



## EVOLUTION AND INHERITANCE

### Year 6 (INTENT)

#### National Curriculum Aims

Pupils should be taught to:

- 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.

#### Vocabulary

adaptation

adapted

characteristics

environment

evolution

evolve

Fossils

genetics

inherit

inheritance

offspring

sexual reproduction

species

suited

variation

vary

#### Significant Individuals





Charles Darwin

Properties and changes of materials



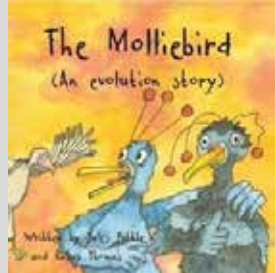






## EVOLUTION AND INHERITANCE

	Learning Objective	Overview of Teaching
PROGRESSION OF LEARNING (IMPLEMENTATION)	<b>WALT: understand that fossils provide information about living things that inhabited the Earth millions of years ago.</b>	<p>Children begin by recapping living things. To understand the concept of time, as a class, children make a physical timeline of history of the Earth's living things, grasping the idea we are a tiny part of history, in comparison to other living things. Fossils are then introduced as imprints left in rock by living things from long ago and this is how scientists can form these conclusions. This leads into activating prior knowledge of the rock types from Year 3. Then the children learn about how fossils are formed and what the three types of fossils are: trace fossil, resin fossil and body fossil. They will then match the fossilised skeletons, of different horses, which have changed due to millions of years of evolution. They will then describe what it might tell them about a horse's evolution.</p> <p>Children are will be taught about the background of Charles Darwin and how he discovered the finches, which later led to his theory of evolution and natural selection. Children generate and raise questions about Darwin and this theory. To solidify the children's understanding, the children will take part in a practical demonstration and discuss which utensil was the best for picking up the seeds. Which beak would be better for them to survive? This will support children to go back to their questions and begin to start answering them. Children will come to the realisation that the finches on the different islands had beaks that were adapted to their respective environments. Any finches whose beaks weren't adapted to their environment would not have</p>
	WS: I can use ideas from secondary sources to support my ideas. 	
	SE: I can identify scientific evidence that has been used to support or refute ideas or arguments. 	
	<b>WALT: understand how adaptation helps animals to survive</b>	
	WS: I can raise questions about a range of phenomena. 	
	SE: I can talk about and explain my research using scientific knowledge and understanding. 	





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PROGRESSION OF LEARNING (IMPLEMENTATION)		<b>WALT: recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</b>	Children will listen to the story of The Molliebird – the teacher will read this book slowly, guiding the children through the story, posing questions and thoughts along the way. Children will then create a story board with their own scientific explanation of how this shows evolution and adaptation using offspring. Children will orally present their findings. 
		WS: I can use scientific diagrams and labels to explain abstract concepts. 	
		SE: I can present my findings, including explanations, in oral and written forms. 	
		<b>WALT: identify how plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</b>	Children will now build on their understanding by looking at how this links to plants. Children begin by understanding that adaptation is any alteration in the structure or function of an organism which makes it better suited to live in its environment, and look at pictures of plant characteristics. Teacher to teach the children about different plants using real-life examples (e.g the cactus stores water, certain roots etc) and how they have adapted in different ways to survive. Then the children will use the cards to match the picture with the adaptations. Discuss whether the adaptations on the card are structural, behavioural or functional adaptations, justifying their reasoning using scientific vocabulary. Finally, to deepen their understanding, children will apply what they have learnt by creating a voice note over a photo of one of the real-life examples to explain how they have adapted to their environment.
		WS: I can orally communicate my findings of plant adaptations. 	
		SE: I can make an observation of the adaptations of a plant. 	



## EVOLUTION AND INHERITANCE

PROGRESSION OF LEARNING (IMPLEMENTATION)	Learning Objective	Overview of Teaching
	<p><b>WALT: recognise that certain characteristics are genetically passed onto offspring</b></p>	<p>Children are introduced to what inheritance is and how this is connected to evolution. The children will focus on characteristics, genetics, variance and offspring. Together, the children look at different family trees and discuss which characteristics have been passed down from parent to offspring (addressing any misconceptions as they arise). Now, the children can write a scientific explanation for the Weasley family tree. Why have certain children inherited certain characteristics?</p>
	<p>WS: I can describe and evaluate my own and other people's scientific ideas supported by evidence.</p> 	
	<p>SE: I can look for patterns when considering variation.</p> 	



## EVOLUTION AND INHERITANCE

### CORE KNOWLEDGE AND SKILLS (IMPACT)

#### **Pupils will know:**

- Fossils are living things from millions of years ago
- The three types of fossils are trace fossil, resin fossil and body fossil
- Fossils can be persevered through time
- Charles Darwin first discovered variation between finches
- Animals adapt to their environment to survive
- Animals produce offspring of the same kind but with variations
- Plants also adapt to their environment through structural, behavioural or functional adaptations
- Some characteristics are passed onto offspring through genetics

#### **Pupils will be able to:**

- Match diagrams of primary sources and explain the differences
- Questions raised about a theory
- Create a story board of the adaptation of the MollieBird
- Orally communicating their observations and findings of plant adaptations
- Write a scientific explanation for the Weasley family tree