Evolution and Inheritance: Adaptation

Aim:	Success Criteria:	Resources:
Identify how animals and plants are adapted to suit their environment in different ways in the context of environmental variation. I can demonstrate understanding of the scientific meaning of adaptation.	I can understand that adaptations are mutations. I can identify adaptive traits.	Lesson Pack
	Key/New Words: Adaptation, environment, habitat, DNA, genes, adaptive traits, mutation, replication, accidental.	**Preparation:** Adaptive Traits Activity Sheets - 1 per child

Prior Learning: It will be helpful if children have learnt about variation in the context of classifying living things.

Learning Sequence

	**Variation:** Recap how variation can occur from Lesson 1 and introduce the idea of adaptation.	
	**Environment and Habitats:** What is an environment? What is a habitat? What different types of habitats are there? Children discuss their understanding of environments and habitats before feeding back to the whole class. Show examples on the IWB. **What Does Adapted Mean?:** Children read and discuss meanings of adapted and decide which are correct or incorrect.	
	**Adaptation: Scientific Definition:** Read through the scientific definition of adaptation. Accidental Adaptations: Explain how most mutations occur in DNA and how this leads to the development of adaptive traits.	
	**Adaptive Traits:** Children complete the differentiated Adaptive Traits Activity Sheets.  Children match living things with their habitat and an adaptive trait.  Children identify a pair of adaptive traits.  Children identify two different adaptive traits.	
	**Humans:** What habitats do humans live in? *On land – all environments and habitats except the Arctic or Antarctic (the Arctic is ice and therefore was not suitable while the Antarctic was already isolated by the time humans started to migrate from Africa).* What habitats are they not able to live in? *(The Arctic, in water habitats such as the ocean, stream, lakes. The latter may still be part of the environment that humans live in)* Can you identify adaptive traits that humans have which enable them to live in such a range of different habitats and environments? *(Our brains! The main reason we are able to live in such a variety of different environments is that we were able to make and wear clothes. Human intelligence has enabled these ideas to be generated and our ability to speak and communicate has allowed us to successfully share these ideas with others).*	

Taskit

***Research*it:** Children choose an environment and research the plants and animals that live there. Children identify adaptive traits for each living thing.

***Film*it:** Show children suitable examples of documentaries by Sir David Attenborough and other naturalists so they can learn to create a short documentary piece. Children work in groups to research an animal and its adaptive traits. Use green screening in order that children can add pictures or video of the animal and its environment to their documentary short.