

Science Y6 Autumn 1 Evolution and Inheritance

In this unit of work the children will explore how creatures (including humans) have adapted to their surroundings through the process of evolution.

They will also be looking at how characteristics- the good, the bad and the strange! - are inherited from our parents and ancestors.

In this unit children will:

Recognise that living things have changed over time and that fossils provide information about living things that inhabited the earth millions of years ago.

Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.

Identify how plants and animals are suited to their environment in different ways and that their adaptation may lead to evolution.

Identify characteristics that will make a plant or animal suited or not suited to a particular habitat.

Give examples of how an animal or plant has evolved over time e.g. a penguin

Link patterns seen in the model to real examples

Make observations of fossils to identify living things that lived on Earth millions of years ago

Research how Charles Darwin and Alfred Wallace developed their ideas on evolution. Research into the proof of evolution

Key Vocabulary

Evolution – The process by which living things can gradually change over time.

Inherit – If you inherit a characteristic you are born with it.

Charles Darwin – Charles Darwin published a book on his theory of Natural Selection in 1859.

Mary Anning - She made many incredible discoveries, which made her famous among some of the most important Scientists of the day. She is remembered as one of the greatest fossil hunters to have ever lived.

Recessive Genes – A gene that can be masked by a dominant gene.

Natural selection – The process whereby organisms better adapted to the environment tend to survive and produce more offspring.

Maladaptation – The failure to adapt properly to a new situation or environment.

Inherited characteristics – Something you receive from your parents, grandparents, or other family members.

Mutation – Characteristics that are not inherited from parents or ancestors and appear as new characteristics.

Palaeontology – The study of fossils as a guide to the history of life on Earth.

Prior Learning

EYFS - Explore the natural world around them

Y2 - Identify that most things live in a habitat to which they are suited.

Y4 – Recognise that environments can change, and this can pose dangers to living things.

Cross Curricular Links

Key Knowledge

Evolution is a process of change that takes place over many generations, during which species of animals, plants or insects slowly change some of their physical characteristics. This is because offspring are identical to their parents.

Evolution occurs when there is competition to survive. This is called natural selection.

Difference within species – between parent and offspring can be caused by inheritance mutations.

Inheritance is when characteristics are passed on from one generation to the next.

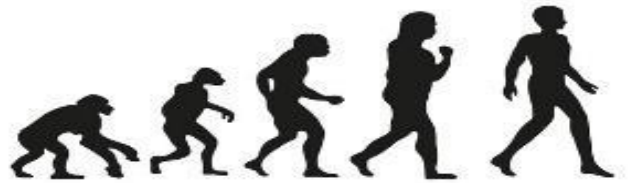
Mutations in characteristics are not inherited from the parents and appear as new characteristics.

Evidence of evolution come from fossils – when these are compared to living creatures from today. Palaeontologists can compare similarities and differences.

Other evidence comes from living things – comparisons of some species may reveal common ancestors.

Adaptation is when plants and animals have evolved so that they have adapted to survive in their environments.

Some environments provide challenges, yet some animals and plants have adapted and survived there.



Sometimes adaptations can be disadvantageous. One example of this can be the dodo, which became extinct as it lost its ability to fly through evolution. Flying was unnecessary for the dodo, as it had lived for so many years without predators, until its native island became inhabited.

When adaptations are more harmful than helpful, these are called maladaptation.

Key Questions

What do you call a gradual change that happens over time?

What does evidence of evolution come from?

Animals adapt to survive in their environment. Write down an example of an animal that has adapted and the reason it can survive in its environment.