



Key Vocabulary

Word	Meaning
Offspring	The young animal or plant that is produced by the reproduction of that species.
Inheritance	This is when characteristics are passed on to offspring from their parents.
Variations	The differences between individuals within a species.
Adaptation	An adaptation is a trait (or characteristic) changing to increase a living thing's chances of surviving and reproducing.
Habitat	Refers to a specific area of place in which particular animals and plants can live.
Environment	An environment contains many habitats and includes areas where there are both living things and non-living things.
Evolution	The process of adaptation over a long period of time.
Natural Selection	The process where organisms that are better adapted to their environment tend to survive and produce more offspring.
Adaptive Traits	Genetic features that help a living thing to survive.
Inherited Traits	These are traits that you get from your family. Within a family, you will often see similar traits.

Process of Fossilisation

An animal dies, its skeleton settles on the sea floor and is buried by sediment.



The sediment surrounding the skeleton thickens and begins to turn to stone.



The skeleton dissolves and a mould is formed.



Minerals crystallise inside the mould and a cast is formed.



The fossil is exposed on the Earth's surface.

Inheritance

Some characteristics are passed from parent to offspring, while other characteristics are acquired through learning.

Inherited Characteristics

Hair Colour

Eye Colour

Skin Colour

Height

Dimples

Freckles

Acquired Characteristics

Swimming

Reading

Riding a Bike

Drawing and Painting

Playing an Instrument

Sports



Living Thing	Environment	Adaptation
Giant Cuttlefish	Marine	Changes colour to communicate with other cuttlefish.
Cactus	Desert	Wide spread roots to take up water in dry conditions.
Polar Bear	Arctic	White fur for camouflage.
Holly	Forest	Sharp spines to avoid predation from cattle and other grazing animals.

Charles Darwin

Considered to be the 'father of **evolution**', Charles Darwin published his scientific theory of **natural selection** in a book called 'On the Origin of Species' in 1859. Darwin's theory explained how every living thing is connected in a family tree that stretches back billions of years to the beginning of life on Earth.



Mary Anning

Mary Anning was a palaeontologist who was the first person to discover certain types of fossil. Her major finds include the first full Ichthyosaur skeleton. The discoveries she made provided evidence for early palaeontologists, but she was not credited for her work until after her death because she was a woman.



Survival of the Fittest

Animals and plants must adapt to survive. Those animals and plants that are most suited to their environment as a result of **inherited** and **acquired characteristics** survive while others do not, passing on their **adaptations** to future animals of the species.

Extending Your Learning

1. Animal Adaptations - <https://www.bbc.co.uk/bitesize/clips/zbp6n39>
2. Read *When the Whales Walked: And Other Incredible Evolutionary Journeys* by Dougal Dixo
3. Watch Charles Darwin - *Evolution and Natural Selection* - <https://www.bbc.co.uk/programmes/articles/2L3mmGh5hjbpxXBH1PPbd0y/charles-darwin-evolution-and-natural-selection>
4. Visit Kew Gardens
5. Research the evolution of Humans



Knowledge Organiser Revision Schedule

Here is the revision schedule for this half term's knowledge organiser. Please help your child to learn the specified section each week.

Week	Knowledge Organiser Section to Learn
Week 1 – w/c 12.9.22	Vocabulary
Week 2 – w/c 19.9.22	Inherited and Acquired Characteristics
Week 3 – w/c 26.9.22	Adaptations
Week 4 – w/c 3.9.22	Survival of the Fittest and Charles Darwin
Week 5 – w/c10.10.22	Stages of Fossilisation
Week 6 – w/c 17.10.22	Mary Anning