St. Paul's C of E VA Primary and Nursery School
Knowledge Organisers

Year Group: Year 4

Topic: Classification and Interdependence

Tier 3 vocabulary	
evolution	the process by which different kinds of living organisms are believed to have developed from earlier forms during the history of the earth
inherit	derive (a quality, characteristic, or predisposition) genetically from one's parents or ancestors
adaptation	the process of change by which an organism or species becomes better suited to its environment
fossil	the remains or impression of a prehistoric plant or animal embedded in rock and preserved in petrified form
organism	an individual animal, plant, or single-celled life form
naturalist	an expert in or student of natural history
geology	the science which deals with the physical structure and substance of the earth, their history, and the processes which act on them
geologist	an expert in or student of geology
biology	the study of living organisms
biologist	an expert in or student of biology
palaeontology	the branch of science concerned with fossil animals and plants
palaeontologist	an expert in or student of palaeontology
Tier 2 vocabulary	
contribution	the part played by a person or thing in bringing about a result or helping something to advance
marine	relating to or found in the sea
theory	a system of ideas intended to explain something
population	the inhabitants of a particular place e.g. a community of animals, plants, or humans
successive	following one another or following others
generation	a set of members of a family regarded as a single step or stage in descent
formulate	express an idea in a concise or systematic way (or create or prepare methodically)

Knowledge Items

KI1: What was Darwin's theory of evolution?

The theory of evolution by natural selection (first formulated in Darwin's book "*On the Origin of Species*" in 1859) is the process by which organisms change over time as a result of changes in inheritable physical or behavioural traits.



KI2: What is inheritance?

Inheritance refers to the characteristic traits that are genetically passed to offspring from their parents e.g. hair colour, eye colour, height etc. Darwin refers to this as natural selection when the strongest traits survive over generations.



KI3: Fossils provide information about living things from the past

How are fossils formed and what do they tell us about animals and plants that used to inhabit the earth?

Fossils are the impressions of the remains of prehistoric animals or plants embedded in rock and preserved in petrified form.



KI4: Living things have changed over time (adaptation)

Animals change over time and adapt to the surroundings in which they live. Darwin observed that there were many forms of finches that had different beak sizes and shapes. Once he considered the food sources of each finch, he noted the reason for these adaptations.



KI5: Adaptation, evolution and human intervention

Consider: are all adaptations good? What is the impact of human intervention on evolution? What impact does this have on the wellbeing of the world and its inhabitants?



Famous People

Charles Darwin—Charles Darwin's theory of evolution by natural selection is the foundation upon which modern evolutionary theory is built.



Mary Anning—an English fossil collector, dealer, and palaeontologist who became known around the world for important finds she made in Jurassic marine fossil beds in the cliffs along the English Channel at Lyme Regis.



Alfred Wallace—British naturalist, explorer, geographer and biologist. He is best known for independently coming up with the theory of evolution through natural selection; his work and ideas were jointly published with some of Charles Darwin's work.

