

# Survival of the Fittest!



| Timeline              |  |                          |  |                   |  |   |  |
|-----------------------|--|--------------------------|--|-------------------|--|---|--|
| 1799                  | 1801   | 1809                     | 1831   | 1847              | 1859   | 1882  | 1974   |
| Mary Anning was born. | Mary Anning made her first discovery at the age of 12. It was a skeleton on a cliff. | Charles Darwin was born. | Darwin set sail on the HMS Beagle and during his 5 years on there, they visited the Galapagos Islands. | Mary Anning died. | Darwin published his book 'The Origin of Species'. | Henri De Blainville coined the term palaeontology. Charles Darwin died. | The first ever Australopithecus afarensis skeleton (Lucy) was found. |

## Evolution

Evolution is the theory that all kinds of living things that exist today developed from earlier types.

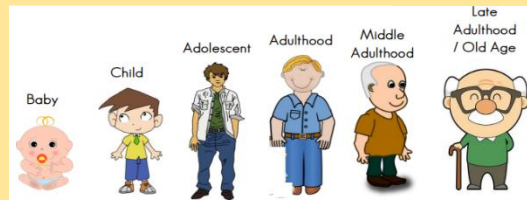
Evolution happens when there is competition to survive (natural selection) and through differences within a species caused by inheritance and mutations.

Found in 1974 Lucy, world's most famous early human ancestor was the first Australopithecus afarensis skeleton to be found, but her remains are only 40% complete. Lucy has a mixture of ape and human features.



## Human growth

Humans go through 6 stages in their life.



## Mary Anning

Mary Anning was born on 21<sup>st</sup> May 1799 and she died on 9<sup>th</sup> March 1847. Mary Anning was well known for finding many fossils, including the first full skeleton of an ichthyosaur.



## Adaptation

A **camel** has humps of fat storage to use up for energy in the dry desert when there is a shortage of food.



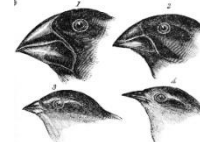
A **polar bear** has adapted to camouflage itself against white snow/ice so it can hunt without being seen.



A **cactus** stores water to help keep it alive in the desert. It also has spikes to protect itself from attack.



If animals don't adapt, then they may not survive.



## Inheritance

Inheritance is when something is passed on to the next generation.

Animals, including humans, produce offspring who inherit some of their characteristics. Offspring may be similar to their parents but they will not be identical.

## Fossils

When palaeontologists compare fossils to animals from today, they can see similarities and identify relationships between them.

Evidence is taken from fossils are evolution of species happens over such long periods of time.



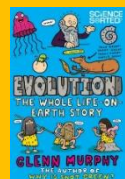
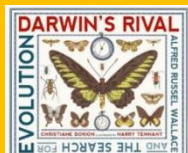
## Charles Darwin

Charles Darwin was an English scientist best known for his theory of evolution.

There is a statue of Darwin in Shrewsbury which was built in 1987.



## BOOKS TO READ WITH THIS TOPIC





offspring

The baby of an animal is known as its **offspring**.



identical

**Identical** means that two or more things are exactly alike.



adaption

**Adaption** is a change in a plant or animal's body to suit its location which can evolve over thousands of years in the most efficient way.



evolution

**Evolution** means change over time.



genes

In your cells you have **genes**, which carry information that determine your traits, such as hair colour. **Genes** are made up of a string of DNA.



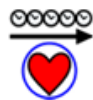
syndrome

A **syndrome** is a genetic condition which can affect learning and physical features. For example: down syndrome.



genotype

A particular gene or set of genes carried by an individual.



survival

To **survive** means to succeed in keeping alive against all odds.



chromosome

**Chromosomes** are tiny structures inside your cells made from DNA and protein.



palaeontologist

A **palaeontologist** is someone who studies fossils as a way of getting information about the history of life on Earth.



mutations

A **mutation** is a mistake or a change in a living thing's DNA.



life cycle

A **life cycle** is a series of changes that happens to all living things.



natural selection

**Natural selection** is the process where living things better adapted to their environment are more likely to survive and produce offspring.



adolescent

An **adolescent** is a person ages between 12 and 19 years old.



extinct

If an animal or plant is **extinct**, then there is no more of that species alive anywhere in the world.



DNA

**DNA** is the material that carries all information about how a living thing will look and function.



ancestor

Your Grandparents and family members before you are known as your **ancestors**.



fossil

**Fossils** are the remains of living things which inhabited the world millions of years ago.



primate

**Primates** are a group of mammals that include humans, apes, monkeys, tarsiers, lemurs and lorises.



homo sapien

**Homo sapiens** is the scientific name for the human species. In Latin it means 'wise man'.



environment

An **environment** is everything around us. Air, soil, water, ants and animals make up an **environment**.



inherit

If you **inherit** something, you receive something from someone you are related to.

