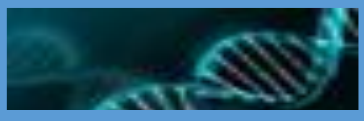
SCIENCE: EVOLUTION AND INHERITANCE



Key Vocabulary

anomaly, classify, offspring, organism, reproduction/reproduce, species, fossil variation, explain, habitat, species, adaptation, adapted, migrate, camouflage, evidence, offspring, evolution/evolve, extinction/extinct, inherited/inherit, natural selection,

Working Scientifically:

- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
- Identifying scientific evidence that has been used to support or refute ideas or arguments.
- Pupils will learn that scientists are often not certain about what their findings tell them. When new evidence comes to light they may change their minds. Scientists also use models that might not be scientifically accurate, but which help to convey complex ideas to a wider audience.

Inheritance

Inheritance refers to the genes that are passed on from parents to offspring. When we talk about inherited characteristics, we tend to focus on physical characteristics, such as eye colour as these are easy to spot, but inherited characteristics include abilities such as taste and smell. Characteristics are inherited from both parents but the way they combine creates variations, making the offspring unique.

Must – know knowledge

- A species is a group of organisms that can reproduce and have offspring which can also have offspring. There are differences between organisms from different species, and this is called variation. There are also differences between individuals within the same species, and this is also called variation.
- Any feature of an organism which helps it to survive is called an adaptation. Organisms are adapted to live in specific habitats.
- An animal's adaptations help it to survive in a specific habitat. A range of different adaptations helps animals to survive. If a habitat changes, an animal's adaptations may no longer help it to survive. If all the animals of the same species die out, then the species becomes extinct.
- Natural selection is also referred to as survival of the fittest. A change in a habitat can cause a plant or animal species to evolve. Charles Darwin and Alfred Wallace both proposed a mechanism for evolution, which is called natural selection. They used observations from their travels to formulate their ideas.

Inheritance and Variation

Living Things		Habitat		Adaptation
Polar Bear		Artic		Its white fur enable it to camoflouge in the snow. It has thick layers of fat to keep warm and large feet to increase grip on the snow.
Camel		Desert		Camels have large flat feet to spread their weight on the sand. Two rows of eyelashes to keep out the sand and the ability to go a long time without water.
Cactus		Desert		Stems can store large amounts of water and their very deep roots are able to collect water. Spines also provide protection from predators.

Charles Darwin

Darwin is famous for travelling the world, investigating what makes animals and plants different and introducingthe Theory of Evolution.