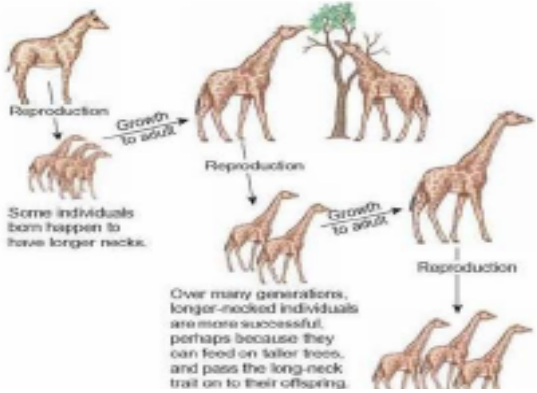
Year 6- Evolution and Inheritance

Key Vocabulary	Definition
adaption	Animals and plants are adapted to their environment. Their bodies are suited to the way they live.
characteristics	A distinguishing trait, feature or quality.
environment	The conditions in which a living thing exists.
evolution	The way in which plants and animals have changed over millions of years.
fossil	The naturally preserved remains or traces of animals or plants that lived long ago.
inherited	The way a trait or characteristic is passed to offspring from parents.
mutation	A mistake or a change in a living thing's DNA
offspring	A person's child/children or an animal's young.
Palaeontologist	Scientists that study the remains of plants or animals that lived millions of years ago.
species	A group of closely related organisms that are very similar to each other. We are the human species.
variation	A change or small difference.

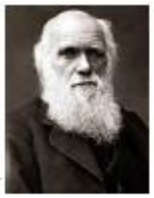
Evolution

Adaptation can lead to evolution if the environment changes. Animals and plants with variations that are best suited survive in greater numbers to reproduce and pass their characteristics on to their young. This is natural selection. Over time these inherited characteristics become more dominant within the population.

The evolution of the giraffe through natural selection



Scientists Link:



Charles Darwin
(1809-1882)

Alfred Wallace
(1823-1913)

Mary Anning
(1799 - 1847)

Fossils

Fossils are the remains of living things which are found in sedimentary rocks. These rocks form in layers so animals and plants can get trapped between the layers. They provide information about living things that inhabited the Earth millions of years ago and can show the evolution of species over time.

Sticky Knowledge

- Living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.
- Characteristics and difference within a species can be inherited or caused by mutations.
- Mutations are random changes (which are not inherited from the parents).
- Living things provide evidence for natural selection and evolution
- As animals and plants adapt to their environment and over time, adaptation may lead to evolution.
- Evolution occurs when there is competition to survive (natural selection)
- Fossils provide information about living things that inhabited the Earth millions of years ago. Extinct animals can also provide evidence for evolution.
- Fossils can show the evolution of species over time.
- Fossils are the remains of living things which are found in sedimentary rocks. These rocks form in layers so animals and plants can get trapped between the layers.
- When palaeontologists compare fossils to animals from today, they can see similarities and identify relationships between them.
- Scientists have researched evolution for many years. Charles Darwin, Mary Anning and Alfred Wallace are scientists who studied evolution.

9 hours

Lesson 1- **Inheritance Detectives**

Can I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents?

Lesson 2- **Mutations and Adaptations**

Can I recognise that living things have changed over time?
Can I identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution?

Focused Reading Session– Charles Darwin

Lesson 3- **Extreme Survival**

Can I identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution?

Lesson 4- **Meet the Evolutionary Pioneers**

Can I recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago?

Lesson 5- **Evolutionary trees and fossils**

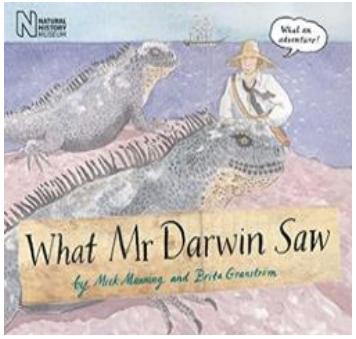
Can I recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago?

Lesson 6- **The Tale of the Giraffe's Neck**

Can I recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago?
Can I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents?
Can I identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution?

Extended Writing - Write a 'Just So' story about a living creature and a distinguishing characteristic.

Link to a text



What Mr Darwin Saw
– Mick Manning & Brita Granstrom

Scientific Enquiry

Pupils might work scientifically by: observing and raising questions about local animals and how they are adapted to their environment; comparing how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels. They might analyse the advantages and disadvantages of specific adaptations, such as being on two feet rather than four, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers.