



Charles Robert Darwin (1809-1882) was an English naturalist and biologist. He is best known for his work on the theory of evolution—explaining how living things change over time and become what they are.

His most famous book of research—'The Origin of the Species' - gave evidence about evolution that has taken place and a theory about how evolution works. This theory is called natural selection.

Inheritance

Is when something is passed on to the next generation. Offspring are not identical to their parents. Some of their characteristics are inherited and others are differences which are new in the offspring—these are called mutations.

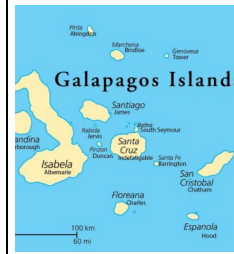
12th Feb 1809— Darwin born in Shrewsbury	1817— Darwin starts school	1825—falls to become a doctor at Cambridge University	1826-27—Begins forming his own ideas and writing papers on animal	1831—HMS Beagle sets sail from Plymouth to South America	1840s—develops his ideas of evolution	1859—His book 'Origin of the Species' is published	1864—Presented with the Copley Medal, the highest scientific award of the Royal Society of London	1882—Darwin dies of heart failure aged 73
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life

What did Darwin do on HMS Beagle?

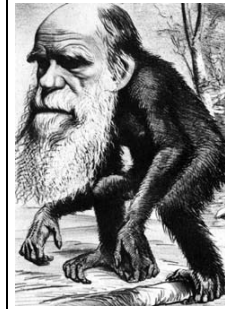


Why is his visit to the Galapagos Islands so famous?



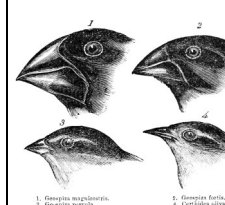
The Galapagos Islands are a series of islands in the Pacific Ocean off South America. Darwin noticed how the finches (birds) there differed from island to island. Darwin found out that the birds were able to quickly evolve in this closed off environment.

Why did his theory get criticised?



Britain was a strongly Christian country in the Victorian era. Some of Darwin's work was seen to go against the teachings of the Bible (especially the creation story) and so religious members of the community were against it. After some time, Darwin's theory eventually achieved approval from virtually everyone in the scientific field.

How is Darwin remembered today?



Darwin's work has become the foundation of our understanding of the natural world in which we live. Many newer studies build on Darwin's work. Islands, natural parks, roads, schools, buildings are all named after Darwin. The finches that he studied on the Galapagos Islands are now known as 'Darwin's Finches'.

Charles Darwin

Charles Darwin

HMS Beagle

scientist

naturalist

evolution

biologist

adaptation

species

expedition

Victorian

natural selection

Galapagos
Islands

ancestry

extinct

variation

fossil

inheritance

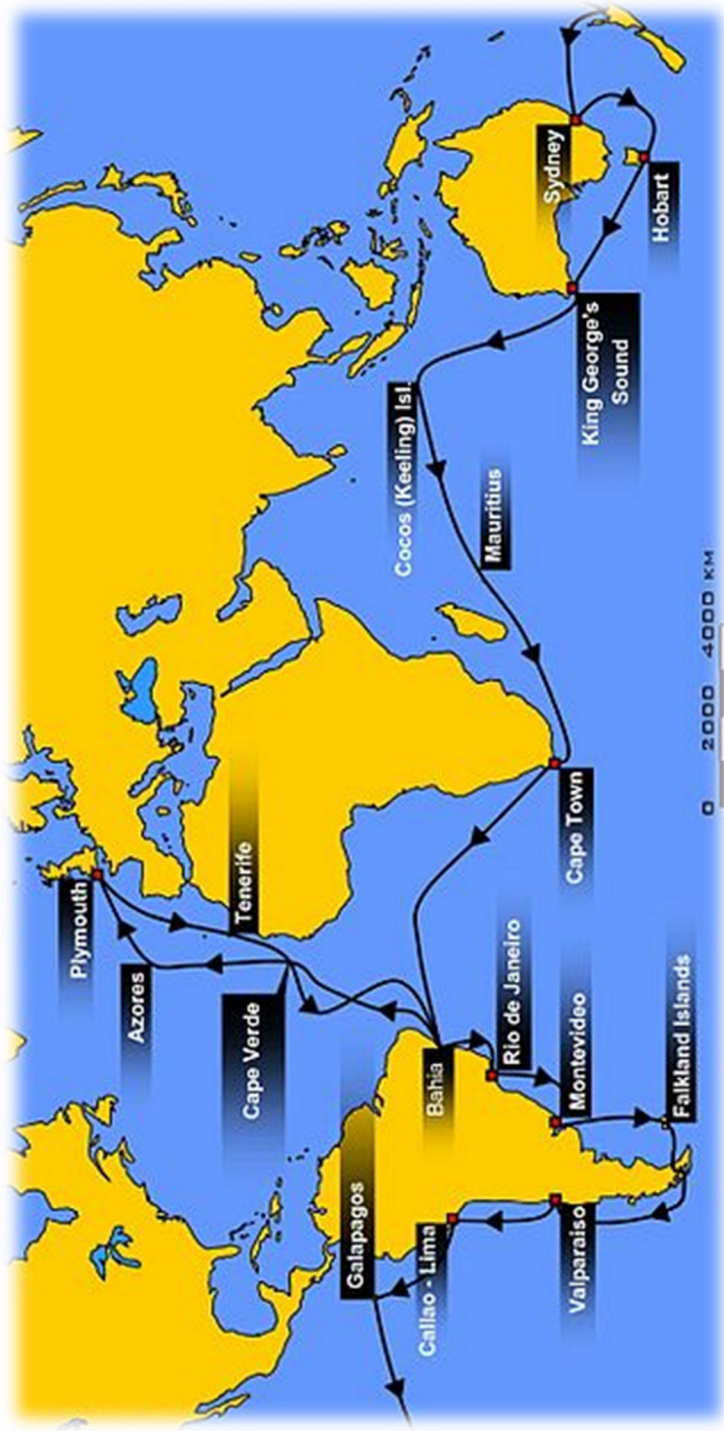
mutation

offspring



Route of HMS Beagle

On 27th December 1831, HMS Beagle set sail from Plymouth Harbour. It carried a crew of 73 men, including Captain Robert Fitzroy and Charles Darwin. It travelled across the Atlantic Ocean to South America where it stopped frequently, allowing Darwin to gather specimens. After spending five weeks in the Galapagos Islands, HMS Beagle travelled across the Pacific Ocean to New Zealand and Australia. The ship eventually arrived back in England on 2nd October 1836.



Examples of Adaptation

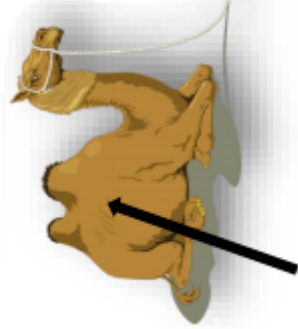
Question: What is adaptation?

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



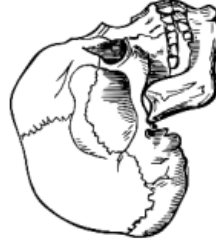
A camel has humps of fat storage to use up for energy in the dry desert when there is a shortage of food.



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.