Knowledge Organiser: Evolution and Inheritance

Careers connected to Evolution and Inheritance: Geneticist, DNA Analyst, Biological Researcher, Conservationist

Lesson Sequence

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

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. However, **environmental** factors are important too.

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. He called this process natural selection.

Australopithecus
Homo habilis
Homo erectus
Homo heidelbergensis/ neanderthalensis
Homo sapiens

3.6 million years ago

↓

Human Evolution

↓

Today

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

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.