Plymouth Science

Knowledge Organiser

Year 5/6
Following Darwin's Footsteps

VOCABULARY

Offspring- children or young of a particular parent

Adapted- to adjust or modify fittingly

Survival- the act of surviving, especially under adverse or unusual circumstances

Sexual reproduction- method of producing plants and animals in which male seed and a female egg join

Environment- the air, water and land in or on which people, animals and plants live.

Evolution- the way in which living things change and develop over millions of years.

Variance- the fact that two or more things are different or the amount by which they are different.

Inherited- received by transmission of hereditary traits.

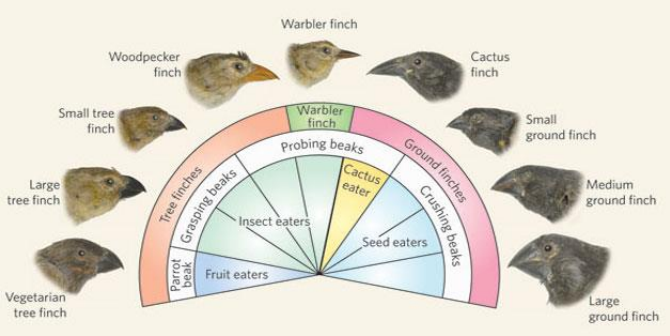
Genetics- the study of how, in all living things, the characteristics and qualities of parents are given to their children by their genes.

Characteristics- a typical or noticeable quality of someone or something.

Species- a set of animals or plants in which members have similar characteristics to each other and can breed with each other.

Living thing- an organism which: moves, breathes, sensitive to environment, nutrients, excretes, reproduce and grows.

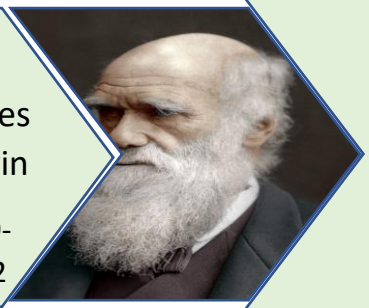
Darwin's finches



Science Capital (Scientists)

Charles Darwin

1809-1882



English naturalist, geologist and biologist, known for his contributions to the science of evolution. He transformed the way we understand the natural world.

Natural selection

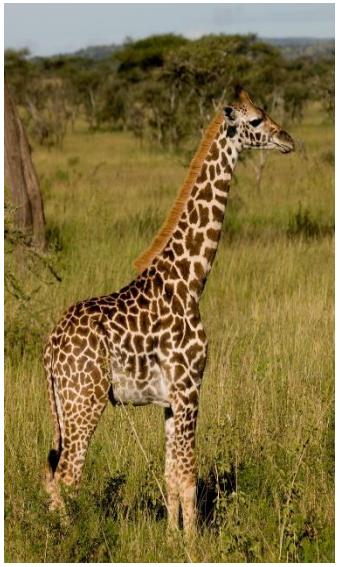
What is natural selection?

The process in which populations of living things adapt and change. Individuals in the population of an organism have traits which are better suited to the environment in which they live and are therefore more likely to survive. These individuals then pass the desirable traits to their offspring and over time these become more common within the population.

Plymouth Science

Adaptation

Year 5/6
Following Darwin's Footsteps



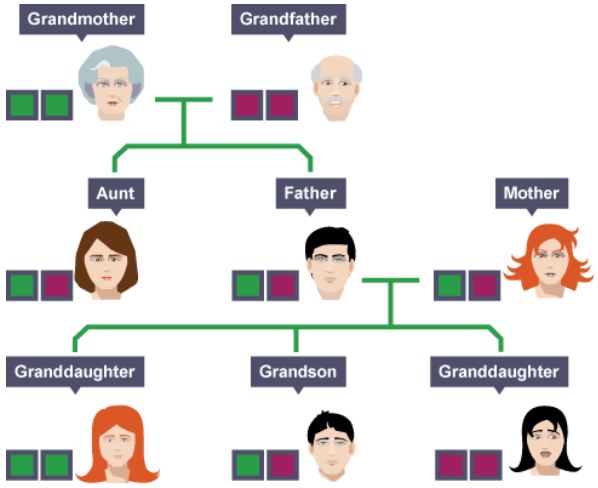
Giraffes have long necks because their ancesters' necks became longer as they stretched to reach leaves high in trees.

This indicates a change can occur within a lifetime of an organism which of course it cannot. Charles Darwin proposed that instead of an ancestor having a long neck, there would have been several species of giraffe living at the same time. Due to some sort of event such as a drought that caused a reduction of flora nearer the ground, the shorter-necked giraffes would have died out due to over feeding and sources of food being scarce.

Evolution

The theory of evolution is the story of all life. Through the process of evolution, living things have changed and adapted over time to live all over our planet. The theory of evolution describes how all living things make up one large family tree that stretches back over 3 billion years. We are all descended from a single common ancestor, with modern humans only appearing around 200,000 years ago.

Inheritance



Offspring can inherit characteristics from their parents through genetics. Genes determine what eye colour, hair colour, height and even things like ear lobe shape. These are called **inherited characteristics.** Some inherited characteristics can be altered such as dying your hair or having plastic surgery.

Acquired characteristics are not inherited they involve changes to the structure or function of a living thing during its lifetime. They could include making muscles stronger by going to the gym or an injury which causes a change.