

Science – Unit 3 How Have we Evolved?

Year 6

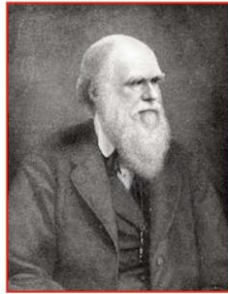
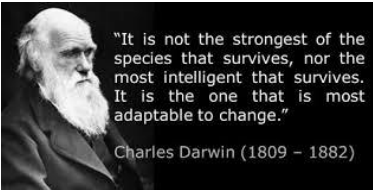
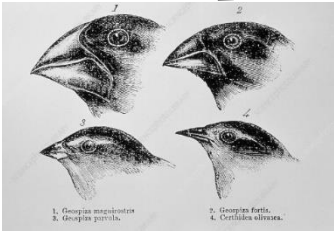
Spring 1



Working together to be the best that we can be



Golden Thread: Belonging



Charles Darwin 1809-1882

Charles Darwin was a naturalist who is considered by many to be one of the most important scientists of all time due to his work on natural selection and evolution.

Darwin was born in Shrewsbury, England. On a five-year voyage around South America, New Zealand and many other places, Darwin made many amazing discoveries. He found new species, fossils, and evidence all around him that plants and animals had evolved over time.

In 1859, Darwin published his book, *On The Origin Of Species*. It explained the process of natural selection. His ideas were revolutionary, and changed scientific thought about the lives of all living things. Today, his work influences many areas of science.



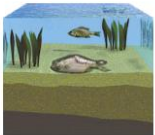
Carl Linnaeus 1707-1778

Carl Linnaeus was an important scientist whose work on the classification of animals continues to be of huge significance today.

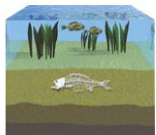
Linnaeus was born in Sweden, where he studied botany (an area of scientific study concerned with plant life) and spent many years travelling around the country, studying its plants and animals.

In 1735, Linnaeus published an important book called *Systema Naturae*. In the book, he explained his new system for naming and classifying animals. It was much clearer than previous systems, and everyone started using it. The modern system of classifying things which is used today is based on the system Linnaeus developed.

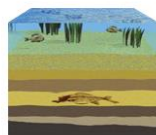
How are fossils made?



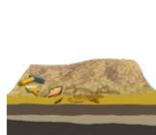
The fish dies and sinks to the sea bed. The flesh rots and is eaten by other small organisms, leaving just a skeleton.



A layer of mud and sand covers the skeleton. This helps preserve it. Not much oxygen can get to the skeleton - the decaying process is slowed down.



The mud and sand become sedimentary rock. The skeleton dissolves. The space it leaves behind fills with minerals. The fossil is formed.

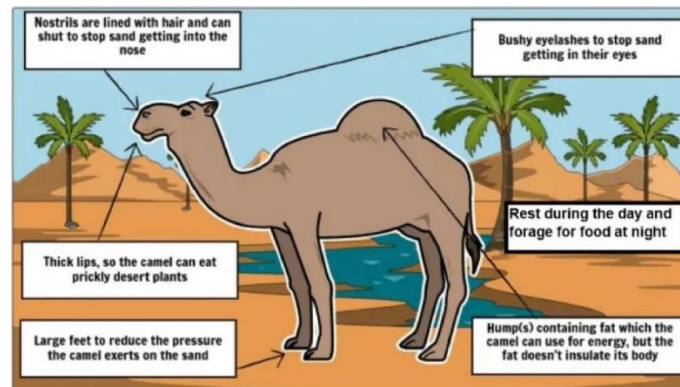


The movement of the Earth's crust brings the fossil closer to the surface. It is ready to be discovered!



Sticky Knowledge

- ☐ Evolution is a scientific theory used by biologists. It explains how living things changed over a long time, and how they have come to be the way they are.
- ☐ We know that living things have changed over time, because we can see their remains in the rocks.
- ☐ That the animals and plants of today are different from those of long ago through the process of adaptation.
- ☐ Evolutionary questions are still being actively researched by biologists.
- ☐ Offspring are not identical to each other or their parents.



Glossary

Adaption How plants and animals have changed to survive over millions of years. They can adapt to make them more suitable to their environment.

DNA Every life form has its own genetic instructions. This is contained in the DNA.

Environment The surroundings or conditions which a person, animal or plant lives.

Fossils Bones and other imprints found in rocks underground formed millions of years ago.

Genes These decide your traits, for example how tall you are, eye colour.

Inheritance What you are given by your parents.

Mutation When genes change from one generation to the next.

Offspring The next generation of creatures, for example a child is a parent's offspring.

Variation Differences between living things in a species.

Adaptations : The Saguaro Cactus



- Can absorb up to 95% of its total weight in water when it rains.
- Pleats between the ribs allow the stem to swell when water is absorbed.
- Shallow root system covers a large area for maximum absorption of water.
- Can live up to over 175 years