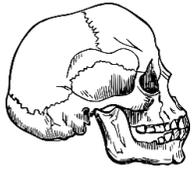


FOSSILS



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



CHIMPANZEE SKULL

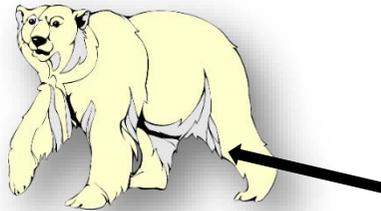
When palaeontologists compare fossils to animals from today, they can see similarities and identify relationships between them. Since evolution of a **species** happens over such long periods of time, evidence is usually taken from fossils.

- 1.) Charles Darwin is an English scientist best known for his theory of evolution.
- 2.) He was a geologist who went travelling in 1831 on the HMS Beagle.
- 3.) He saw many animals and plants and came up with the idea of natural selection (the strongest survive and evolve).
- 4.) His book 'Origin of the Species' was released in 1859 and was controversial because it went against the creation story in the Bible.

Evolution & Inheritance

Question: What is adaptation?

Answer: A change in a plant or animal's body to **suit** its location which can evolve over thousands of years in the most efficient way. If they don't adapt, then they may not survive.



A polar bear has adapted to camouflage itself against white snow/ice so it can hunt without being seen.



A camel has humps of fat storage to use up for energy in the dry desert when there is a shortage of food.



A cactus stores water to help keep it alive in the desert. It also has spikes to protect itself from attack.

Charles Darwin (1809 – 1882)



Prior Knowledge

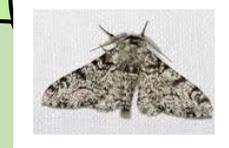
Year 2 – animals have offspring which grow into adults; living things live in habitats to which they are suited

Year 3 – fossils are formed when things that have lived are trapped within rock

Year 4 – environments can change and pose dangers to living things

Year 5 – describe differences in life cycles; describe processes of reproduction

Peppered Moth



In the 1700's lighter coloured pepper moths were better camouflaged and thrived. Those with the mutation that made them darker got eaten by birds. By 1850, when the environment was dirtier because of the Industrial Revolution, darker coloured moths began to survive better. The need to be adapted to their **environment** lead to 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 is when something is passed on to the next generation. **Offspring** are not identical to their parents and some characteristics are inherited (carried in offspring from parents) and other differences are new in the offspring – these are called mutations