

What should I already know?

- Fossils are formed when things that have lived are trapped within rocks
- Species of living things have similar characteristics but they are not identical
- Reproduction can be sexual or asexual

Fossilisation

After an animal dies, the soft parts of its body **decompose** leaving the hard parts, like the skeleton, behind. This becomes buried by small particles of rock called **sediment**.

As more layers of sediment build up on top, the sediment around the skeleton begins to compact and turn to rock. The bones then start to be dissolved by water seeping through the rock.

Minerals in the water replace the bone, leaving a **rock replica** of the original bone called a fossil.

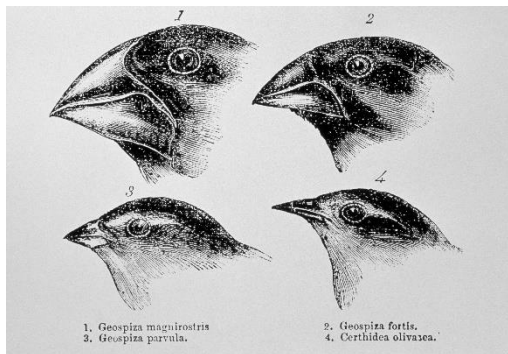
Fossils provide info about living things that inhabited the Earth in the past.

Offspring and Inheritance

Evolution means change over time. It happens when there is competition to survive (natural selection) and through differences within a species caused by inheritance and mutations.

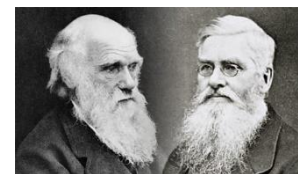
Inheritance is when something is passed on to the next generation. Offspring are not identical to their parents although some characteristics are inherited (passed on from parents to offspring). Other new differences in the offspring are called mutations.

Adaptation is the action of a living thing changing to suit the environment. If a species is well adapted it will survive and pass on successful genes to offspring.



Key Vocabulary

Organism	A living thing.
Evolution	The process in which the characteristics of living things change over time.
Mutation	A change in DNA which alters the characteristics of a living thing.
Natural Selection	The process in which organisms better adapted to their environment tend to survive and produce more offspring.
Offspring	The young created from a living organism.
Inherit	To receive something from one's parents or ancestors.
Variation	Differences between organisms of the same species.
Adaptation	An organism changing to be better suited to its environment.
Reproduction	The production of offspring.
Fossils	The preserved remains or impressions of prehistoric plants or animals.
Extinct	When a species is no longer in existence.



Charles Darwin & Alfred Wallace

Darwin and Wallace are jointly responsible for developing the theory of evolution by natural selection.