

Charles Darwin



Charles Darwin was an important scientist who studied nature.

Early Life

Charles was born in England in 1809. He had five brothers and sisters.

Charles's mother died when he was eight years old. His father was a doctor.



Becoming a Scientist

Charles went to University at Edinburgh and Cambridge. He became very interested in natural history.



Charles went on a journey on a ship called HMS Beagle in 1831. The voyage was to study creatures all around the world.

He visited the Galapagos islands. Charles noticed the birds on the islands had differences to help them survive in their different habitats.

Theory of Evolution



Charles published a book called 'On the Origin of Species' in 1859. He described an idea called natural selection. This meant that creatures change over a long period of time to survive. Charles noticed that creatures with the best features to survive in their environment would pass these onto their young. Charles's ideas were known as the theory of evolution.

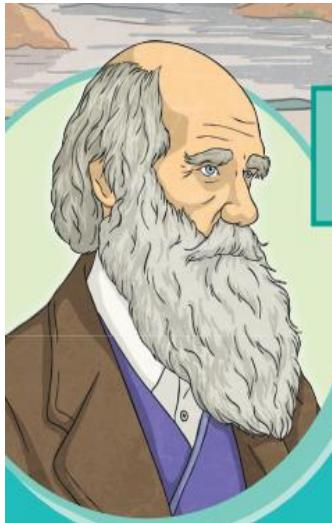
Later Life

Charles and his wife had 10 children. He died in 1882.

Fun Fact

A type of frog from Chile is called Darwin's frog after he discovered it.





Charles

Darwin

1809 - 1882

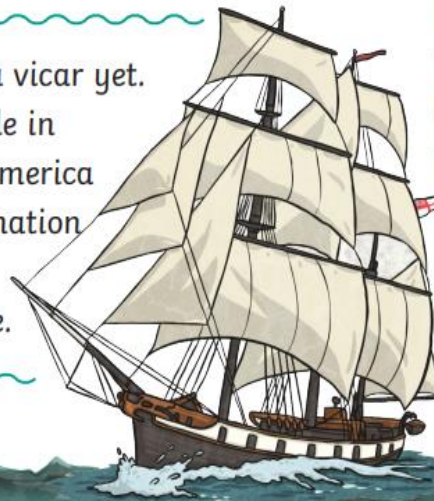
Early Life and Education

Charles Darwin was born in Shrewsbury, England. He loved asking questions about the world. Darwin began studying medicine but decided to train as a vicar instead. In his spare time, he studied nature and animals.



Adventure

After university, Darwin didn't want to be a vicar yet. He became a ship's naturalist on HMS Beagle in 1831. Over five years, they sailed to South America and then the Galápagos. He collected information about rocks, plants, animals and fossils, including some that nobody had seen before.



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Charles Darwin was a famous naturalist best known for his theory of evolution by natural selection.

Scientist and Author

When Darwin returned, he continued studying nature.

In 1859, he published a book called 'On the Origin of Species'. It was about the plants and animals he had seen and his theory about how they had changed. This theory of evolution was based on the idea that over millions of years, living things had adapted to suit their own environments. He described an idea called natural selection, where creatures that could adapt were more likely to survive and pass these features on.

His book was a bestseller and challenged previous theories. In 'The Descent of Man', Darwin suggested that humans may have evolved from another species. Scientists today generally agree that humans share a common ancestor with apes like chimpanzees and gorillas. Studies of DNA have since provided scientific evidence for Darwin's theories.

Fascinating Fact

Darwin later introduced 'survival of the fittest' as another term for 'natural selection'.

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Key Vocabulary	
offspring	The young animal or plant that is produced by the reproduction of that species.
inheritance	This is when characteristics are passed on to offspring from their parents.
variations	The differences between individuals within a species.
characteristics	The distinguishing features or qualities that are specific to a species.
adaptation	An adaptation is a trait (or characteristic) changing to increase a living thing's chances of surviving and reproducing.
habitat	Refers to a specific area or place in which particular animals and plants can live.
environment	An environment contains many habitats and includes areas where there are both living and non-living things.



Animals and plants produce **offspring** that are similar but not identical to them. **Offspring** often look like their parents because features are passed on.

Variation
In the same way that there is **variation** between parents and their **offspring**, you can see **variation** within any species, even plants.



Adaptive Traits
Characteristics that are influenced by the **environment** the living things live in. These **adaptations** can develop as a result of many things, such as food and climate.



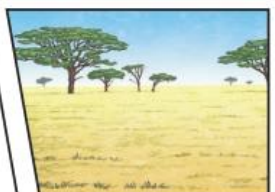
Inherited Traits
Eye colour is an example of an **inherited trait**, but so are things like hair colour, the shape of your earlobes and whether or not you can smell certain flowers.



Habitats
A good **habitat** should provide shelter, water, enough space and plenty of food.



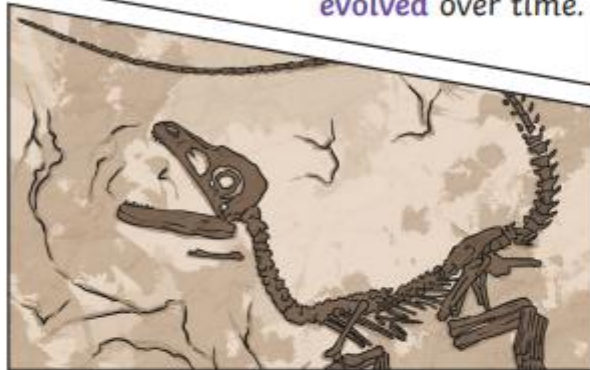
Environments
There are many types of **environment** around the world. Polar regions, deserts, rainforests, oceans, rivers, and grasslands are all **environments**.



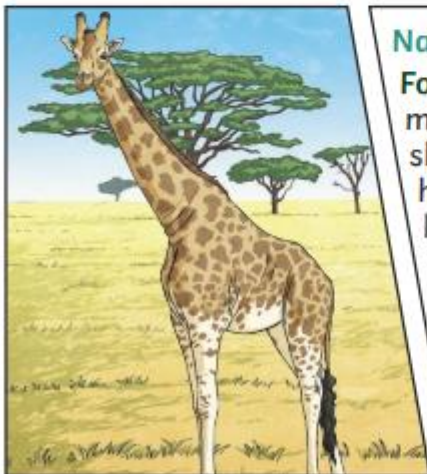
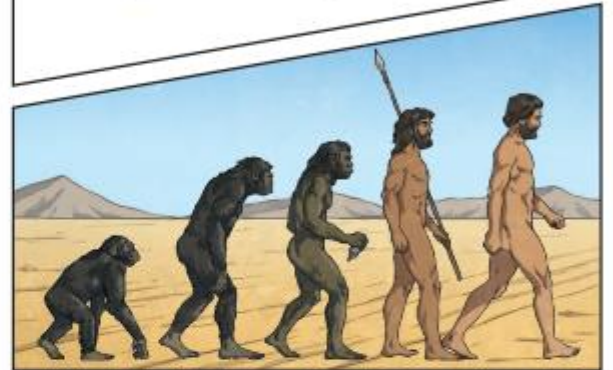
Key Vocabulary

evolution	Adaptation over a very long time.
natural selection	The process where organisms that are better adapted to their environment tend to survive and produce more offspring .
fossil	The remains or imprint of a prehistoric plant or animal, embedded in rock and preserved.
adaptive traits	Genetic features that help a living thing to survive.
inherited traits	These are traits you get from your parents. Within a family, you will often see similar traits, e.g. curly hair.

Fossils are the preserved remains, or partial remains, of ancient animals and plants. **Fossils** let scientists know how plants and animals used to look millions of years ago. This is proof that living things have **evolved** over time.



Evolution is the gradual process by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously **evolving** - even today!



Natural Selection

Fossils of giraffes from millions of years ago show that they used to have shorter necks. They have gradually **evolved** through **natural selection** to have longer necks so that they can reach the top leaves on taller trees.

Living Things	Habitat	Adaptive Traits
polar bear	arctic	Its white fur enables it to camouflage in the snow.
camel	desert	It has wide feet to make it easier to walk in the sand.
cactus	desert	It stores water in its stem.
toucan	rainforest	Its narrow tongue allows it to eat small fruit and insects.