

Year 6 – Evolution & Inheritance

National Curriculum Objectives	Sticky Knowledge	Vocabulary	
<ul style="list-style-type: none"> Know about evolution and can explain what it is. Know how fossils can be used to find out about the past. 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- recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago 	<ul style="list-style-type: none"> Life cycles have evolved to help organisms survive to adulthood. Over time the characteristics that are most suited to the environment become increasingly common. <p><i>NB: The following could be duplicated in Year 6 Living things and their habitats.</i></p> <ul style="list-style-type: none"> Organisms best suited to their environment are more likely to survive long enough to reproduce. Organisms are best adapted to reproduce are more likely to do so. Organisms reproduce and offspring have similar characteristic patterns. Variation exists within a population (and between offspring of some plants) Competition exists for resources and mates 	Fossils, Adaptation, Evolution, Characteristics, Reproduction, Genetics, Variation, Inherited, Environmental, Mutation, Competition, Survival of the Fittest, Evidence,	
		Key Scientists	Linked Texts
		Charles Darwin and Alfred Russel Wallace (Theory of Evolution by Natural Selection)	One Smart Fish (Christopher Womell)
		Jane Goodall (Chimpanzees)	The Molliebird (Jules Pottle)
			Our Family Tree (Lisa Westberg Peters)
Maths National Curriculum Objectives			
<ul style="list-style-type: none"> Interpret and construct pie charts and line graphs and use these to solve problems. Calculate the mean as an average. 			

Working Scientifically Objectives	Key Question(s):	Prior Learning
<p>1.1 planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>1.2 taking measurements, using a range of scientific equipment, with increasing accuracy and precision</p> <p>1.3 recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs</p> <p>1.4 using test results to make predictions to set up further comparative and fair tests</p> <p>1.5 reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations</p> <p>1.6 identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	<ul style="list-style-type: none"> Why are we all different? What is variation, and why is it important? How did life begin on Earth? How do we change? What is evolution? What evidence is there for evolution? How does evolution happen? What reasons do animals become extinct? Polar Bears habitat is rapidly changing, what possible futures do they face and can we predict which is most likely? How did Darwin come up with the theory? Why was his theory not initially accepted? 	From Key Stages 1 & 2, children should: <ul style="list-style-type: none"> Understand there is a variety of life on Earth Know that some animal's differences are important to their survival Know how animals and plants reproduce Know how fossils form over time
		Future Learning
		In Key Stage 3 children will learn about: <ul style="list-style-type: none"> heredity as the process by which genetic information is transmitted from one generation to the next the variation between individuals within a species being continuous or discontinuous, to include measurement and graphical representation of variation the variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction the importance of maintaining biodiversity and the use of gene banks to preserve hereditary material.

Teaching Ideas

Comparative tests	Identify & Classify	Observation over time	Pattern Seeking	Research	BIG Question – Assessment Opportunity
<p>What is the most common eye colour in our class?</p>	<p>Compare the skeletons of apes, humans, and Neanderthals – how are they similar, and how are they different?</p> <p>Can you classify these observations into evidence for the idea of evolution, and evidence against?</p>	<p>How has the skeleton of the horse changed over time?</p>	<p>Is there a pattern between the size and shape of a bird's beak and the food it will eat?</p>	<p>What happened when Charles Darwin visited the Galapagos islands?</p> <p>What ideas did American geneticist Barbara McClintock have about genes that won her a Nobel Prize?</p>	<p>What is evolution, how does it happen and how do scientists know?</p>