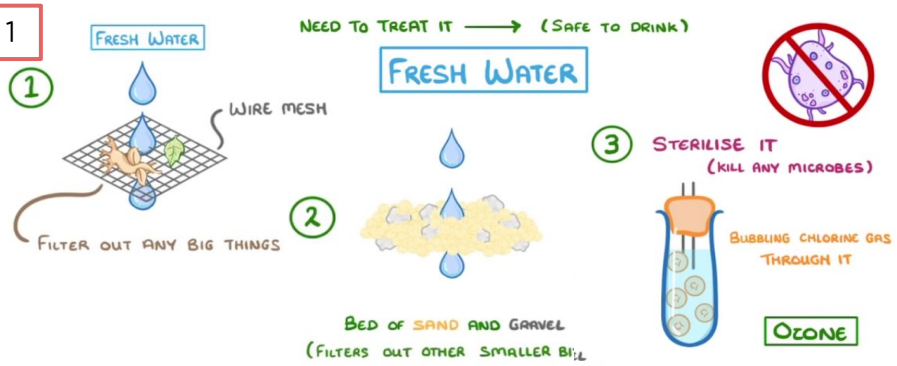
N°	Keyword	Definition
1	Atmosphere	layers of gases that surround the Earth. The main gases are nitrogen, oxygen and carbon dioxide.
2	Crude oil	Mixture of hydrocarbons, mainly alkanes, formed over millions of years from the remains of ancient dead marine organisms.
3	Evidence	Information or material that shows something is true.
4	Sedimentary	Rocks that are formed through the deposition of sediments, eg limestone and sandstone
5	Global warming	The increase of the overall average global temperature
6	Carbon footprint	The total amount of greenhouse gases a person, product or event is responsible for
7	Greenhouse gases	The gases responsible for global warming - carbon dioxide, methane, nitrous oxide and water.
8	Greenhouse effect	Retention of heat in the atmosphere caused by a build-up of greenhouse gas
9	Pollutant	A toxic chemical or object that causes damage to the land, air or water.
10	Atmospheric pollutants	

N°	Fact
11	The evolution of the atmosphere is only a theory. This is because there is a lack of evidence <u>NOT</u> because no-one was there
12	The main effects of global warming are: flooding from sea level rise; extreme weather such as hurricanes; changes in rainfall such as storms and droughts and extinction due to all of this
13	The Earth needs certain level of greenhouse gases to be habitable. Without greenhouse gases the Earth would be too cold to live on
14	Carbon footprints are difficult to measure due to the large number of factors that need to be considered and the complexity of the greenhouse effect in the atmosphere.

GCSE Using resources

Learned	Revised	Confident
_____ % Achieved:_____		

1



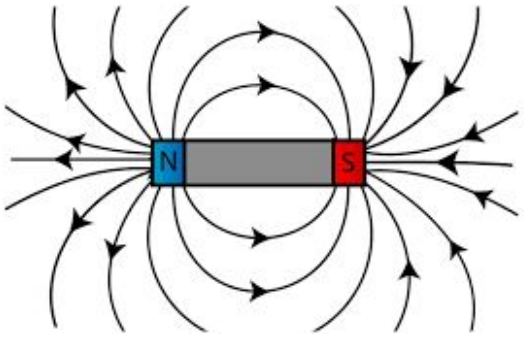
3º	Keyword	Definition
2	Finite resource	A resource that can only be used once and is in limited supply e.g. crude oil
3	Natural resource	MAterials that have been made through the formation of the world e.g. metal
4	Renewable resource	Resources which will not run out in the foreseeable future, they are being made faster than they are used
5	Synthetic resources	A material made by a chemical process, not naturally occurring.
6	Desalination	The removal of salt from water. This is an energy-intensive process.
7	Sustainable	An activity which does not consume or destroy resources or the environment for future generations
8	Potable water	Water that contains a low amount of microbes and dissolved salts and has a neutral pH.
9	Bioleaching	Using bacteria to extract metals from their ores.
10	Phytomining	Using plants to absorb metal compounds from the ground through their roots. The plants are then burned to produce an ash containing a high concentration of the metal compounds.
11	Life cycle assessment	(LCA) A 'cradle-to-grave' analysis of the impact of a manufactured product on the environment.
12	LCA steps	

Nº	Fact
13	Potable water **isn't** pure! Potable water can contain a small amount of dissolved salts and microbes.
14	The UK sources potable water from groundwater e.g. reservoirs. Hotter countries such as Australia have to desalinate sea water using distillation or reverse osmosis.
15	There are some issues with life cycle assessments. It can be difficult to judge the impact of aspects such as pollutants and the process can be biased. The LCA may not be fully objective

Physics

GCSE Magnets and electromagnets

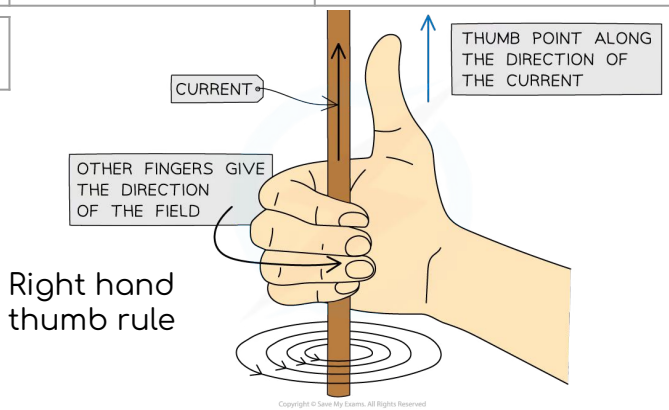
1	Bar magnet magnetic field



Learned	Revised	Confident
_____ % Achieved:_____		

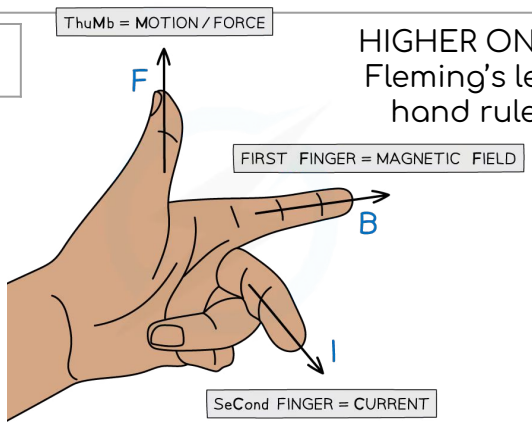
N°	Keyword	Definition
2	Magnetic field	The region around a magnet where another magnet, or magnetic material will experience a force due to the magnet.
3	Permanent magnet	Produces its own magnetic field which is always there
4	Induced magnet	An object that becomes magnetic when it is placed in a magnetic field
5	Electromagnet	A solenoid with an iron core
HIGHER ONLY		
6	Motor effect	When a current carrying wire in a magnetic field experiences a force
7	Magnetic flux density	How many field (flux) lines there are in a region

8



Right hand thumb rule

9



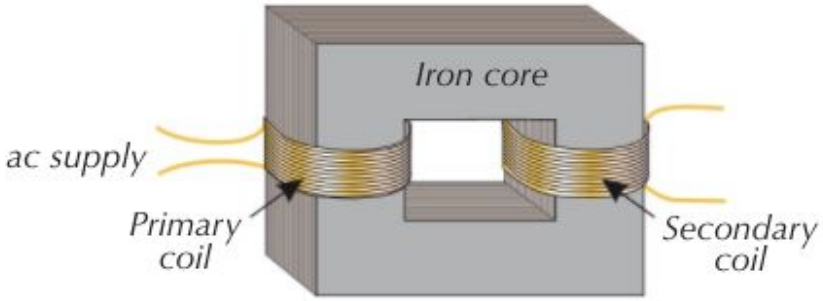
HIGHER ONLY
Fleming's left hand rule

N°	Facts
10	All magnets have a north and south pole
11	Like poles (eg. north and north, or south and south) repel each other
12	Unlike (opposite) poles (eg. north and south) attract each other
13	The magnetic metals are iron, steel, cobalt and nickel
14	The closer together magnetic field lines are, the stronger the magnet
15	Magnetic field lines always point from north to south

GCSE Magnets and electromagnets

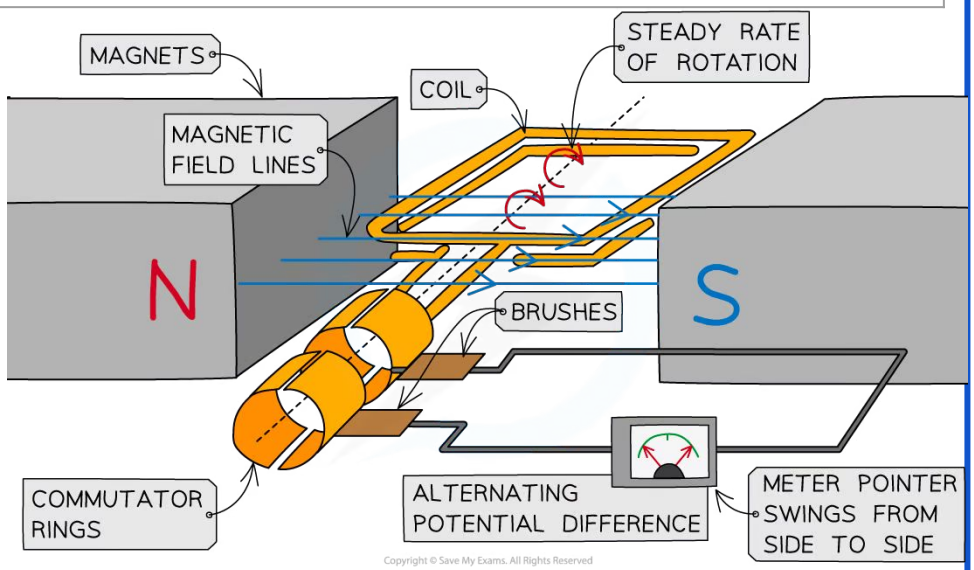
Learned	Revised	Confident
_____ % Achieved:_____		

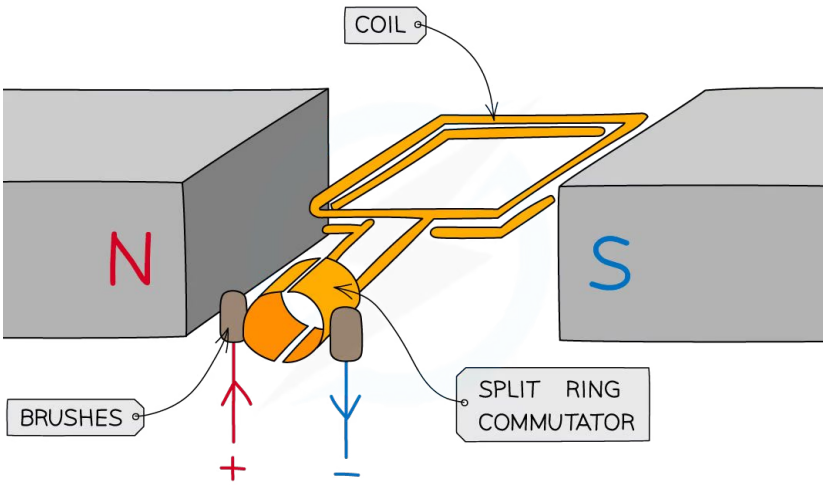
1 Transformer



N°	Keyword	Definition
2	Alternator	A type of generator that generates alternating current.
3	Dynamor	A type of generator that generates direct current.
4	Generator effect	The generator effect is the induction of a potential difference (and current if there is a complete circuit) across a conductor which is experiencing a change in an external magnetic field.
5	Transformer	A device that can change the potential difference of an ac supply.

6 Alternator



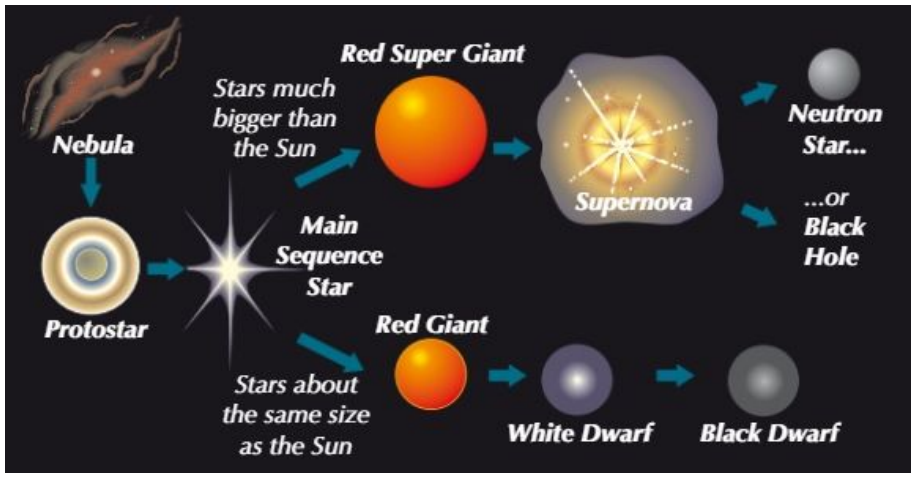


7 Dynamo

GCSE Space Physics

Learned	Revised	Confident
_____ % Achieved:_____		

1	Star life cycle



N°	Keyword	Definition
2	Dwarf planet	A planet-like object in space that orbits a star
3	Main sequence star	A star in the main sequence of its life, which is stable because the nuclear fusion provides pressure that balances the inward pull of gravity.
4	Nebula	A cloud of dust and gas in space.
5	Neutron star	The very dense core of a star that is left behind when a red super giant explodes in a supernova.
6	Nuclear fusion	When two nuclei join to form a heavier nucleus.
7	Orbit	The path on which one object moves around another
8	Planet	A natural object that orbits a star, and is large enough to have "cleared the neighbourhood".
9	Protostar	The earliest stage in the lifecycle of a star.
10	Red giant	A type of star that is formed when a star around the same size as the Sun expands as it begins to run out of hydrogen.
11	Red super giant	A type of star that is formed when a star much bigger than the Sun expands as it begins to run out of hydrogen.
12	Red shift	The shift in observed wavelength of light from a source moving away from a stationary observer (towards the red end of the EM spectrum)
13	Satellite	An object that orbits a second, more massive object. Satellites can be artificial or natural (e.g. the moon)
14	Supernova	The explosion of a red super giant
15	White dwarf	The hot, dense core left behind when a red giant becomes unstable and ejects its outer layer of dust and gas.

N°	Facts
16	The big bang theory says that initially, all matter in the universe occupied a very small space. This tiny space was very dense, and so was very hot Then it "exploded" - space started expanding, and the expansion is still going on.