

# Science Knowledge Organiser: Have we always looked like this?

## (evolution and heritance)



Key Vocabulary	
<b>offspring</b>	The young animal or plant that is produced by the reproduction of that species.
<b>inheritance</b>	This is when <b>characteristics</b> are passed on to <b>offspring</b> from their parents.
<b>variations</b>	The differences between individuals within a species.
<b>characteristics</b>	The distinguishing features or qualities that are specific to a species.
<b>adaptation</b>	An <b>adaptation</b> is a trait (or <b>characteristic</b> ) changing to increase a living thing's chances of surviving and reproducing.
<b>habitat</b>	Refers to a specific area or place in which particular animals and plants can live.
<b>environment</b>	An <b>environment</b> contains many <b>habitats</b> and includes areas where there are both living and non-living things.

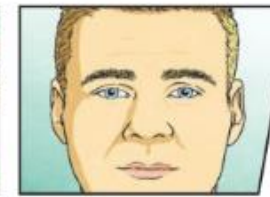


**Offspring**  
Animals and plants produce **offspring** that are similar but not identical to them. **Offspring** often look like their parents because features are passed on.

**Variation**  
In the same way that there is **variation** between parents and their **offspring**, you can see **variation** within any species, even plants.



**Adaptive Traits**  
**Characteristics** that are influenced by the **environment** the living things live in. These **adaptations** can develop as a result of many things, such as food and climate.



**Inherited Traits**  
Eye colour is an example of an **inherited trait**, but so are things like hair colour, the shape of your earlobes and whether or not you can smell certain flowers.

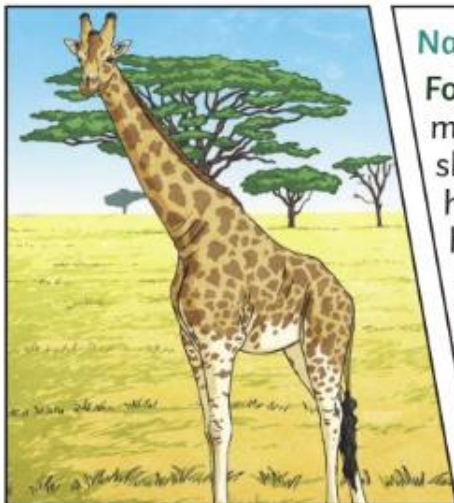


**Habitats**  
A good **habitat** should provide shelter, water, enough space and plenty of food.

**Environments**  
There are many types of **environment** around the world. Polar regions, deserts, rainforests, oceans, rivers, and grasslands are all **environments**.



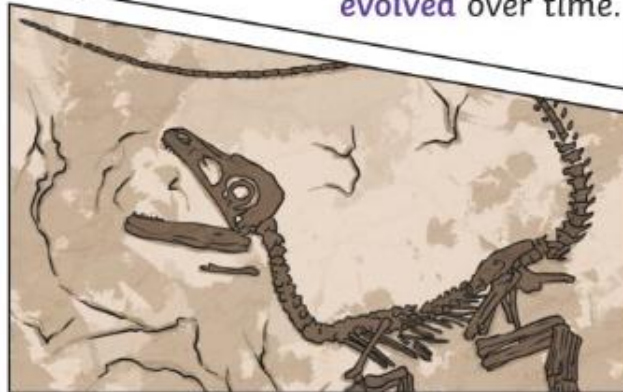
Key Vocabulary	
<b>evolution</b>	<b>Adaptation</b> over a very long time.
<b>natural selection</b>	The process where organisms that are better adapted to their <b>environment</b> tend to survive and produce more <b>offspring</b> .
<b>fossil</b>	The remains or imprint of a prehistoric plant or animal, embedded in rock and preserved.
<b>adaptive traits</b>	Genetic features that help a living thing to survive.
<b>inherited traits</b>	These are traits you get from your parents. Within a family, you will often see similar traits, e.g. curly hair.



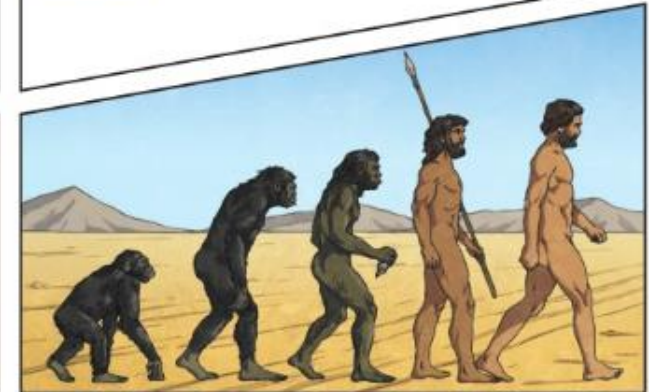
### Natural Selection









Fossils of giraffes 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 on taller trees.

**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.