

Year 6 – Evolution and Inheritance (Animals Including Humans)											
Links made with other subjects	PE – Health and fitness (circuits) PHSE – Drugs and a healthy life style										
The BIG Question	How do living things change over time and place?										
The BIG Outcome	Gather evidence (could use technology) of adaptations and not identical offspring and explain why this has happened										
Science objectives (link to NC)	-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.										
Prior knowledge What prior knowledge is needed for children to be successful in this unit?	Children already know: EYFS – Understanding the world - Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes. Yr 1 –Animals Including Humans (Types and Parts of Animals) Yr 2 - Animals Including Humans (Feeding & Exercise and Living Things) Yr 3 - Animals Including Humans (Movement and Feeding) Yr 3 - Rocks and Soils Yr 4 - Animals Including Humans (Human Nutrition) Yr 5 - Animals Including Humans (Life Cycles)										
Future learning Consider the conceptual knowledge within a subject that pupils need for future learning not just the recall of facts but the importance of concepts	This unit gives prior knowledge to: KS3 curriculum -Heredity as the process by which genetic information is transmitted from one generation to the next. • A simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model. • 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.										
Science strands	<table><tr><td>Related Enquiry Questions</td></tr><tr><td>Classifying</td></tr><tr><td>To show variation in a species: - Classify a species of animal e.g. cats, dogs -classify a species of plant e.g. daffodils, tulips, lilies.</td></tr><tr><td>Observing over time</td></tr><tr><td>Not relevant</td></tr><tr><td>Pattern Seeking</td></tr><tr><td>Use different pieces of equipment, e.g. chopsticks, toothpicks, cutlery, to look for patterns linking the suitability of bird beaks for the available food e.g. rice, grapes, raisins.</td></tr><tr><td>Comparative testing</td></tr><tr><td>Not relevant.</td></tr><tr><td>Researching</td></tr></table>	Related Enquiry Questions	Classifying	To show variation in a species: - Classify a species of animal e.g. cats, dogs -classify a species of plant e.g. daffodils, tulips, lilies.	Observing over time	Not relevant	Pattern Seeking	Use different pieces of equipment, e.g. chopsticks, toothpicks, cutlery, to look for patterns linking the suitability of bird beaks for the available food e.g. rice, grapes, raisins.	Comparative testing	Not relevant.	Researching
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Science Scheme of Work

	- Research different types of a species and their characteristics making them suitable for different habitats e.g. penguins.
Vocabulary/ Glossary	Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils
Knowledge (see italics for knowledge to remember)	The knowledge that children will learn and remember: <i>All living things have offspring of the same kind, as features in the offspring are inherited from the parents.</i> <i>Due to sexual reproduction, the offspring are not identical to their parents and vary from each other.</i> <i>Plants and animals have characteristics that make them suited (adapted) to their environment.</i> <i>If the environment changes rapidly, some variations of a species may not suit the new environment and will die.</i> <i>If the environment changes slowly, animals and plants with variations that are best suited survive in greater numbers to reproduce and pass their characteristics on to their young.</i> <i>Over time, these inherited characteristics become more dominant within the population.</i> <i>Over a very long period of time, these characteristics may be so different to how they were originally that a new species is created. This is evolution.</i> <i>Fossils give us evidence of what lived on the Earth millions of year ago and provide evidence to support the theory of evolution.</i> <i>More recently, scientists such as Darwin and Wallace observed how living things adapt to different environments to become distinct varieties with their own characteristics.</i>
SEND expectations	<i>All living things have offspring of the same kind</i> <i>Due to sexual reproduction, the offspring are not identical to their parents and vary from each other.</i> <i>Plants and animals have characteristics that make them suited (adapted) to their environment.</i> <i>Over time, these inherited characteristics become more dominant within the population.</i> <i>Over a very long period of time, these characteristics may be so different to how they were originally that a new species is created. This is evolution.</i> <i>Fossils give us evidence of what lived on the Earth millions of year ago and provide evidence to support the theory of evolution.</i>
Common misconceptions	Some children may think: - adaptation occurs during an animal's lifetime: giraffes' necks stretch during their lifetime to reach higher leaves and animals living in cold environments grow thick fur during their life -offspring most resemble their parents of the same sex, so that sons look like fathers - all characteristics, including those that are due to actions during the parent's life such as dyed hair or footballing skills, can be inherited - cavemen and dinosaurs were alive at the same time.