

B13 Reproduction

Asexual Reproduction – 1 diploid cell duplicates itself to form 2 identical diploid cells. Offspring are genetically identical to parent cell.

Sexual Reproduction – 2 haploid cells fuse to create a diploid cell which grows into an organism. Offspring are genetically non-identical to the parents.

DNA coding for characteristics passed on from parent to offspring. In sexual reproduction, gene passed on determines the characteristic. 1 gene for a characteristic comes from both parents. Some alleles are dominant, some are recessive.

XX x XY

Gametes	X	Y
X	XX	XY
x	Xx	xy

	g	g	
G	Gg	Gg	Heterozygous
g	gg	gg	Homozygous

C14 The Earth's Resources

The earth has many resources. Some are finite and will eventually run out, some are renewable and can be made as quickly as they are used. Sustainable use is when a resource will be available for future generations.

Potable water is water that is safe to drink but is not completely pure – drinking water in the UK is put through processes to remove large debris (screening), remove smaller solids (sedimentation) and to remove bacteria (sterilisation).

Waste water must be treated before it is released into the environment. Effluent sludge (organic human waste) is removed and can be used to produce methane gas as a renewable fuel.

Low grade ores can be extracted using phytomining or bioleaching. Phytomining involves growing metal ion absorbing plants in an area, burning them and using chemical processes to extract and purify the metal. It takes a long time.

Bioleaching involves using a metal ion absorbing bacteria to produce a solution called a leachate that is extracted using chemical processes.

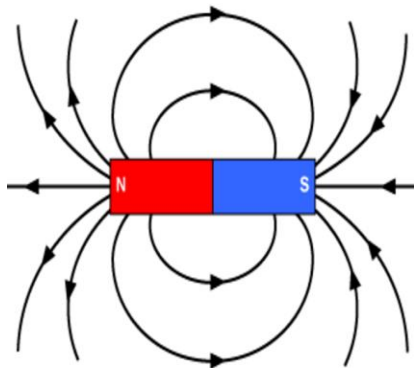
P15 Electromagnetism

Magnets have 2 poles:

- A north pole
- A south pole

The magnetic force is strongest at the poles

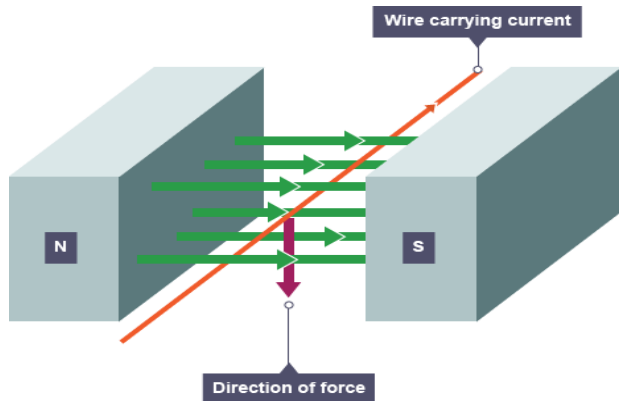
- Like poles repel
- Unlike poles attract



A permanent magnet produces its own magnetic field that cannot be turned off.

An induced magnet only because magnetic when it is placed in a magnetic field.

A wire carrying a current creates a magnetic field. When we place that wire into another magnetic field, a force is produced that pushes the wire at a right angle. This is the motor effect.



Videos



Quizzes

