Grange Park Primary School Year 6 Summer 2 Science

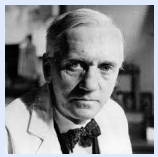
Evolution and Inheritance

Significant Scientist

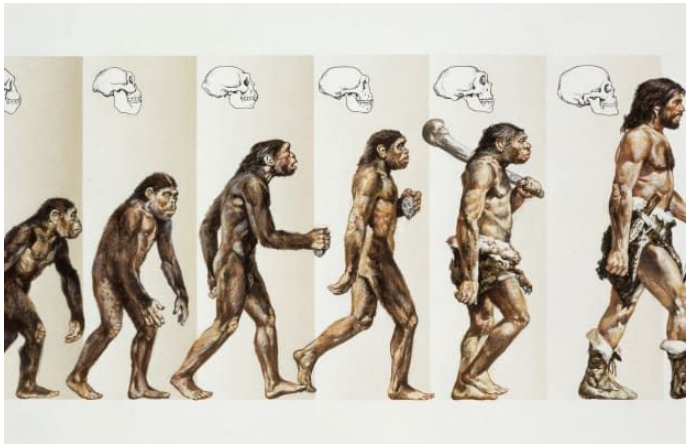
Libbie Hyman

Libbie Hyman (1888 –1969) was a zoologist who is best known for her work on the classification of invertebrates. Libbie Henrietta Hyman earned an international reputation for her monumental six-volume work on the classification of invertebrates.

Alexander Fleming



Alexander Fleming (1881 –1955) is well known for discovering the world's first antibiotic that could be used to treat illnesses caused by bacteria. He called it penicillin. For this discovery, he shared the Nobel Prize in Physiology or Medicine in 1945 with Howard Florey and Ernst Boris Chain.



HUMAN SKULL

CHIMPANZE SKULL

Key Knowledge

Fossils are the remains of living things which inhabited the world millions of years ago. They are formed in sedimentary rock (sand, mud and pebbles squashed under layer, after layer over time) and plants/animals get trapped in these layers revealing their shape.

When palaeontologists compare fossils to animals from today, they can see similarities and identify relationships between them. Since evolution of a species happens over such long periods of time, evidence is usually taken from fossils.

Evolution means change over time. It is the reason we have so many species on Earth. It happens when there is competition to survive (natural selection) and through differences within a species caused by inheritance and mutations.

Inheritance is when something is passed on to the next generation. Offspring are not identical to their parents and some characteristics are inherited (passed on from parents to offspring). Other differences are new in offspring—these are called mutations.

Adaptation is the action of a living things changing to suit the environment. If a species is well adapted it will survive and pass on successful genes to offspring. However, being highly adapted to one specific environment can be detrimental to a species' survival if there are sudden changes to that environment.

Enquiry Skills

Research

Grouping and classifying

Working Scientifically Skills

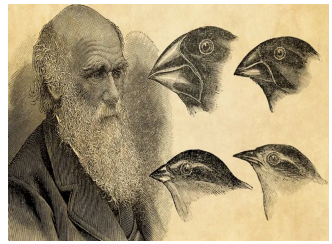
Measure

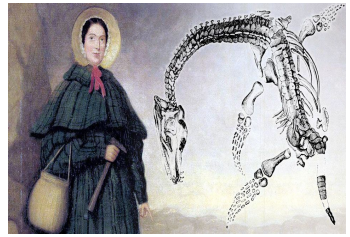
Report data – scientific diagrams, labels, bar graphs and line graphs.

Present – conclusions, casual relationships, explanations.

Key Vocabulary

evolution	The process of gradual change in a species that takes place over many generations
inheritance	The particular characteristics received from parents through genes
adaptation	The process of change by which an organism or species becomes better suited to its environment
mutation	Permanent changes in genes which pass on to future offspring
genes	Part of a cell in a living thing which controls its physical characteristics
palaeontology	The branch of science concerned with fossil animals and plants
natural selection	The process by which species that are best adapted to their environment survive and reproduce, while less well adapted species die out
variation	Differences between cells, individual organisms, or groups of organisms of any species caused either by genetic differences or by the effect of environmental factors





Grange Park Primary School