

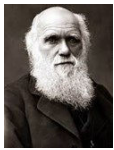


Topic: Where did we come from?

Year: 6

Strand: Evolution and Inheritance

Significant Scientists



Charles Robert Darwin (1809-1882) was an English naturalist and biologist. His scientific theory of evolution by natural selection became the foundation of modern evolutionary studies.



Alfred Wallace (1823-1913) was an explorer, naturalist and anthropologist. He independently proposed the theory of evolution by natural selection. He worked around the world to gather evidence to support his theory.

Key Vocabulary

Offspring	The young of a plant or animal; the product of their reproductive process
Inheritance / Inherited	Characteristics that are passed to an offspring from their parents
Variation	The changes between individuals within a species
Parent	An animal or plant that produces offspring
Characteristics	The distinguishing features that are specific to a species
Adaptation	A characteristic changing to increase a living thing's chances of surviving and reproducing
Selective Breeding	Choosing parents with particular characteristics to breed together and produce offspring with more desirable characteristics.
Environment	An environment contains many habitats and includes areas where there are both living and non-living things
Evolution	Adaptation over a very long period of time
Natural Selection	The process where organisms that are better adapted to their environment tend to survive and produce more offspring
Fossil	The imprint of a prehistoric animal, embedded in rock and preserved
Adaptive Traits	Genetic features that help a living thing to survive
Inherited Traits	Traits you get from your parents. Within a family, you will often see similar inherited traits
Generation	A group of offspring of similar age

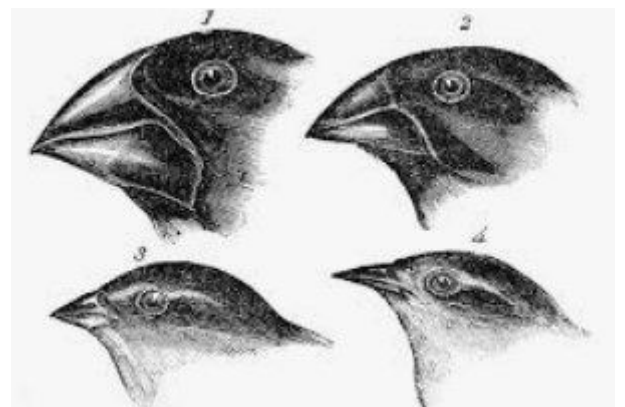
Key knowledge

By the end of this unit, you will be able to explain the difference between inherited and environmental characteristics (those that are passed from a parent to their offspring as opposed to those that are developed in response to an organisms surroundings). It will be shown that humans may wish to control breeding to create offspring that have more desirable characteristics, but also to highlight some of the problems that this might create, such as an increased risk of disease or infection or unforeseen physical or genetic problems, and be able to give examples of animal adaption (such as long necks in giraffes or large ears on elephants) and explain why these adaptations are advantageous. You will be reminded about the importance of sunlight, rainfall, wind, competition and nutrients to successful plant growth. You will be able to explain that evolution is natural selection and adaptation over a long period of time and that this can be evidenced by the fossil record which provides proof of adaptation over millions of years, as well as knowing something of the associated scientists (Darwin and Wallace).
By the end of the unit, you will be able to explain 'Natural Selection' as being the process where organisms that are better adapted to their surroundings survive better and produce more, healthier offspring.

Retrieval Questions

I will know:

1. What are inherited characteristics?
2. What are environmental characteristics?
3. Why might humans want to control breeding?
4. What problems might controlled breeding cause?
5. What environmental variables affect plant growth?
6. Name an example of animal adaptation.
7. What is evolution?
8. Which famous scientist is associated with the theory of evolution?
9. How do fossils help explain the theory of evolution?
10. What is 'Natural Selection'?



Useful Websites

- <https://www.bbc.co.uk/bitesize/topics/zbssgk7/resources/1>
- <https://www.bbc.co.uk/bitesize/topics/zbssgk7>