

Year 6 Science Knowledge Organiser - Evolution and Inheritance

Word	Definition
Adaptation	The process of change by which an organism or species becomes better suited to its environment.
Characteristics	Distinguishing qualities, traits or features of a living thing.
Evolution	The process of gradual change that takes place over many generations.
Extinct	A species that no longer exists.
Genes	Part of a cell in a living thing which controls its physical characteristics.
Inheritance	The particular characteristics received from parents through genes.
Mutation	Permanent changes in genes which pass on to future offspring.
Natural Selection	The process by which species that are best adapted to their environment survive and reproduce, while less well adapted species die out.
Offspring	A human's child or an animal's young.
Species	Plants or animals which have the same characteristics and are able to produce offspring.
Variation	Differences between cells, individual organisms, or groups of organisms of any species caused either by genetic differences or by the effect of environmental factors.

Sticky Knowledge is in red!

Evolution:

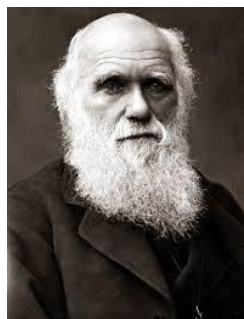
Evolution means change over time. It is the reason we have so many species on Earth. It happens when there is competition to survive (natural selection) and through differences within a species caused by inheritance and mutations.

Inheritance:

Inheritance is when something is passed on to the next generation. Offspring are not identical to their parents and some characteristics are inherited (passed on from parents to offspring). Other differences are new in offspring - these are called mutations.

Adaptation:

Adaptation is the action of a living things changing to suit the environment. If a species is well adapted it will survive and pass on successful genes to offspring. However, being highly adapted to one specific environment can be detrimental to a species' survival if there are sudden changes to that environment



A significant Scientist - Linked to the topic of Evolution and Inheritance

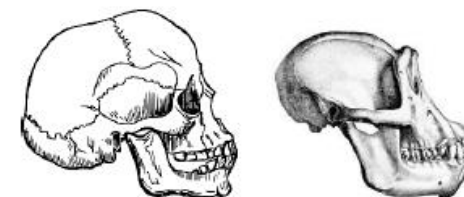
Charles Darwin (1809-1882)

Charles Robert Darwin was born in Shrewsbury and was an English Naturalist and biologist. He studied many animals and plants on his travels and came up with the idea of natural selection. His Scientific theory of evolution by natural selection became the foundation of modern evolutionary studies.

FOSSILS



Fossils are the remains of living things which inhabited the world millions of years ago. They are formed in sedimentary rock (sand, mud and pebbles squashed under layer, after layer over time) and plants/animals get trapped in these layers, revealing their shape.



HUMAN SKULL

CHIMPANZE SKULL

When palaeontologists compare fossils to animals from today, they can see similarities and identify relationships between them. Since evolution of a species happens over such long periods of time, evidence is usually taken from fossils.