Science – Year 6

Summer 1	Evolution and Inheritance					
Prior learning	Rocks – Y3, Animals including humans – Y2 Growth and lifecycles, Living things and their habitats Y4					
Lesson objective	Understand how offspring vary and are not identical to their parents	Learn about animal adaptations	Learn about plant adaptations	Explore what we can learn from fossils	Explore the theory of evolution by natural selection	Explore human evolution
Key vocabulary	offspring characteristic inherit variation environmental	adaptation climate nutrition camouflage arid	nutrients epiphytes toxic photosynthesis pollinate	fossil extinct palaeontologist relative prehistoric	Charles Darwin evolved ancestor natural selection theory	descended bipedal primate Homo sapiens Neanderthal
Creative context						
Substantive knowledge	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	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	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
Disciplinary knowledge	Reporting and presenting findings from enquiries – including conclusions, causal relationships and explanations of and a degree of trust in results - in oral and written forms such as displays and other presentations	Identifying scientific evidence that has been used to support or refute ideas or arguments	Reporting and presenting findings from enquiries – including conclusions, causal relationships and explanations of and a degree of trust in results - in oral and written forms such as displays and other presentations	Identifying scientific evidence that has been used to support or refute ideas or arguments	Identifying scientific evidence that has been used to support or refute ideas or arguments	Identifying scientific evidence that has been used to support or refute ideas or arguments

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Recorded learning	Examine the images of crossbred dogs - two parents and a puppy. Which characteristics have the offspring inherited from their parents? What variations in the puppy can the children identify? Consider which other characteristics may have been caused by environmental factors. Challenge Task: Show the children the picture of 2 breeds of dog. Draw and describe what they think their offspring might look like. Which characteristics could they inherit from their parents?	Select an animal to research. Find out how their animal has adapted to suit its environment. Use prompting questions to guide the research. Challenge Task: draw and explain how their chosen animal would have to adapt to survive in a different habitat of their choice.	Use pictures and names of the plants to research their habitats and the conditions they live in. Suggest how the plants have adapted to live in their habitat and how these adaptations help the plants to survive. Challenge Task: design a 'super plant'. Draw and label the perfect plant to survive either in the desert or the Arctic. Answer the questions on the handout that prompt them to think about how exactly it will adapt and survive, and also think about how it compares to any real plants they know.	Compare images of the fossils and their extinct animals with those of living animals. Consider how the living animal has adapted so it can survive in the modern world. Are there any other living animals that are also similar to the extinct creatures? Challenge Task: from an image of a fossil. Ask them to draw what the creature would have looked like when it was living.	Create a scientific report explaining Charles Darwin's observations and theories. Developing Expert handout offers guide and suggested subheadings. Challenge Task: When Charles Darwin published his ideas about evolution, they were very controversial. Predict why they think some of Charles Darwin's ideas were problematic at the time. Use the internet to find out the real reasons and compare them with their predictions.	Create a storyboard to explain human evolution. Challenge Task: consider Neanderthals. How were they different from Homo sapiens? What happened to them? Use the internet or books to research this further and add more detail.
Future learning						