

Our School Values- Science	
Love	We show love by fostering a joy of discovery.
Courage	We show courage by being brave, challenging thinking, asking questions and investigating new ideas. We show courage knowing that we won't always find the answer.
Unity	We show unity by working collaboratively to discover more.
Inspiration	We show inspiration by not giving up and thinking creatively to seek answers.



Year 6 Science Evolution



Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago

Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Knowledge I already know

Fossils—describe in simple terms how fossils are formed when things that have lived are trapped within rock.

Knowledge I will learn

All living things have offspring of the same kind, as features in the offspring are inherited from the parents. Due to sexual reproduction, the offspring are not identical to their parents and vary from each other.

Plants and animals have characteristics that make them suited (adapted) to their environment. If the environment changes rapidly some variations of a species may not suit the new environment and will die. Over time these inherited characteristics become more dominant within the population. Over a very long period of time these characteristics may be so different to how they were originally that a new species is created.

Fossils (impressions of the remains of prehistoric animals or plants embedded in rock and preserved in petrified form.) give us evidence of what lived on the Earth millions of year ago and provide evidence to support the theory of evolution. 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.

Animals change over time and adapt to the surroundings in which they live. Scientists such as Darwin and Wallace observed how living things adapt to different environments to become distinct varieties with their own characteristics. Once he considered the food sources of each finch, he noted the reason for these adaptations.

Charles Robert Darwin (12 February 1809 – 19 April 1882) was an English born evolutionary biologist, naturalist and geologist who was best known for his contributions to the science of evolution. He first formulated his theory in his book "On the Origin of Species" in 1859.

Mary Anning (21 May 1799 – 9 March 1847) was 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 in the county of Dorset in Southwest England.

Key Vocabulary

Word	Definition
Adapted	Adaptions are special features that animals and plants develop to suit the place they live.
Characteristics	A distinguishing trait, quality or property.
Offspring	A human child or an animal child, or the children of a family for many years.
Species	A group of similar organisms that can breed with one another to produce fertile offspring.
Vary	Difference or alterations.
Inherited traits	These are traits you get from your parents. Within a family, you will often see similar traits e.g. curly hair.
Adaptive traits	Genetic features that help a living thing to survive
Natural selection	The process where organisms that are better adapted to their environment tend to survive and produce more offspring.
Evolution	Adaption over a very long time
Species	A biological species is a group of organisms that can reproduce with one another in nature and produce fertile offspring.

L1: How have living things changed over time? How do we know?		L1: How has life on Earth changed over time?		L1: Are all offspring identical to their parents?		L1: Survival of the fittest—how have animals adapted and evolved to suit their environment?	
Using images of fossils, venn diagram comparison of contrasting fossils. What do we learn from each fossil?		Explore a scaled version of life on earth over time. Justify thoughts on sequence and ask scientific questions.		Discuss selective breeding and cross-breeding of dogs. Design their own cross-bred dog, showing how features have been inherited.		Carroll diagrams—what characteristics did you inherit from your parents.	
What type of beak does a bird need to survive? Bird beak experiment. Link to Darwin's findings.		If humans live for another 1,000 years, what adaptations might we expect to see?					
ToE 	WS 	ToE 	WS 	ToE 	WS 	ToE 	WS
ToE 	WS 	ToE 	WS 	ToE 	WS 	ToE 	WS