















Evolution and Inheritance: Adaptation, Evolution and Human Intervention

Aim: Identify how adaptation may lead to evolution by examining the advantages and disadvantages of specific adaptations and the role of human intervention in the process of evolution. I can explain how adaptations can result in both advantages and disadvantages. I can explain how human intervention affects evolution.	Success Criteria: I can understand that some living things have acquired more adaptive traits than others. I can identify advantages and disadvantages of specific interventions. I can explain how humans have created new varieties of living things through selective breeding. I can demonstrate understanding of the issues raised by human intervention in the evolutionary process.	Resources: Lesson Pack Glue sticks Scissors
	Key/New Words: Evolution, adaptation, human intervention, selective breeding, environment, inherited traits, genetic, genes, modification.	Preparation: Advantages and Disadvantages of Adaptation Activity Sheets - 1 per child Selective and Cross Breeding Cards - 1 per group

Prior Learning: Children will have learnt about adaptive traits in Lesson 2 evolution in Lessons 3 – 5.

Learning Sequence

	Adaptation: Children discuss statements on the Lesson Presentation with their talk partner relating to adaptation of living things. Ask children to feedback by voting on each statement and then reveal if the statement is true or false. Address misconceptions and errors if they arise.	
	Adaptation and Evolution: Explain the conditions for adaptation by natural selection leading to evolution. Living Fossils: Read through the information about what constitutes a living fossil and how some living things have remained virtually unchanged. Does this mean these living things have never developed mutations or does it mean those that did have become extinct? Which is a more plausible explanation?	
	Advantages and Disadvantages of Adaptation: Show examples of how an adaptation can have both advantages and disadvantages. Children cut and match the advantages and disadvantages of specific adaptations in living things using the differentiated Advantages and Disadvantages of Adaptation Activity Sheets . <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Children match advantages and disadvantages of adaptive traits in animals.</p> </div> <div style="text-align: center;">  <p>Children match the advantages and disadvantages of adaptive traits in living things. Extension: Children write down own examples of advantages and disadvantages of bipedalism.</p> </div> </div>	
	Evolution and Human Intervention: Explain how humans have affected the evolutionary process through selective breeding of plants and animals. Selective Breeding: Explain the process of selective breeding. Cross Breeding: Explain the difference between cross and selective breeding.	
	Selective and Cross Breeding: In mixed ability groups, children examine and sort the Selective and Cross Breeding Cards into parent(s) and selectively bred offspring. Children or adult takes a picture of the sorted cards as evidence. Selective and Cross Breeding Card Answers: Go through the correct answers on the Lesson Presentation one at a time and give groups the chance to make changes if necessary. (If a picture has been taken of the original card sort, then take one of the revised one also for comparison.)	
	Genetic Modifications: Show a range of ways that humans are intervening in the evolution process. Should humans intervene in this way? Why? Why not? What effect will this have on living things in the future?	

Taskit

Imagineit: Children decide on an adaptive trait that humans might evolve in the future and explain the advantages and disadvantages this adaptation would cause using the **Future Human Adaptation Activity Sheet**.

Debateit: Children research the pros and cons of a particular human intervention in the evolutionary process before debating it as a whole class.

Defineit: Pupils use the **Evolution and Inheritance Scientific Vocabulary Poster** and write definitions for each of the terms based on their learning in this unit.