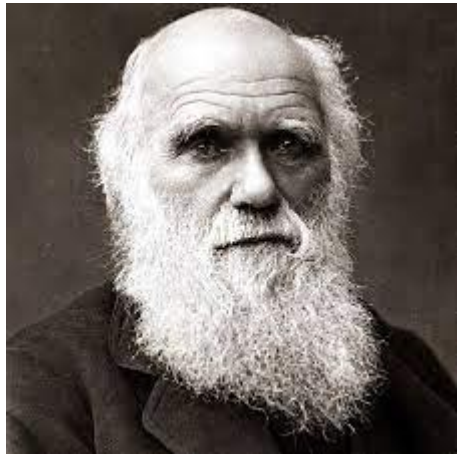
Science Subject Knowledge Bank
Year 6: Evolution and Inheritance

Selby Community Primary School

Vocabulary	Definition
Evolution	The gradual development of something
Inheritance	The passing on of traits from parents to their offspring
Adaptation	When organisms adjust to new environments or to changes in their current environment over a long period of time.
Fossil	The remains or impression of a prehistoric plant or animal embedded in rock and preserved in petrified form.
Generation	all of the people/animals born and living at about the same time, regarded collectively
Mutations	A change in the characteristics that are not inherited.

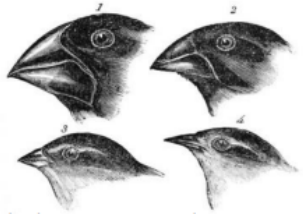


What is evolution?

- Evolution is a process of change that takes place over many generations, during which species of animals, plants, or insects slowly change some of their physical characteristics. This is because offspring are not identical to their parents.
- It occurs when there is competition to survive. This is called natural selection.
- Difference within a species (for example between parents and offspring) can be caused by inheritance and mutations.
- Inheritance is when characteristics are passed on from generation to the next.
- Mutations in characteristics are not inherited from the parents and appear as new characteristics.

Why is Charles Darwin important?

- Charles Darwin, an evolutionary scientist, studied different animal and plant species, which allowed him to see how adaptations could come about.
- His work on the finches was some of his most famous.



How do we know about evolution?

- Evidence of evolution comes from fossils - when these are compared to living creatures from today, palaeontologists can compare similarities and differences.
- Other evidence comes from living things - comparisons of some species may reveal common ancestors.

What is adaptation?

- Adaptation is when animals and plants have evolved so that they have adapted to survive in their environments. For example, polar bears have a thick layer of blubber under their fur to survive the cold, harsh environment of the Arctic while giraffes have long necks to reach the leaves on trees.
- Some environments provide challenges yet some animals and plants have adapted to survive there
- Sometimes adaptations can be disadvantageous. One example of this can be the dodo, which became extinct as it lost its ability to fly through evolution. Flying was unnecessary for the dodo as it had lived for so many years without predators, until its native island became inhabited.