

## Inheritance, Variation and Evolution: Paper 2

Content	RAG
To understand the differences between sexual and asexual reproduction	
Describe the process of meiosis and explain why it leads to variation.	
Explain how sex is determined, using genetic diagrams where necessary.	
Describe the structure of genes, chromosomes and DNA	
Describe genetic inheritance.	
Describe polydactyly and cystic fibrosis.	
Use punnett squares to predict the outcome of a monohybrid cross	
Describe the process of genetic engineering and its advantages & disadvantages.	
HT – Describe main steps in genetic engineering	
Describe examples of genetic engineering including the production of insulin.	
Classify characteristics as inherited or environmental variation.	
Describe the process of selective breeding and give advantages and disadvantages.	
Describe Darwin's theory of evolution by natural selection.	
Define the terms mutation and species. Explain why mutations lead to change.	
Describe the evidence for evolution: fossils & resistant bacteria.	
Define the term extinction and explain how it may be caused.	
Be able to explain how living things are classified (Domain; kingdom; Phylum; Class; Order; family; genus; Species)	
Use evolutionary trees to show how organisms are related	