

Key Knowledge	Key Skills	Key Vocabulary
<ul style="list-style-type: none"> <li>- Evolution is a process of change that takes place over many generations, during which species of animals, plants, or insects slowly change some of their physical characteristics. This is because offspring are not identical to their parents.</li> <li>- Evolution occurs when there is competition to survive. This is called natural selection.</li> <li>- Difference within a species (for example between parents and offspring) can be caused by inheritance and mutations.</li> <li>- Inheritance is when characteristics are passed on from generation to the next.</li> <li>- Mutations in characteristics are not inherited from the parents and appear as new characteristics.</li> </ul>	<ul style="list-style-type: none"> <li>- To recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</li> <li>- To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</li> <li>- To identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</li> </ul>	<p><b>Adaptation:</b> A change in structure or function that improves the chance of survival for an animal or plant within a given environment.</p> <p><b>Ancestor:</b> An early type of animal or plant from which a later, usually dissimilar, type has evolved.</p> <p><b>Fossils:</b> Preserved remains of a living thing from the past Adaptation – the process of change so that an organism or species can become better suited to their environment.</p> <p><b>Environment:</b> The surroundings or conditions in which a person, animal or plant lives Evolution – the process by which different kinds of living organisms are believed to have developed from earlier forms during the history of the Earth.</p> <p><b>Inherit:</b> To gain a quality, characteristic of predisposition genetically from a parent or ancestor.</p> <p><b>Variations:</b> The differences between individuals in the same species.</p> <p><b>Extinct:</b> no longer has any living members, either in the world or in a particular place</p> <p><b>Maladaptation:</b> the failure to adapt properly to a new situation or environment</p>

**Inheritance and Variation**

Inheritance refers to the genes that are passed on from parents to offspring. When we talk about inherited characteristics, we tend to focus on physical characteristics, such as eye colour or skin colour, as these are easy to spot, but inherited characteristics include abilities such as taste and smell. Characteristics are inherited from both parents but the way they combine creates variations, making the offspring unique. For example, humans may get blue eyes from our Mum, but brown hair from our dad.

The inherited characteristics can combine in different ways, which is the reason why siblings (brothers and sisters) inherit the same characteristics but are not identical to each other. Even identical twins that share the exact same combination of DNA are not 100% the same.

**Charles Darwin**

Charles Robert Darwin was a naturalist who was born on February 12th, 1809, in Shropshire, England. He died in 1882 at the age of 73. Darwin is famous for travelling the world, investigating what makes animals and plants different and introducing the Theory of Evolution.

Darwin wrote a book called 'On the Origin of Species' in 1859. In it, he explained his Theory of Evolution by Natural Selection.

**Mary Anning**

Mary Anning was born on 21<sup>st</sup> May, 1799 and lived all her life in Lyme Regis in Dorset (England). Mary is recognised as a pioneer in the field of palaeontology (the study of fossils) and is celebrated as the greatest fossil hunter of all time! In 1811, at the age of 12, Mary discovered an ancient species, named Ichthyosaurus – meaning 'fish lizard'. She also discovered a Plesiosaur skeleton (long necked sea creature) and a Pterodactyl (flying reptile). Mary died in 1847 at the age of 47.