

Knowledge Organiser - Science - Year A - Evolution and Inheritance (UKS2)

Careers connected to Evolution and Inheritance: geneticist
DNA analyst, biological Researcher, conservationist



Sticky Learning - What I already know

- I know that offspring grow into adults
- I know that young animals are similar to their parents
- I know that animals need food, water and air to survive
- I know that humans and other animals have lifecycles
- I know that animals reproduce
- I know that environments can change
- I know that plants have lifecycles
- I know that new plants grow from seeds
- I know that fossils are the preserved remains or traces of living things
- I know that fossils provide evidence about plants and animals that lived long ago

Characteristics and variation

A characteristic describes how something looks or how it behaves. Characteristics can be passed on from parents to their offspring, meaning that they can be inherited. They can include hair colour, eye colour and height. Environmental factors can also affect a person's characteristics



Adaptations

Plants and animals have numerous adaptations which help them to survive in their habitats.

- Camels have humps to store food, two rows of eyelashes and small slits for nostrils
- Epiphytes are plants which can grow on the surface of another plant
- Some plants contain toxic minerals to protect themselves from predators
- Other plants can store water, trap insects and smother other plants

Charles Darwin, the Galapagos Islands and human evolution

Charles Darwin was a famous naturalist who studied finches and tortoises on the Galapagos Islands. He suggested that some species may share a common ancestor and evolve to suit their habitats. Those who cannot adapt to their environment become extinct. He called this process natural selection. Humans have also gone through stages of evolution, evolving from primates to Homo sapiens.



Fossils

Mary Anning was a palaeontologist who found and collected many fossils along the Jurassic Coast in Dorset. She was the first person to uncover a full ichthyosaurus skeleton. Scientists use fossils to study how a creature has evolved over time by comparing bone structures.



Core Learning



1. Understand how offspring vary and are not identical to their parents



2. Learn about animal adaptations



3. Learn about plant adaptations



4. Explore what we can learn from fossils



5. Explore the theory of evolution by natural selection



6. Explore human evolution

variation	the differences in characteristics or traits between living things of the same species
inherited	when characteristics or traits are passed on from parents to offspring
adaptation	changes or special features of a living thing to help it live in a habitat
ancestor	someone or something a living thing is related to from a long time ago
natural selection	survival and reproduction of the fittest
evolved	<u>how</u> living things gradually changed over time
extinct	a species that is no longer living, having completely vanished from the Earth
Homo sapiens	the scientific name for the human species