Evolution and inheritance

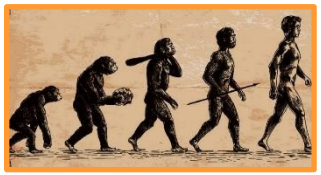
We will learn…

Evolution is a process of change that takes place over many generations, during which species of animals, plants, or insects slowly change some of their physical characteristics. This is because offspring are not identical to their parents. It occurs when there is competition to survive. This is called natural selection. Inheritance is when characteristics are passed on from generation to the next. Mutations in characteristics are not inherited from the parents and appear as new characteristics.

Evidence of evolution comes from fossils. When these are compared to living creatures from today, palaeontologists can compare similarities and differences. Other evidence comes from living things.

Adaptation is when animals and plants have evolved so that they have adapted to survive in their environments. For example, polar bears have a thick layer of blubber under their fur to survive the cold, harsh environment of the Arctic. Some environments provide challenges yet some animals and plants have adapted to survive.

Key vocabulary:

adaptation	A change in structure that improves the chance of survival for an animal or plant within a given environment.
characteristics	The features that belong to them and make them recognisable.
extinct	No longer has any living members.
inherit	You are born with a characteristic because your parents or ancestors also had it.
reproduction	When an animal or plant produces one or more individuals similar to itself.
evolution 	A process of change whereby species of animals, plants, or insects slowly change some of their physical characteristics.

Inspirational Scientists

Professor Nazneen Rahman- Human geneticist

Alfred Russel Wallace and Charles Darwin- suggested the theory of evolution

Investigate:

- Are you a super taster? Find out if you've inherited tasting genes.
- How are plants or animals adapted to their environment? Research rainforest plants and animal adaptations.
- Discuss different arguments for human evolution. Why do people disagree?

Working scientifically –

In this topic we develop the following practical skills:

- ✓ Identifying scientific evidence that has been used to support or refute ideas or arguments.
- ✓ Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.