Evolution and Inheritance

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.

Charles Darwin Factfile

Questions

Why do some animals become extinct while others continue to evolve?

How do fossils provide evidence for evolution?

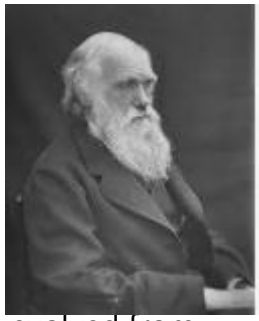
Why might animals and plants have adapted to live in different environments? Can you give an example?

What is natural selection, and how does it affect the survival of different species?

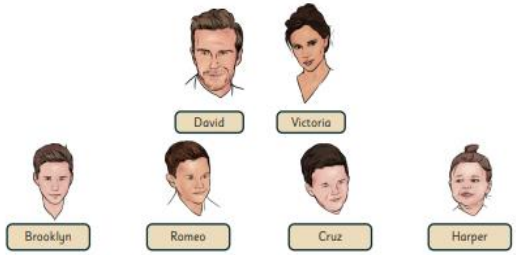
Who was Charles Darwin, and what was his contribution to the theory of evolution?

Describe how a feature of the mole helps the mole to live underground?

Scientist: Charles Darwin 1809-1882

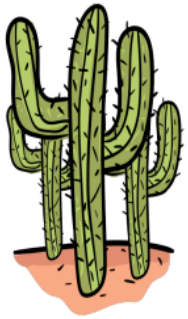


Charles Darwin is introduced as a scientist who developed the theory of evolution by natural selection, explaining how living things change over time through adaptation and inheritance. In 'The Descent of Man', Darwin suggested that humans may have evolved from other species. Studies of DNA have since provided scientific evidence for Darwin's theories.



The Beckham Family

The children have inherited certain traits from their parents but they cannot inherit Victoria's singing ability or David's football skills.



Cacti grow in the desert which is hot and sandy.

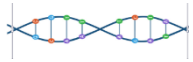
- They have spines instead of leaves to protect them from being eaten by predators.
- They have a thick, waxy skin which helps reduce the amount of water they lose.
- They have shallow, widespread roots which allow fast absorption of water when it rains.
- They have large, thick stems which allow them to store water until they need it.

Scientific Terminology

Adaptation - process of change by which an organism or species becomes better suited to its environment.

Characteristics - a feature or quality belonging typically to a person, place, or thing and serving to identify them.

DNA - carries specific genetic information inside every living thing



Evolution - a theory that states that all species that exist today developed from previous species.

Inheritance - how characteristics or traits are passed down from parents to offspring (their children), like eye colour or height.

Natural Selection - when organisms that are best suited to their environment survive and pass on their genetic traits.

Organism - any living thing, from the smallest bacteria to the biggest whale, that can grow, move and reproduce.

Reproduce- to make more of something, like having babies or offspring

Traits you can inherit	Traits you can't inherit
eye/hair/skin colour, shape of nose, size of feet, height	a good singing voice, ability to play football, drawing skills