






Trilogy Biology Paper 2 Higher Revision Checklist

Paper 2 Content			
B10 The Human Nervous System	Analysis	Revision	
Can define the term homeostasis			
Can describe 3 internal conditions in the human body regulated during homeostasis			
Can state 3 features of control systems in the human body which may involve nervous or chemical responses.			
Can describe the role of the nervous system.			
Can state what makes up the central nervous system (CNS)			
Can describe the features of a neurone and explain how it is adapted to do its job			
Can identify the pathway of a reflex arc from stimulus to response as a flow chart or on a diagram			
Can describe why reflex arcs are important			
Can describe the difference between voluntary and involuntary responses			
<i>Can plan and carry out an investigation into the effect of a factor on human reaction time (RP6)</i>			
B11 Hormonal Control	Analysis	Revision	
Can describe the role of the endocrine system			
Can describe what a hormone is, where it is produced, how it travels around the body and where it produces an effect			
Can state the role of the pituitary gland			
Can identify where the following glands are found: pituitary, pancreas, thyroid, adrenal, ovary and testes.			
Can compare and contrast messages sent by the endocrine and nervous system			
Can describe where blood glucose is monitored and controlled			
Can describe what insulin does and where it is released and why			
Can compare Type 1 and Type 2 diabetes and explain how they are treated			
Can interpret graph data showing the effect of insulin on blood glucose levels in people with or without diabetes			
Can describe the what Glucagon does and where it is released and why			
Can explain how glucagon and insulin interact with each other in a negative feedback cycle to control blood sugar levels			
Can describe what secondary sexual characteristics are developed during puberty in males and females			
Can describe where oestrogen and testosterone are released			
Can state the length of the menstrual cycle			
Can define the term ovulation and state when it happens during the menstrual cycle			
Can describe what a period is and when it happens during the menstrual cycle			
Can describe the role of FSH, LH, oestrogen and progesterone in the menstrual cycle			
Can explain how these hormones interact with each other in the control of the menstrual cycle			
Can interpret data from graphs showing hormone levels during the menstrual cycle			




Trilogy Biology Paper 2 Higher Revision Checklist

Can describe and evaluate different hormonal methods of contraception			
Can describe and evaluate different non - hormonal methods of contraception			
Can explain why FSH and LH are referred to as 'fertility drugs'			
Can describe the process of In Vitro Fertilisation (IVF)			
Can evaluate the benefits and problems of undergoing IVF			
Can explain why there is an increased risk of multiple births from IVF and why this can cause problems			
Can explain the role of thyroxin and adrenaline in the body			
Can interpret and explain simple diagrams of negative feedback control, e.g. in Thyroxine levels			
B12 Reproduction	Analysis	Revision	
Can compare and contrast mitosis and meiosis			
Can state the gametes in animals and plants			
Can explain why meiosis is used in the formation of gametes			
Can define what fertilisation is			
Can explain how meiosis halves the number of chromosomes and fertilisation restores the full number of chromosomes			
Can compare and contrast sexual and asexual reproduction			
Can explain how meiosis halves the number of chromosomes and fertilisation restores the full number of chromosomes			
Can describe the structure of DNA			
Can define the term genome			
Can describe where DNA is found in cells			
Can describe the relationship between DNA, chromosomes and genes			
Can describe what a gene is and what it does			
Can describe what the Human Genome Project (HGP) is			
Can explain the benefits of studying the human genome			
Can define the terms: gamete, chromosome, gene, allele			
Can define the terms: dominant, recessive, homozygous, heterozygous, genotype and phenotype. All in relation to inheritance			
Can describe characteristics that are the result of multiple genes or single genes			
Can predict the outcome of genetic crosses by using simple ratios and direct proportion			
Can explain why using Punnett squares to predict the outcome of genetic crosses is limited			
Can extract and interpret information from family trees and genetic crosses to complete Punnett square diagrams			
Can construct Punnett squares and use them to make predictions using theories of probability			
Can describe what an inherited disorder is			
Can describe the genetic diseases Polydactyly and Cystic Fibrosis and describe how they are caused			

Trilogy Biology Paper 2 Higher Revision Checklist

Can describe the benefits and drawbacks of genetic screening for the above conditions			
Can state the sex chromosomes in males and females			
Can carry out a genetic cross to show sex inheritance			
B13 Variation and Evolution	Analysis	Revised	
Can describe that the phenotype of an organism is developed from a combination of the genome and the influence of the environment and give examples			
Can define the term variation			
Can describe how variation arises through mutations			
Can identify when a mutation will have a positive/negative/no effect on the organism			
Can define the term evolution			
Can describe the theory of natural selection			
Can describe the process of selective breeding in both animals and plants			
Can explain the benefits and risks of selective breeding			
Can give examples of the ways humans have selectively bred organisms in farming, agriculture and horticulture			
Can define genetic engineering and give an example in plants and bacterial cells on how it has been useful			
Can explain the benefits and risks of genetic engineering			
Can describe the process of genetic engineering simply			
Can describe what a GM crop is			
Can describe the main steps in genetic engineering using the words; enzyme, plasmid, vector and gene			
B14 Genetics and Evolution	Analysis	Revised	
Can describe what a fossil is and how they are formed			
Can explain why we do not have much evidence of early forms of life			
Can explain how the fossil record provides evidence for evolution			
Can define the term extinction			
Can describe factors which can contribute to the extinction of a species			
Can explain why bacteria evolve quickly			
Can describe how antibiotic resistance develops through natural selection			
Can explain how antibiotic resistance in bacteria provides evidence for evolution			
Can describe what MRSA is			
Can describe ways to slow down the evolution of antibiotic resistant bacteria			
Can explain why we classify organisms			
Can describe Carl Linnaeus' classification system: KPCOFGS			
Can explain what the binomial system of naming organisms is			
Can explain why classification systems have developed over the years since Linnaeus			
Can describe the 'three-domain system' by Carl Woese			

Trilogy Biology Paper 2 Higher Revision Checklist

Can interpret evolutionary trees to extract information about how organisms have changed over time			
B15 Adaptation, Interdependence and Competition	Analysis	Revised	
Can define the terms: organism, habitat, population, community and ecosystem and suggest how they relate to each other			
Can state factors organisms will compete for in a habitat			
Can define the term interdependence and why it is important in a community of organisms			
Can describe what an abiotic factor is and give examples			
Can describe what a biotic factor is and give examples			
Can identify and explain adaptations organisms have for the habitat they live in			
Can describe whether an adaptation is behavioural, structural or functional			
Can describe what an extremophile is and give an example			
B16 Organising an Ecosystem	Analysis	Revised	
Can define the term producer in a food chain			
Can define the term primary, secondary and tertiary consumer and identify them in food chains			
Can interpret predator-prey cycle graphs and describe what is happening at different points			
Can describe how to use a quadrat to determine the distribution and abundance of species in an area			
Can describe how to use a transect to determine the distribution and abundance of species in an area			
Can calculate mean, median and mode for sampling data from quadrats and transects			
<i>Can measure population size using sampling techniques and plan an investigation into the effect of a factor on species distribution (RP7)</i>			
Can describe the main stages of the water cycle			
Can describe how carbon is cycled and the role of plants, animals and microorganisms in this			
Can interpret and explain processes in diagrams of the carbon and water cycles			
B17 Biodiversity and Ecosystems	Analysis	Revised	
Can define the term biodiversity			
Can explain why having high biodiversity in an ecosystem is important in keeping it stable			
Can describe the human activities that have a negative impact on global biodiversity			
Can describe what steps we can take to reduce this negative impact			
Can describe the impact on resources that a rapidly growing human population will have and why levels of pollution will increase			
Can describe how pollution occurs in water, on land and in the air			
Can explain how pollution reduces biodiversity			
Can explain how humans reduce the amount of land available to other organisms			
Can describe what a peat bog is			
Can explain how the burning of peat as a fuel contributes to global warming			

Trilogy Biology Paper 2 Higher Revision Checklist

Can describe what deforestation is and why it happens			
Can explain how deforestation can contribute to global warming			
Can describe what some of the biological consequences of global warming can be			
Can explain why global warming is not fully accepted as a theory by everyone			
Can describe ways in which humans attempt to conserve high levels of biodiversity			
Can explain why humans should try to conserve high levels of biodiversity			