Our Lady's Catholic Primary School – Knowledge Organiser

Science	Evolution ad inheritance	Year 6

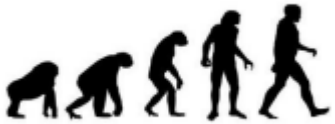
Vocabulary & Explanation

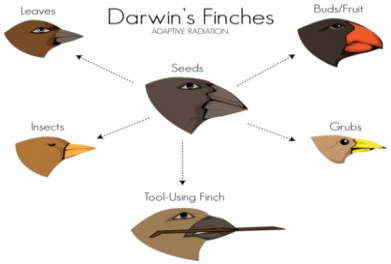
- **Adaptation** = The process of change by which an organism or species becomes better suited to its environment
- **Adaptive traits =** Characteristics that are influenced by the environment the living thing lives in. these can develop as a result of many things including food and climate.
- **Biology** = The study of living organisms
- **Evolution** = The process by which different kinds of living organisms are believed to have developed from earlier forms during the history of the earth inherit derive (a quality, characteristic, or predisposition) genetically from ones parents or ancestors
- **Fossil** = The remains or impression of a prehistoric plant or animal embedded in rock and preserved in petrified form
- **Inherited traits =** Features or traits passed from parent to offspring. Eye colour is an example of inherited traits
- **Naturalist** = An expert in or student of natural history
- **Offspring =** Animals and plants produce offspring that are similar but not identical to them. Offspring often look like their parents because features have been passed on.
- **Organism** = An individual animal, plant, or single-celled life form
- **Palaeontology** =The branch of science concerned with fossil animals and plants
- **Variation =** In the same way that there is variation between parents and their offspring, you can be variation within any species even plants.

What I should already know

- Humans and animals have adapted to their surroundings over many thousands of years.
- A fossil is the preserved remains or traces of a dead organism (living thing)
- Fossils can tell us lots about the organism when it was living

Images / Diagrams





Key facts & Information

Inheritance refers to the characteristic traits that are genetically passed to offspring from their parents e.g. hair colour, eye colour, height etc. Darwin refers to this as natural selection when the strongest traits survive over generations.

While offspring does mean child, it does not mean that you are only offspring when you are children! The inherited characteristics you gain from your parents are part of your DNA for life

Darwin's theory of evolution built on the ideas of many theorists who, over the ages, had thought about the origins of human existence and links between humans and other animals

The theory of evolution by natural selection (first formulated in Darwin's book "On the Origin of Species" in 1859) is the process by which organisms change over time as a result of changes in inheritable physical or behavioural traits.

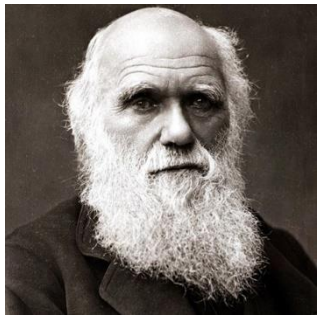
Animals change over time and adapt to the surroundings in which they live. Darwin observed that there were many forms of finches that had different beak sizes and shapes. Once he considered the food sources of each finch, he noted the reason for these adaptations.

'Survival of the fittest' means those that are most suited to their environment as a result of their inherited or adaptive traits survive while others do not.

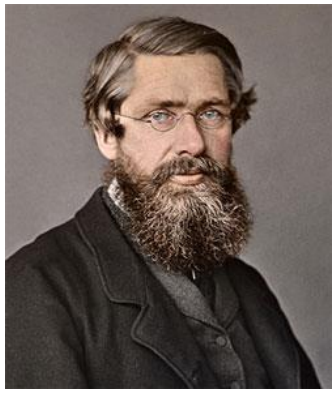
Since Darwin's time, we have continued to find fossils that have proven his theory

Examples of selective breeding include cows that can produce more milk, sheep with thicker coats of wool, wheat that produces more grain and different colouring in flowers

Significant Scientist



Charles Darwin 1809 – 1892



Alfred Wallace 1823 – 1913