

Evolution and Inheritance

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|------------------------|---|
| 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 species. |
| Characteristics | The distinguishing features or qualities that are specific to a species. |
| Adaption | An adaption 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. |

Humans are 99.9% all the same, but the other 0.1% contains enough **DNA** information to make us all different!

Some animals are bred to make products and others for scientific research.

Animals can also be bred for cultural or ethical reasons, or to be kept as pets.

| Genetic Modification | |
|---|---|
| Pros | Cons |
| <p>Can protect crops and mean the produce has less disease.</p> <p>The produce can be bigger and tastier.</p> <p>Can mean lower cost to consumer.</p> | <p>We don't know the long term effect of safety.</p> <p>Research isn't yet finished.</p> <p>Could cause more allergies or diseases for consumers.</p> |




Evolution and Inheritance

This unit is designed to help you learn about the history of **organisms** (animals and plants) and how they need to **adapt** to survive. From Darwin's theory of natural selection, to **genetic modification** and cloning today, you will gain an understanding of how **inheritance** and **genetics** works.

You will also gain an understanding of what history tells us, such as **fossils** and geology.

It really is a fascinating subject to see how life on earth has **evolved** over all these years!

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|--------------------------|---|
| Evolution | Adaption over a very long time. A process of formation, growth or development. |
| 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. |
| DNA | The material in chromosomes that transfers genetic information in all life forms (Deoxyribonucleic acid). |

| 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. |

Charles Darwin and Natural Selection

Different species of animal had evolved from one shared ancestor.

Animals had adapted to suit the habitats and environments they live in.

Those animals that didn't adapt had become extinct. Called the "Survival of the Fittest."

Many religious people were angry at this theory to start with.

