

Year 3 Subject Knowledge Organiser – Evolution and Inheritance

What I should already know

Animals have offspring that grow into adults.

There are different types of animals, including mammals, birds, reptiles, amphibians, and fish.

Living things are suited to their habitats.

Some characteristics of living things are inherited from their parents.

What I will have learnt by the end of the unit

How characteristics are inherited.

How fossils help us understand evolution.

Why some animals have become extinct.

How adaptation helps living things survive.

How Charles Darwin and Mary Anning contributed to science.

Key Concepts

Biology

Chemistry

Physics

Scientific enquiry

Science for the

future

Vocabulary

What I will have learnt at the end of the key stage

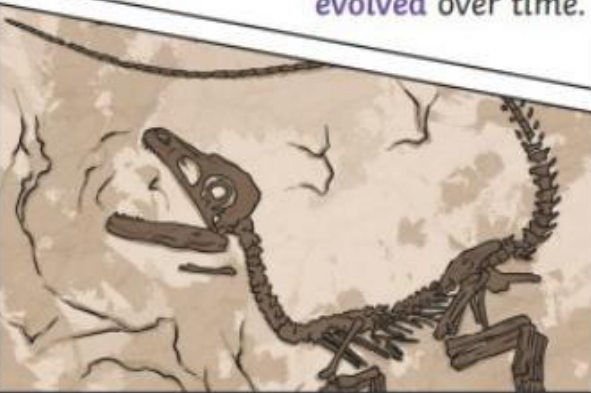
The theory of evolution and how it explains the diversity of life.

How genetic inheritance works and why we look similar but not identical to family members.

How living things have adapted to survive in different environments.

How human actions can impact the survival of species.

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.



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.

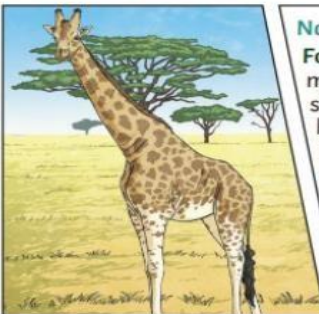


Inherited Traits

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.

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.

Key skills I will learn/use

Notice- I will be able to ask relevant questions and using different types of scientific enquiries to answer them

Observe- I will be able to set up simple practical enquiries, comparative and fair tests

Record- I will be able to gather, record, classify and present data in a variety of ways to help in answering questions.

I will be able to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

Report- I will be able to report findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
I will be able to using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

Identify- I will be able to identify differences, similarities or changes related to simple scientific ideas and processes

Evidence- I will be able to use straightforward scientific evidence to answer questions or to support their findings.

Opportunities for teaching diversity, equality (including protected characteristics and expanding cultural capital)

Learning about scientists from different backgrounds, e.g., Mary Anning (fossil discoveries) and Charles Darwin (theory).

Understanding how evolution connects us all as humans.

Exploring real-life examples of adaptation, such as animals in different climates.

Visiting museums or virtual tours of fossil collections.

Skills I may use for other subjects

Understanding timelines from history (how long ago events happened).

Using evidence and making predictions (science skills).

Reading and researching about famous scientists.

Recording and presenting findings in different ways (writing and maths).

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.

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Key Vocabulary

Evolution – The process of change in living things over time.

Inheritance – Passing on characteristics from parents to offspring.

Adaptation – A trait that helps an organism survive.

Natural Selection – The survival of the best-adapted organisms.

Fossil – Preserved remains of ancient life.

Extinction – When a species no longer exists.

Habitat – The environment where a living thing lives.

Species – A group of living things that can reproduce.

Characteristics – Features of an organism, inherited or influenced by the environment.

Environment – The surroundings in which an organism lives.

Key Knowledge

Evolution is the process by which living things have changed over time.

Offspring inherit characteristics from their parents, but they are not identical.

Fossils provide evidence of how living things have changed over millions of years.

Some changes help animals and plants survive in their environment (adaptation).

Natural selection is a process where living things with helpful traits survive and pass on their traits.

Evolution means change over time. It is the reason we have so many species on Earth.

Inheritance is when something is passed on to the next generation. Offspring are not identical to their parents and some characteristics are inherited (passed on from parents to off-spring).

Adaptation is the action of a living things changing to suit the environment. If a species is well adapted it will survive and pass on successful genes to offspring.

Recall and Remember questions

What is evolution?

How do offspring inherit characteristics from their parents?

What is a fossil, and what does it tell us?

Who was Charles Darwin, and why is he important?

How do animals and plants adapt to their environment?

