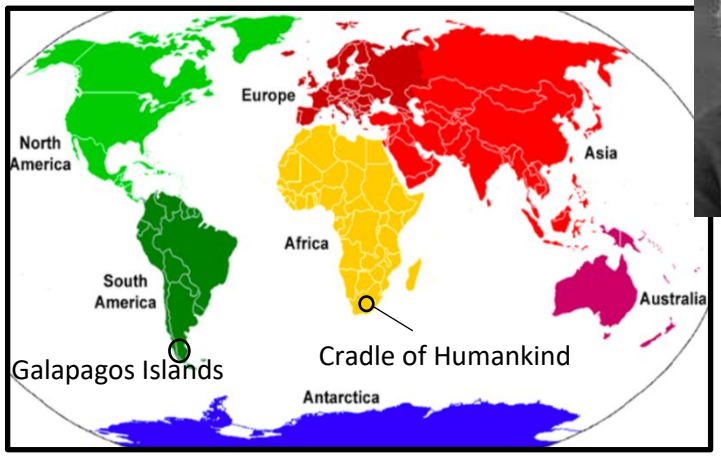
Burwell Village College Primary

The Theory of Evolution

Human Evolution

Human fossils show how humans have changed and evolved over millions of years.

Fossils of early humans show clear changes in **skull shape, jaw size, teeth and brain size**. Over time, human skulls became rounder, with larger brains, smaller jaws and flatter faces, showing increased ability to think, communicate and use tools.



Cradle of Humankind

The region is called the Cradle of Humankind because some of the earliest ancestors of modern humans were born there. The oldest evidence dates back three million years or more. Located about 30 miles from Johannesburg, it covers an area of about 180 square miles. There are 13 major fossil sites in the region.

Adaptation

Adaptations are features that help living things survive in their environment.

Animal adaptations:

- Sharp teeth for eating meat
- Thick fur for cold climates
- Camouflage for protection

Plant adaptations:

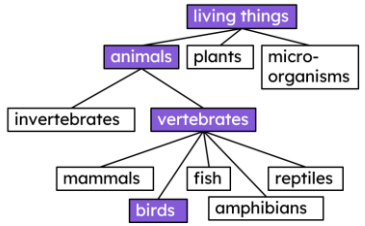
- Waxy leaves to reduce water loss
- Deep roots to reach water
- Large leaves for photosynthesis

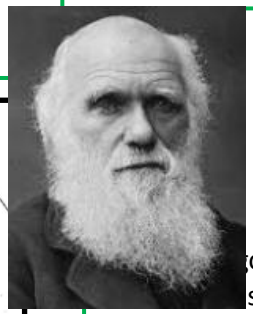
Classification

Classification means grouping living things by their characteristics.

- Carl Linnaeus created the modern classification system
- Libbie Hyman helped classify animals

Living things are grouped into animals, plants and micro-organisms.



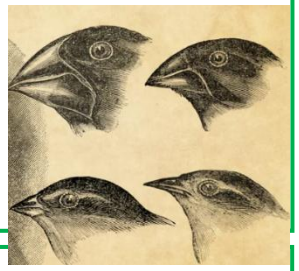


Famous Scientist: Charles Darwin (1809 – 1882)

Charles Darwin was an English naturalist who travelled the world on HMS *Beagle* to study plants and animals. He carefully recorded his observations in notebooks and detailed drawings, which eventually led to his theory of natural selection. This theory as hugely important because it explained how living things change over long periods of time and how new species develop. One of the most interesting places Darwin visited was os Islands, where he noticed small differences between animals on different islands. These s helped Darwin understand that species adapt to their environments in order to survive, changing the way scientists understood life on Earth forever.

Natural Selection

Natural selection is the process where living things with helpful characteristics are more likely to survive, reproduce and pass these traits on to their offspring. Over time, species change. Darwin observed this in the finches (on the Galapagos Islands) whose different beak shapes are adapted to different food sources.



How does evidence from fossils, inheritance and adaptations explain how living things have changed over time?

Fossils tell us what plants and animals were like in the past and show how some species have changed or died out. Inheritance passes features from parents to offspring, with small differences between individuals. Helpful adaptations are more likely to be passed on, so species slowly change over many generations.