





GCSE (9-1) Combined Science (Biology)

Natural selection and genetic modification

Specification/Revision Checklist



Checklist. I can

Reference	Description	I understand this 	I need to check this 	I need help with this 	Revised 
4.2	Explain Darwin's theory of evolution by natural selection.				
4.3	Explain how the emergence of resistant organisms supports Darwin's theory of evolution including antibiotic resistance in bacteria.				
4.4	Describe the evidence for human evolution, based on fossils, including: (a) Ardi from 4.4 million years ago (b) Lucy from 3.2 million years ago (c) Leakey's discovery of fossils from 1.6 million years ago.				
4.5	Describe the evidence for human evolution based on stone tools, including: (a) the development of stone tools over time (b) how these can be dated from their environment.				
4.7	Describe how genetic analysis has led to the suggestion of the three domains rather than the five kingdoms classification method.				
4.8	Explain selective breeding and its impact on food plants and domesticated animals.				
4.10	Describe genetic engineering as a process which involves modifying the genome of an organism to introduce desirable characteristics.				
4.11	Describe the main stages of genetic engineering including the use of: (a) restriction enzymes (b) ligase (c) sticky ends (d) vectors.				
4.14	Evaluate the benefits and risks of genetic engineering and selective breeding in modern agriculture and medicine including practical and ethical implications.				

