# Science: Year 6 - Evolution and Inheritance

Morda CE Primary School

## Key Learning Spring 1 2024

All living things have offspring of the same kind, as features are inherited from the parents. The offspring are not identical to their parents (they vary).

Plants and animals have characteristics that make them suited (adapted) to their environment. If the environment changes, some species will die, sone will adapt. Over a very long period, these adapted characteristics may be so different that a new species is created. This is evolution.

Fossils give us evidence of what lived on the Earth millions of year ago. Scientists such as Darwin and Wallace observed how living things adapt to different environments.

## Enquiry Types

Identifying/grouping - Sort characteristics of humans into 'inherited characteristics' and 'acquired characteristics'.

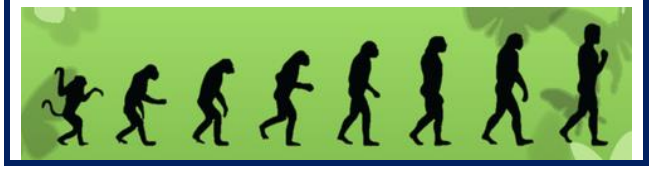
Make comparisons between a modern-day human and fossil skeletons of those believed to be ancestors in human evolution.

## Key Knowledge

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

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

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



## Common Misconceptions

Some children may think:
• adaptation occurs during an animal's lifetime
• offspring most resemble their parents of the same sex/gender
• all characteristics, including those that are due to actions during the parent's life such as dyed hair or footballing skills, can be inherited • cavemen and dinosaurs were alive at the same time.

## Key Scientific Vocabulary

Species: a group of organisms that share a wide range of characteristics, and that breed to produce fertile offspring.
Organism: an individual animal, plant or singular-celled life form.
DNA: the chemical that controls the characteristics and working of cells.
Genes: a section of the DNA molecule that controls the production of a certain protein.
Chromosomes: contain all the genetic information that allows cells to divide and replicate. They occur in pairs– one from the mother and one from the father. Humans have 23 pairs.
Clone: a genetically identical replica. In plants, this is using shoots or bulbs to grow new plants. Animal clones are relatively new and unpredictable. Identical twins are clones of each other.
Variation: a slight difference.
Mutation: a change.
Genetics: the study of inherited characteristics.
HMS Beagle: Darwin's ship.
Palaeontology: the study of dinosaurs.
Fossils: the remains or impression of a plant or animal embedded and preserved in rock.
Archaeology: the study of history through digging up and examining artefacts and physical remains.
Genome: the entire genetic makeup of an organism.