Key Vocabulary Overview	
characteristic	an identifiable feature of an organism
species	a group of living things with similar characteristics that have the potential to produce fertile offspring
adaptations	the characteristics of an organism that allow it to have the best chances of survival in an environment
habitat	the place where a particular animal or plant lives
polar habitat	an extremely cold area located at the most northern and southern points on Earth where particular organisms live
desert habitat	an extremely dry area where particular organisms live
evolution	the gradual change in organisms over time, which can result in the creation of new species
Charles Darwin	a British naturalist most famous for his theory of evolution and studies of how new species come to exist
common ancestor	an organism that two or more species are descended from
theory	a scientific explanation for something based on the evidence available at the time
natural selection	a process that can lead to evolution, where organisms with the most suitable adaptations are more likely to survive and reproduce
finch	a type of small to medium-sized bird
Galapagos Islands	a group of islands located near South America

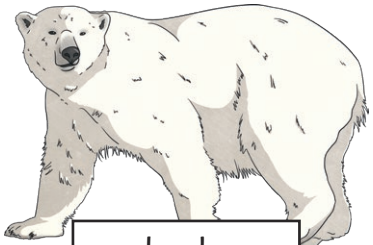
Adaptations

Adaptations are specific **characteristics** that make an organism suited to living in a particular **habitat**, giving them a better chance of survival in particular environments.

Examples of Animal Adaptations

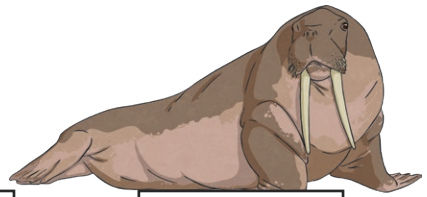
Conditions in **polar habitats** and hot **desert habitats** are harsh but living things with certain **adaptations** can survive there. What **adaptations** do these animals have?

Polar habitat



polar bear

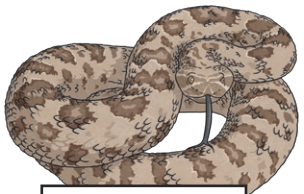
penguin



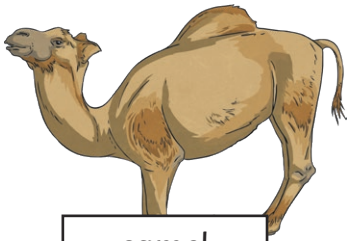
walrus

Hot desert habitat

desert scorpion



sidewinder



camel

Plant Adaptations

Plants also have various **adaptations** that help them to survive in various **habitats**. What **adaptations** do these plants have?

Polar habitat

pasqueflower

lichens

Arctic poppy

Hot desert habitat

cactus

Joshua tree

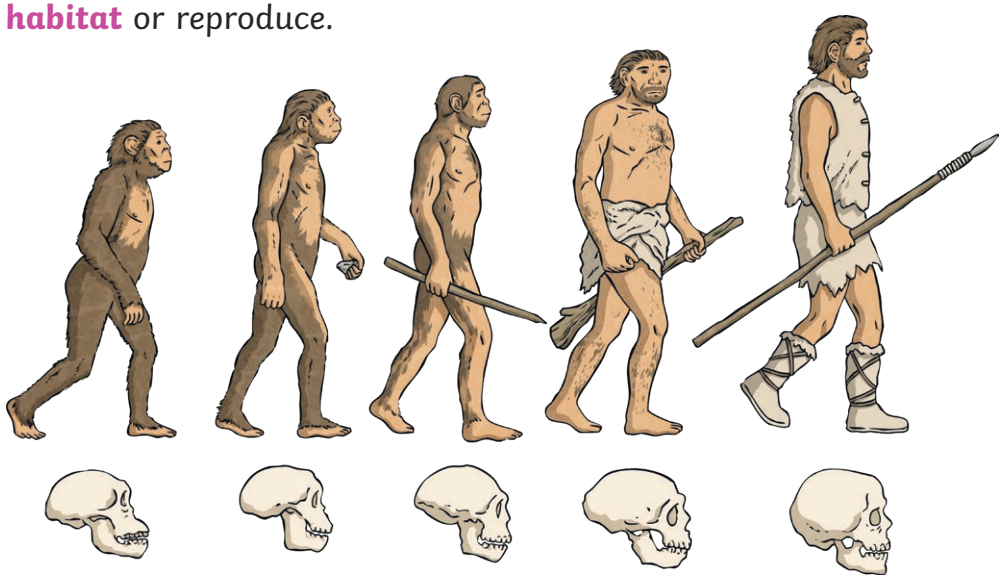
Mexican poppy

Evolution

Over millions of years, changes to an organism's **characteristics** can result in the creation of a new **species**. This is known as **evolution**. **Evolution** is a process that all organisms undergo over time.

Why Is Evolution Important?

Conditions in **habitats** can change. Organisms without advantageous **adaptations** are less likely to survive in their **habitat** or reproduce.

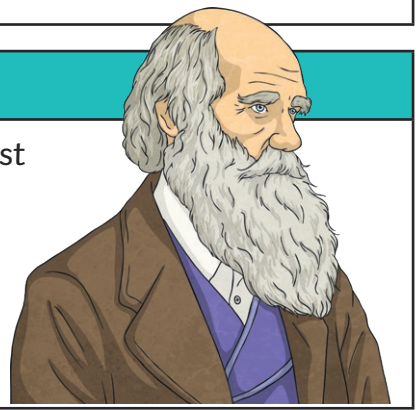


Early ancestors of humans originated in eastern Africa approximately 3.8 million years ago.

Charles Darwin

Charles Darwin was a British naturalist who wrote 'On the Origin of **Species**'.

In this book, Darwin shared his discoveries from the **Galapagos Islands** and his **theory** of **evolution**.



Natural Selection

Natural selection (often referred to as 'survival of the fittest') is the process by which living things that are better **adapted** to their environment become more likely to survive and reproduce. It is important for animals and plants, as it increases the chances of advantageous **characteristics** being passed down to offspring.

Natural selection can lead to **evolution**.

Darwin's Finches

On the **Galapagos Islands**, **Darwin** studied ***finches***. He observed that ***finches*** on different islands had varying **characteristics**, noting a pattern between their beak size and shape and the food sources available in each **habitat**.