Fossilisation process

Animal dies, its skeleton settles on the sea floor and is buried by sediment.
The sediment surrounding the skeleton thickens and begins to turn to stone.
The skeleton dissolves and a mould is formed.
Minerals crystallise inside the mould and a cast is formed.
The fossil is exposed in the Earth's surface.

How evolution works:

1. Not all individuals of a species are exactly the same. There is variation between them.
2. The individuals of a species who are best adapted to their environment are most likely to survive.
3. These individuals are more likely reproduce and pass their useful adaptations onto their offspring.
4. Individuals that were poorly adapted were less likely to survive.
5. Over time, the characteristics that help survival become more common and a species gradually changes.
6. Given enough time, these small changes can add up to the extent that a new species altogether can evolve.

Variation

The differences between living things in a species.

Adaptation

How living things are specialised to suit their environment.

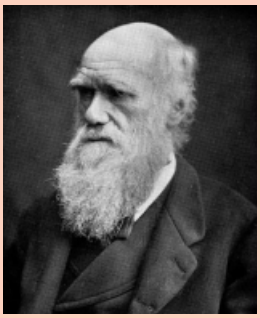
Species:

A group of living things with very similar characteristics. They can breed together to make more living things of the same type.

Evolution:

The process by which living things can gradually change over time.

Charles Darwin



Born: 1809

Died: 1882

Nationality: British

Famous for: his book 'On the Origin of Species' (1859). In his book he laid out his theory of evolution which was very controversial at the time but is now widely accepted as scientific fact.

Life on Earth timeline

Cenozoic Era	Modern humans first appear (Homo sapiens)	0.2 mya
	First human-like animals appear	2.5 mya
Mesozioc Era	Dinosaurs go extinct	66.4 mya
	First flowering plants	141 mya
	First birds	195 mya
	First dinosaurs and mammals	230 mya
Paleozoic Era	First reptiles	340 mya
	First insects	360 mya
	First amphibians	370 mya
	Plants appear on land	420 mya
	Cambrian explosion – the first fish	530 mya
Proterzoic Era	Simple single celled creatures appear	700 mya
	Algae, fungi, single-celled animals appear	2100 mya
	Life first begins with single-celled creatures like bacteria	3600 mya