Frogwell School Year 5 & 6 Science Knowledge Organiser Term 4

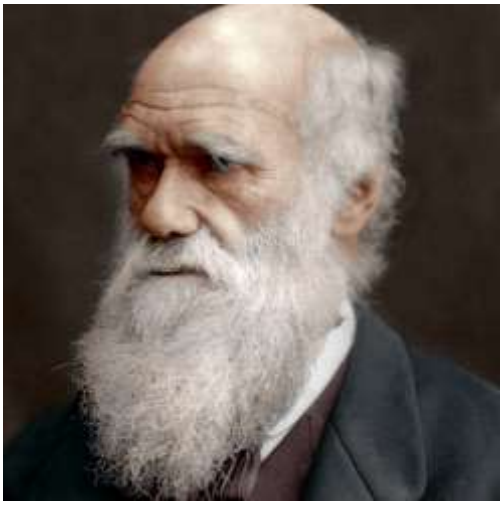
Evolution and Inheritance

Key Skills:

- I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.
- I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
- I can use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas.
- I can record data and results of increasing complexity, using scientific diagrams and labels, classification keys, tables, scatter graphs, bar charts and line graphs.
- I can recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact.
- I can use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas and should talk about how scientific ideas have developed over time.

Key Vocabulary	
offspring	The young of an animal or a plant
sexual reproduction	The joining of genetic information that leads to a new individual
vary	To make different; to change to something else
characteristics	The distinguishing features that are specific to that species
Natural selection	The key mechanism of evolution. It determines which traits become more or less common and therefore reproduced
suited	When a plant or animal has characteristics that allow it to live in a certain place.
adapted	When plants and animals change their characteristics, over many generations, to suit their environments.
environment	An environment contains many habitats and includes areas that contain living and non-living things.
inherited	When characteristics are passed on from parents to their offspring.
species	A group of animals or plants that have shared characteristics.
fossils	The remains of a prehistoric plant or animal that has been embedded in rock and preserved.

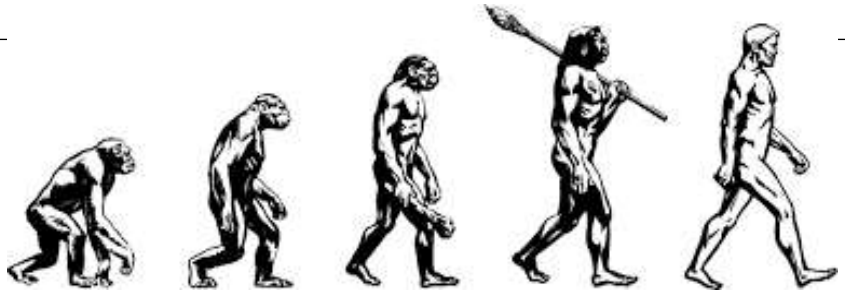
Charles Darwin (1809 – 1882) is considered to be the 'Father of Evolution'. It was whilst he voyaged around the world on board HMS Beagle; as the ship's naturalist, that he began to develop his Theory of Evolution. An idea that all living things evolved and changed over time and generations to suit their environments. Many years later, and after a lifetime of study, Darwin published his book: The Origin of Species. It is this theory that became the foundation of modern evolutionary studies and even though his findings were not well received at first; they are now accepted as fact.



Fossils are the preserved remains, or partial remains of ancient animals and plants. Fossils let scientists know how plants anf animals used to look like millions of years ago. This is proof that living

Natural Selection. Fossils of giraffes from millions of years ago show that they used to have shorter necks. They have gradually evolved through natural selection to have longer necks so that they can reach the top leaves on taller trees.

Evolution is the gradual process by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously evolving – even today!



Adaptive traits. Characteristics that are influenced by the environment the living things live in. These adaptations can develop as a result of many things, such as food.

Inherited traits. Eye colour is an example of an inherited trait, but there are also things like hair colour, height and skin colour. Inherited traits are features that an offspring gets from their parents.

Offspring. Animals and plants produce offspring that are similar but not identical to them. Offspring often look like their parents because features are passed on.

Variation. In the same way that there is variation between parents and their offspring, you can see variation within any species, even plants.