

Year 6 Science Knowledge Organiser

Evolution and Inheritance

Key Knowledge

Evolution is a theory that explains how life on earth has slowly developed over time from simple life forms to those we see today. It was a theory created by **Charles Darwin**, who noticed changes and links in animals that he was studying.

Fossils are really useful for helping scientists to know what life was like millions of years ago. Fossils preserve what life was like thousands and even millions of years ago, so are helpful when making comparisons.

After observing animals in the wild, Charles Darwin came up with a theory known as **natural selection**. This means that animals have to adapt or change to their environments or they will die.

When animals (including humans) mate and produce **off-spring**, the off-spring will often look similar to their parents. There are certain things that a parent can pass on to their child – such as eye, hair or skin colour or the shape of their faces. This is called **inheritance**.

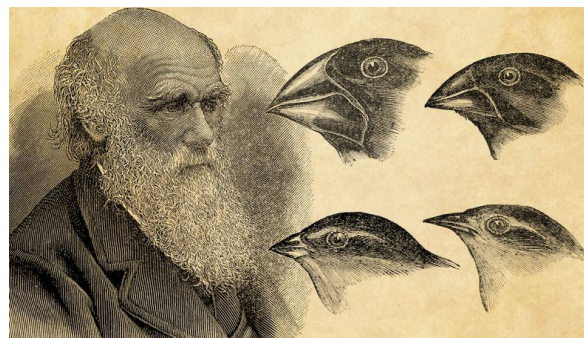
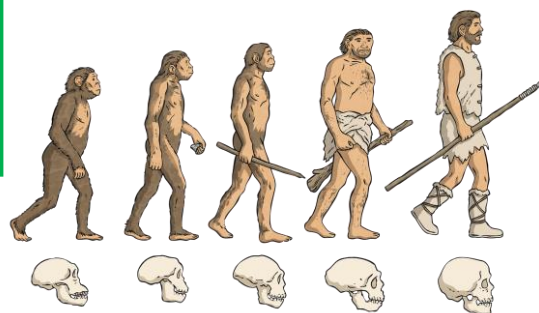
Not all things can be **inherited**. For example hair styles or scars are not inherited. Off-spring will often look different even when they have the same parents. Even identical twins will have small differences about them. This is called **variation**.

Characteristics are the different things that make you who you are. This can be because of your **genes** or because of your personality.

Some plants and animals live in extreme conditions, like deserts or the arctic. In order to survive, they need to change to suit the conditions they are in. This is called **adaptation**.

Key Vocabulary

Theory of Evolution	A theory by Charles Darwin that says living things have changed (or evolved) over time. He believes everything can be connected in a huge giant family tree that goes back millions of years.
Natural Selection	When living things have to adapt or change over time otherwise they will die off and could become extinct.
Inheritance	When characteristics are passed on from parents to their off-spring. Only some characteristics can be inherited.
Variation	Things that make each living organism (thing) different. For example a cat with longer fur than its sibling.
Species	A group of living things that are similar and are able to reproduce.
Genes	Part of the DNA that is passed down to off-spring, which is responsible for your characteristics like hair or eye colour.



Plants and animals adapt to their environment so they don't die.