

Vocabulary

1	Evolution	The process by which living organisms are believed to have developed from earlier forms.
2	Inherit	To receive through a parent's genes.
3	Adaptation	The process of change by an organism to become better suited to its environment
4	Fossil	The remains or impression of a prehistoric plant or animal embedded in rock and preserved.
5	Offspring	A person or an animal's young
6	Naturalist	An expert in or student of natural history
7	Geologist	An expert in the science which deals with the physical structure and substance of the earth, their history, and the processes which act on them
8	Biologist	An expert in the study of living organisms
9	Paleontologist	An expert in the study concerned with fossils
10	Natural selection	The process whereby organisms better adapted to their environment tend to survive and produce more offspring.
11	Selective breeding	Process by which humans use animal breeding and plant breeding to selectively develop particular traits.

Evidence for Evolution

When paleontologists compare animals in fossils to animals today, they can see similarities and differences between them. Fossils are the remains or traces of ancient life that have been preserved by natural processes, Fossils show that giraffes necks did not used to be as long. They have developed over time to reach higher branches.



What is evolution?

Evolution is the theory that all the kinds of living things that exist today developed from earlier types. The differences between them resulted from changes that happened over many years.

Why does evolution occur?

Evolution results from a process called natural selection. This process can happen when an individual's genes differ in some way from the genes of others of its kind. Variations, or differences, in genes cause differences in an individual's traits—such as how it looks, its structure, or its behaviour.

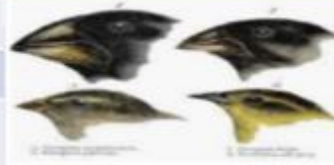
Inheritance and Variation

Inheritance refers to the characteristic traits that are genetically passed to offspring from their parents e.g. hair colour, eye colour, height etc. Darwin refers to this as natural selection when the strongest traits survive over generations.



Natural Selection and Artificial Selection

Animals change over time and adapt to the surroundings in which they live. Darwin observed that there were many forms of finches that had different beak sizes and shapes. Once he considered the food sources of each finch, he noted the reason for these adaptations-natural selection.



Selective breeding is the process by which humans use animal breeding and plant breeding to selectively develop particular traits by choosing which animals will reproduce offspring together.



Charles Robert Darwin (12 February 1809 - 19 April 1882) was an English born evolutionary biologist, naturalist and geologist who was best known for his contributions to the science of evolution.



He first formulated his theory in his book "On the Origin of Species" in 1859.

Mary Anning and Charles Darwin

Mary Anning (21 May 1799 - 9 March 1847) was an English fossil collector, dealer, and palaeontologist who became known around the world for important finds she made in Jurassic marine fossil beds in the cliffs along the English Channel at Lyme Regis in the county of Dorset in Southwest England.

