

Evolution is the way that living things change over time.

The first person who explained how evolution happens was Charles Darwin with his scientific theory of natural selection.

Charles Darwin observed that although individuals in a species shared similarities, they were not exact copies of each other; there were small differences or variations between them. He also noticed that everything in the natural world was in competition.

The winners were those that had characteristics which made them better adapted for survival. For example, they were stronger, faster, cleverer or more attractive than others in their species. These living things were more likely to reproduce and pass on their useful characteristics to their offspring.

Individuals that were poorly adapted were less likely to survive and their characteristics were not as likely to be inherited.

Over time, the characteristics that help survival become more common and a species gradually changes. Given enough time, these small changes can add up to the extent that a new species altogether can evolve.

All living things are slightly different from their parents. This is known as . Some have characteristics that make them better to survive. For example, they might make them better at avoiding predators or catching their prey.

Those living things that are better at surviving are more likely to and pass on their characteristics to their offspring. Those characteristics that don't help a living thing to survive are less likely to be .

This means that over time living things gradually change and eventually they might become a new altogether. This happens very slowly and usually takes millions of years. The process by which species change over time is called .

These useful terms will help you understand evolution.

- **Adaptation** - How living things are specialised to suit their environment.
- **Evolution** - The process by which living things can gradually change over time.
- **Inheritance** - The process of passing on features from parents to offspring.
- **Species** - A group of living things with very similar characteristics. They can breed together to make more living things of the same type.
- **Variation** - The differences between living things in a species.