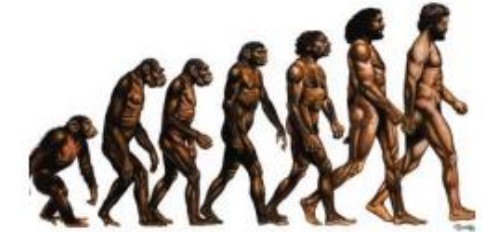


# Linnaeus and Darwin – what connects them?

<b>Evolution</b>	A change over a long period of time
<b>Fossil</b>	The preserved remains of an organism (plant or animal)
<b>Anthropologist</b>	A scientist who studies the origins of mankind (Charles Darwin)
<b>Adaptation</b>	The process of changing to suit a particular environment
<b>Variation</b>	The difference between living things within a species e.g. hair colour
<b>Inheritance</b>	Passing on characteristics from parent to offspring
<b>Natural Selection</b>	When the most beneficial characteristics get passed onto later generations
<b>Species</b>	Organisms with similar characteristics
<b>Extinct</b>	A species that no longer exists in nature
<b>Theory</b>	A thought-out explanation based on observations
<b>offspring</b>	The young animal or plant that is produced by the reproduction of that species.
<b>Characteristic</b>	The distinguishing features or qualities that are specific to a species.
<b>habitat</b>	Refers to a specific area or place in which particular animals and plants can live.
<b>Environment</b>	An environment contains many habitats and includes areas where there are both living and non-living things.

## Evolution

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!



### 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.



### Inheritance

When parents have offspring, they pass on their physical traits. The offspring inherit their parents' qualities. This means that most offspring look like their parents but they are not identical. The offspring may take characteristics from the father, the mother or a mixture of both.

### Adaptation

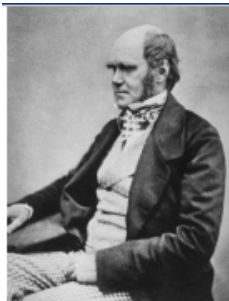
Adaptations are **any physical or behavioural characteristics of an animal that help it to survive in its environment**. Living things are adapted to their habitats. This means that they have **special features** that help them to **survive**. It's not just animals that are adapted to their environment, plants are too. A cactus is well adapted for survival in the desert. They have long roots to collect water from a large area and a stem that can store water for a long period of time. The animals and plants in one habitat are **suited** to live there and may not be able to survive in other habitats. When a habitat changes, the animals and plants that live there are affected.

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.

## Classification

In 1735, Swedish Scientist Carl Linnaeus first published a system for **classifying** all living things. An adapted version of this system is still used today: The Linnaeus System.

Living things can be **classified** by these eight levels. The number of living things in each level gets smaller until the one animal is left in its species level. This is how a dog would be classified.



### Charles Darwin

Charles Darwin was born in Shrewsbury in 1809, and as a child enjoyed Natural History. He wrote the book *On the Origin of Species (1859)* which provided evidence that evolution happened, and suggested a theory about how evolution worked.

Darwin sailed on the HMS Beagle at the age of 22 and was responsible for collating notes about the animals, plants and geology of the countries that the ship visited.

### Galapagos Islands

Charles Darwin explored the Galapagos Islands with the HMS Beagle and this was the main base of study for his book. He observed the different finches on the multiple islands and saw how they were of the same species but differed because of variations.

