

Year 6 Topic: Evolution and Inheritance



Key Learning Points:

1. I can understand how offspring vary and are not identical to their parents.
2. To learn about different animal adaptations.
3. To learn about different plant adaptations.
4. I can explore what we can learn from fossils.
5. To understand the theory of evolution and explore natural selection.
6. To explore human evolution.

Resilience

This topic will link to our **resilience** driver as we find out how species have evolved, over time, to survive within their environment.

Key Facts and Dates

How have living things changed over time?	Identify how fossils of giraffes have changed over time. Fossils from millions of years ago show that they used to have shorter necks. They have gradually evolved through natural selection to have longer necks so that they can reach the top leaves of taller trees. Identify the work of Mary Anning, the palaeontologist and how fossils tell a story.
How are characteristics passed from parents to their offspring?	Identify characteristics from photographs. What is the same? What is different? Animals and plants produce offspring that are similar but not identical to them. Offspring often look like their parents because features are passed on. In the same way that there is variation between parents and their offspring, you can see variation within any species, even plants. Inherited traits - eye and hair colour; even the shape of earlobes and whether you can smell certain flowers are inherited traits.
How have animals and plants adapted to suit their environment?	There are many types of environment around the world Polar regions, deserts, rainforests, oceans, rivers and grasslands. The peppered moth and the industrial revolution. The mutations of micro-organisms for survival (e.g. viruses). The polar bears white fur enables it to camouflage in the snow. The cactus stores water in its stem. The toucan's narrow tongue allows it to eat small fruit and insects. The camel's wide feet make it easier to walk in the sand of the desert.
Who was Charles Darwin?	Knowledge of Darwin's personal journey to share his theory of evolution through natural selection. This meant going against the norms of society at the time. Darwin's curiosity and passion for natural history, as well as his voyage on the Beagle and reliance on scientific process resulted in his book - The Origin of the Species. Compare his work with Alfred Wallace.



Vocabulary

Classification - A feature of any organism (either seen e.g. hair colour or hidden e.g. blood group)

Environmental variation - similarities/differences are dependent upon the life choices we make and how we live our lives.

Inherited variation - slight differences and similarities as a result of our genes (the sort code)

Adaptation - The process of change so that an organism or species can become better suited to their environment

Body fossil - Preserved remains of the body of the actual animal or plant itself

Breeding - The mating and production of offspring by animals

Environment - The surroundings or conditions in which a person, animal, or plant lives

Evolution - The process by which different kinds of living organism are believed to have developed from earlier forms during the history of the earth

Fossil - The remains or impression of a prehistoric plant or animal embedded in rock and preserved.

Inherit - To gain a quality, characteristic or predisposition genetically from a parent or ancestor

Offspring - A person's child or children/ an animal's young

Reproduction - The production of offspring by a sexual or asexual process.

Selective breeding - The process by which humans use animal breeding and plant breeding to develop selective characteristics by choosing particular animals and plants

Trace fossil - Indirect evidence of life in the past such as the footprints, tracks, burrows, borings and waste left behind.