

Bomere and the XI Towns Federation Knowledge Organiser—Evolution and Inheritance

Topic: Science—Evolution and Inheritance

Class/Year Groups: Year 6

Term: Autumn

What you already know?

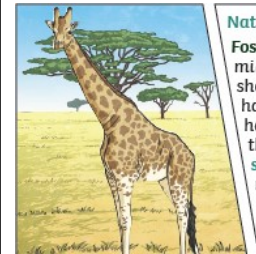
Pupils will not have had any formal teaching about evolution prior to this unit but will have studied classification and will be aware of the variety of life on Earth. They will have learned about fossil formation in Year 3 and should know that fossils are the imprint of a living animal or plant in the rocks.

What you will learn



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.



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.

Adaptive Traits

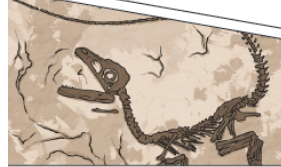
Characteristics that are influenced by the **environment** the living things live in. These **adaptations** can develop as a result of many things, such as food and climate.



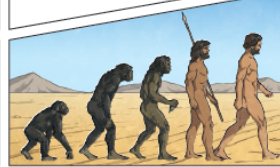
Inherited Traits

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.

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.

Vocabulary

Evolution	Adaptation over a very long time.
Natural selection	The process where organisms that are better adapted to their environment tend to survive and produce more offspring.
Fossil	The remains or imprint of a prehistoric plant or animal embedded in rock and preserved.
Inherited traits	These are traits you get from your parents. Within a family, you will often see similar traits, e.g. curly hair.
Off spring	The young animal or plant that is produced by the reproduction of that species.
Environment	An environment contains many habitats and includes areas where there are both living and non living things.



National Curriculum Objectives:

- 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 animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

