Evolution and Inheritance Knowledge Organiser

Thakeham Primary School

What should I already know?

Which things are living and which are not.

Identifying animals (e.g. amphibians, reptiles, birds, fish, mammals, invertebrates) and plants using classification keys

Animals that are carnivores, herbivores and omnivores.

Animals have **offspring** which grow into adults.

The basic needs of animals for **survival** (water, food, air)

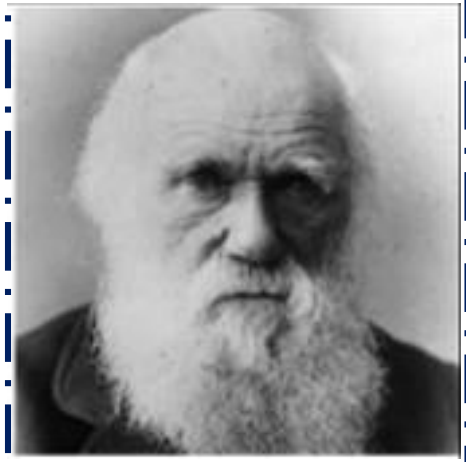
Some animals have skeletons for support, protection and movement.

Food chains, food webs and the role of predators and prey.

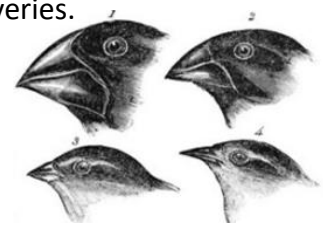
Key vocabulary

adaptation	a change in structure or function that improves the chance of **survival** for an animal or plant within a given **environment**
characteristics	the qualities or features that belong to them and make them recognisable
evolution	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**
species	a class of plants or animals whose members have the same main **characteristics** and are able to **breed** with each other
mutation	**characteristics** that are not **inherited** from the parents or **ancestors** and appear as new **characteristics**.
inherit	If you inherit a characteristic you are born with it, because your parents or ancestors also had it.
natural selection	a process by which **species** of animals and plants that are best **adapted** to their **environment** **survive** and **reproduce**, while those that are less well **adapted** die out

extinct	no longer has any living members, either in the world or in a particular place
ancestor	an early type of animal or plant from which a later, usually dissimilar, type has evolved
extinct	no longer has any living members, either in the world or in a particular place
offspring	a person's children or an animal's young
reproduction	when an animal or plant produces one or more individuals similar to itself
variation	a change or slight difference
biodiversity	a wide variety of plant and animal **species** living in their natural **environment**
maladaptation	the failure to **adapt** properly to a new situation or **environment**
traits	A distinguishing characteristic or quality



Charles Darwin, an evolutionary scientist, studied different animal and plant species, which allowed him to see how **adaptions** could occur. His work on the finches was some of his most famous discoveries.



Adaptive Traits

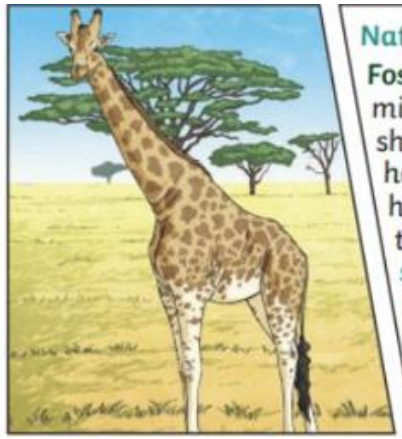
Characteristics that are influenced by the environment the living things live in. These adaptations can develop as a result of many things, such as food and climate.

Inherited Traits

Eye colour is an example of an inherited trait, but so are things like hair colour, the shape of your earlobes and whether or not you can smell certain flowers.

Variation

In the same way that there is variation between parents and their offspring, you can see variation within any species, even plants.



Natural Selection

Fossils of giraffes from millions of years ago show that they used to have shorter necks. They have gradually evolved through natural selection to have longer necks so that they can reach the top leaves on taller trees.