

# Evolution and Inheritance

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## Year 6 Science Knowledge Organiser Spring Term 2023

This term, in Science, we will learn about variation and adaptation. We will learn what traits can be inherited, and how plants and animals can adapt to their environment in order to survive. We will explore different theories of evolution and examine the scientific evidence from plants and animals that has been gathered to support the theory of evolution.

 <b>Offspring</b> Animals and plants produce <b>offspring</b> that are similar but not identical to them. <b>Offspring</b> often look like their parents because features are passed on.	 <b>Variation</b> In the same way that there is <b>variation</b> between parents and their <b>offspring</b> , you can see <b>variation</b> within any species, even plants.
 <b>Adaptive Traits</b> <b>Characteristics</b> that are influenced by the <b>environment</b> the living things live in. These <b>adaptations</b> can develop as a result of many things, such as food and climate.	 <b>Inherited Traits</b> Eye colour is an example of an <b>inherited</b> trait, but so are things like hair colour, the shape of your earlobes and whether or not you can smell certain flowers.
 <b>Habitats</b> A good <b>habitat</b> should provide shelter, water, enough space and plenty of food.	 <b>Environments</b> There are many types of <b>environment</b> around the world. Polar regions, deserts, rainforests, oceans, rivers, and grasslands are all <b>environments</b> .

### Key Vocabulary

*offspring inheritance*  
*variation characteristics*  
*adaptation habitat*  
*environment evolution*  
*natural selection fossil*  
*traits*

**Fossils** are the preserved remains, or partial remains, of ancient animals and plants. Fossils let scientists know how plants and animals used to look millions of years ago. This is proof that living things have **evolved** over time.

**Evolution** is the gradual process by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously **evolving** - even today!

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 (1809 - 1882)

English Naturalist and Geologist, Charles Darwin, brought together the ideas of natural selection, adaptation and a single origin of life. He went on to state that humans were not separate from all living things but had developed through the same evolutionary process. He emphasised survival of the fittest and the competition that allowed certain varieties to survive due to inherited traits. The reason Darwin is known for evolutionary theory is the way that he combined the ideas so that they made sense - there was a single origin of life for all living things, that living things changed through adaptations that helped them to survive better in their environment and that these adaptations led to evolution from the original living thing to the ones we see now.