Science Knowledge Organiser

Year 6

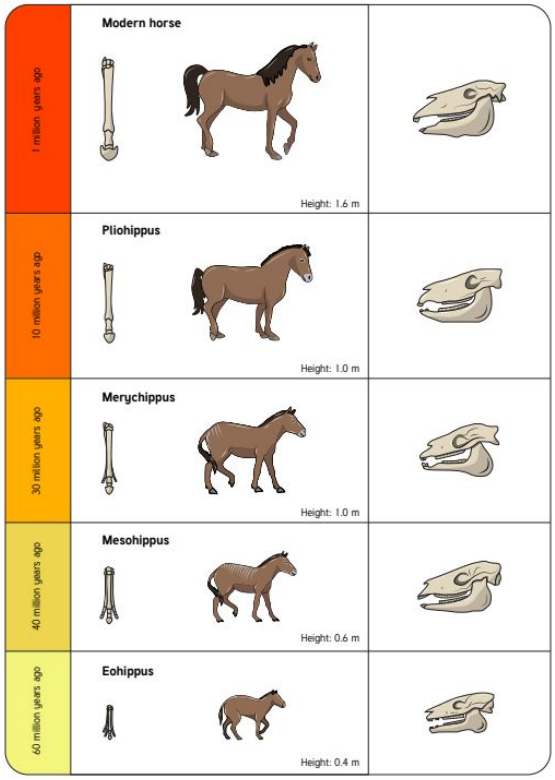
Autumn (ii)

What is evolution?

Portable Knowledge -

Fossils provide information to support scientific theory including evolution. Animals and plants have, through evolution, adapted to live in their habitats.

To know that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.



Fossils are imprints of long dead plants and animals found in rocks.

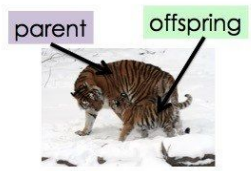
They are important because they were formed many millions of years ago. This means they can tells how plants and animals on earth used to look.

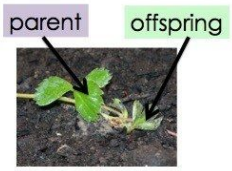
Fossils are good evidence for evolution because they show that living things have changed over time.

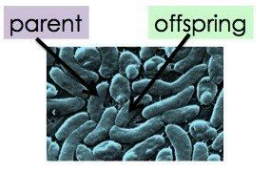
Horses have not always looked like the horses we know today. Scientists have studied the changes in horses over millions of years through fossils that have been found.

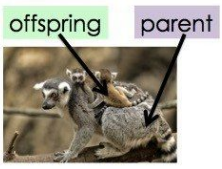
To know that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.

When living things reproduce they pass on characteristics to their offspring. This is known as inheritance. You've probably noticed that you might look like your parents. This is because you inherit key characteristics from them, like your eye colour, skin colour and height. All living things produce offspring of the same kind, but normally offspring are not identical to their parents; there are variations that make them different. For example, if you cross two different breeds of dog, you get a dog with a combination of characteristics. Some characteristics come from their mother and some from their father.









To know how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

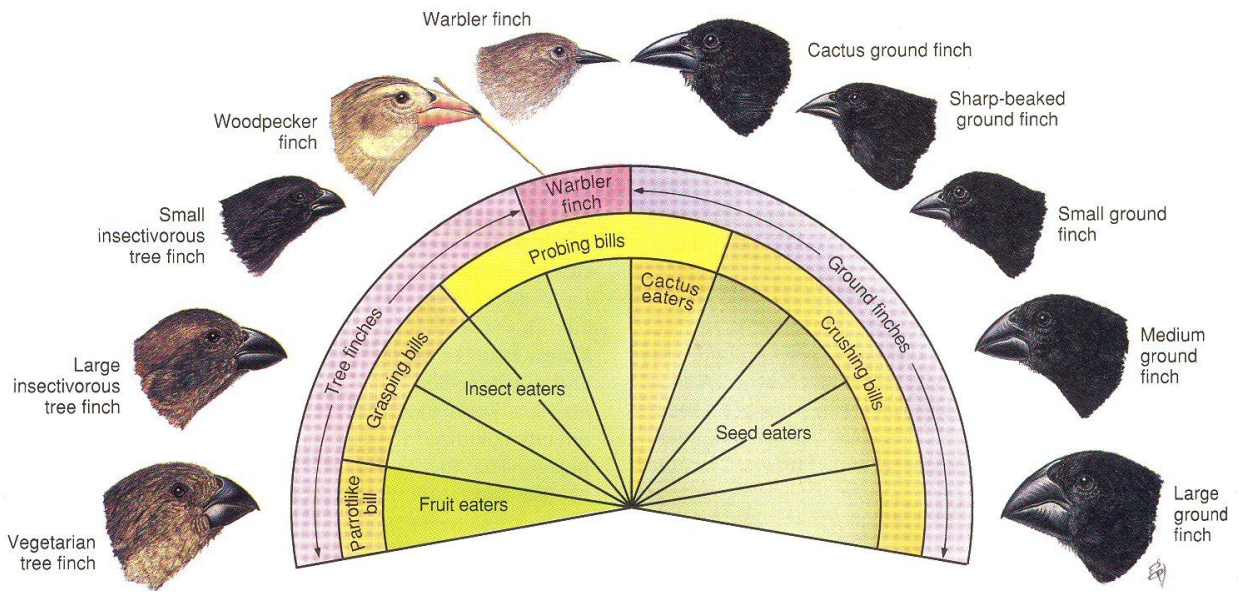
Evolution is the way that living things change over time. The first person who explained how evolution happens was Charles Darwin with his scientific theory of natural selection.

Charles Darwin observed that although individuals in a species shared similarities, they were not exact copies of each other; there were small differences or variations between them. He also noticed that everything in the natural world was in competition.

The winners were those that had characteristics which made them better adapted for survival. For example, they were stronger, faster, cleverer or more attractive than others in their species. These living things were more likely to reproduce and pass on their useful characteristics to their offspring.

Individuals that were poorly adapted were less likely to survive and their characteristics were not as likely to be inherited.

Over time, the characteristics that help survival become more common and a species gradually changes. Given enough time, these small changes can add up to the extent that a new species altogether can evolve.



Core vocabulary

Adaptation - is the word used to describe the traits an animal or plant has that make it suited to its environment and more likely to stay alive.

Evolution - is a word used for gradual changes that happen over time.

Offspring - a child or animal as related to its parent.