Learners Cloud

Education, Anywhere, Anytime

AQA GCSE BIOLOGY EXAMINATION BOARD COVERAGE

TOPIC	HEADING	AQA KEYWORDS	AQA CORE	AQA ADDITIONAL	AQA EXTENSION
Adaptation, classification and evolution	Classification	Similarities and differences, animals, plants and microbes, evolutionary and ecological relationships	Y		
Adaptation, classification and evolution	Adaptations to the environment	Survival, competition, helpful adaptations, extremophiles, desert and arctic survival, plant adaptations to dry conditions	Y		
Adaptation, classification and evolution	Evolution by natural selection	Simple life 3 billion years ago, acceptance of theory, Lamarck, variation, survival, breeding, pass on genes, mutation and rapid change	Y		
Adaptation, classification and evolution	Speciation	Geographical isolation, genetic variation, natural selection, speciation		Y	
Behaviour	Rhythms in plants and animals	N/A			
Behaviour	Behaviour and conditioning	N/A			
Behaviour	Communication and plant and animal interactions	N/A			
Behaviour	Human evolution	N/A			
Biotechnology	Introduction to working with microbes	Investigating action of disinfectants, Petri dish, loop, media, incubation temperatures	Y		
Biotechnology	Making use of microbes	Fusarium, mycoprotein, production process			Y

TOPIC	HEADING	AQA KEYWORDS	AQA CORE	AQA ADDITIONAL	AQA EXTENSION
Biotechnology	Using enzymes in industry	Microbial enzymes, (biological detergents, proteases, carbohydrases, isomerases), advantages and disadvantages			Y
Biotechnology	Genetic engineering	N/A			
Biotechnology	Biofuels	Global warming and impacts, CO_2 sequestration, biofuels from fermentation, biogas from waste			Y
Biotechnology	New technologies in biology	N/A			
Cell processes	Aerobic and anaerobic respiration	Aerobic respiration, release of energy, mitochondria, word equation, use of energy (building molecules, muscle contraction, body temp), glycogen, anaerobic respiration definition, lactic acid, oxygen debt		Y	
Cell processes	Diffusion, osmosis and active transport	Diffusion, definition, rate, oxygen diffusion, active transport, and explanation, concentration gradient, osmosis definition, partially permeable membrane, sports drinks, water/ion balance in body, specially adapted exchange surfaces in organs (large surface area, thin, blood supply, ventilation), lungs and alveoli, intestine and villi		Y	
Cells and cell division	Cells	Nucleus, cytoplasm, membrane, mitochondria, ribosome, cellulose cell wall, chloroplast, vacuole, bacterial cell, yeast, specialist cells		Y	
Cells and cell division	The microscope	N/A			
Cells and cell division	Cell division - mitosis	Mitosis, asexual reproduction, chromosomes, genetically identical body cells		Y	
Cells and cell division	Cell division - meiosis	Meiosis, gamete production, cells divide twice, single set of chromosomes, fertilisation		Y	

TOPIC	HEADING	AQA KEYWORDS	AQA CORE	AQA ADDITIONAL	AQA EXTENSION
Cells and cell division	Cloning	Sexual and asexual reproduction, cuttings, tissue culture, embryo transfer, adult cell cloning	Y		
Cells and cell division	Stem cells	Cell differentiation, stem cells, properties, treatments		Y	
Cells and cell division	Growth and development	N/A			
DNA and genes	DNA, genes and the genetic code	Chromosome, DNA, double helix, gene, genetic fingerprinting		Y	
DNA and genes	Genetic modification	Cutting out and transferring genes, examples of GM crops, concerns about GM crops	Y		
Drugs	Developing new drugs	Drug development (toxicity, efficacy, dose, laboratory testing, clinical trials, placebo), e.g. use of statins, development of thalidomide	Y		
Drugs	Alcohol, cigarettes and health	Effects of misuse of alcohol and nicotine	Y		
Drugs	Drugs and their misuse	Medicines, painkillers. Illegal recreational drugs, cannabis, ecstasy, heroin, adverse effects, impacts on health, addiction, withdrawal, heroin, sport performance enhancement, anabolic steroids, cocaine	Y		
Ecosystems, cycles and energy flow	Energy and biomass in food chains	Sun's energy, pyramid of biomass, food chain, energy losses	Y		
Ecosystems, cycles and energy flow	Parasitism and mutualistic feeding relationships	N/A			
Ecosystems, cycles and energy flow	Decay and the carbon cycle	Decay, microorganisms, stable community, carbon cycle, photosynthesis, respiration, detritus feeders, combustion	Y		
Ecosystems, cycles and energy flow	The nitrogen cycle	N/A			
Farming and food security	Food security	Efficiency of food production, declining fish stocks, net sizes, quotas			Y
Farming and food security	Farming	N/A			

TOPIC	HEADING	AQA KEYWORDS	AQA CORE	AQA ADDITIONAL	AQA EXTENSION
Fieldwork	Fieldwork techniques in biology	Physical factors (temp, nutrients, light, water, oxygen, carbon dioxide), quadrat sampling, transect		Y	
Fieldwork	Fossil evidence for evolution	Evidence of early life, fossil formation, fossil record, extinction		Y	
Fieldwork	Soil	N/A			
Homeostasis	Homeostasis - balancing the internal environment	Internal conditions, water, ions, temperature, blood sugar level	Y		
Homeostasis	Thermoregulation - balancing heat gain and loss	Sweating, thermoregulatory centre, receptors. Constriction and dilation of skin capillaries, sweating and shivering			Y
Homeostasis	Controlling blood sugar level and diabetes	Pancreas, insulin, Type 1 diabetes. Role of glucagon, glycogen			Y
Human impact on the environment	Pollution and environmental change	Changes to environment and impact on distribution, living and non-living factors, lichen and invertebrates as pollution indicators, measuring non-living indicators. Population change, pollutants (sewage, fertiliser, toxic chemicals, sulfur dioxide, pesticides, herbicides), reduction in land	Y		
Human impact on the environment	Human impact on biodiversity	Reasons for deforestation and impact (CO_2 balance, reduced biodiversity). Destruction of peat bogs			Y
Human impact on the environment	Sustainability	N/A			
Inheritance	Variation and inherited characteristics	Genes, chromosomes, characteristics, inherited and environmental factors	Y		
Inheritance	Genetic disorders and genetic diagrams - AQA	Genetic disorders, polydactyly, cystic fibrosis, carrier, recessive, embryo screening	Y		

TOPIC	HEADING	AQA KEYWORDS	AQA CORE	AQA ADDITIONAL	AQA EXTENSION
Inheritance	Genes and inheritance	Genetic variation, alleles, sex determination, single gene inheritance, alleles, dominant, recessive, Mendel, interpret genetic diagram, construct genetic diagram, homozygous, heterozygous, phenotype, genotype		Y	
Inheritance	Sex determination and sex-linked genetic disorders	N/A			
Keeping healthy	Organ transplants	Kidney transplants, mechanism of rejection, tissue typing			Y
Keeping healthy	Pathogens and the body's defences against disease	Pathogens, bacteria, viruses, toxins. Body defences	Y		
Keeping healthy	Antimicrobial agents and microbial resistance	Antibiotics, penicillin, resistant strains, new antibiotics, MRSA, natural selection, over-use, mutation of pathogens, resistance, resistant pathogens survive, reproduce and increase	Y		
Keeping healthy	Harmful microbes, vaccination and immunity	White blood cells, antibodies, antitoxins, immune system, immunity, vaccination process, MMR	Y		
Keeping healthy	Diet	Diet and exercise, metabolic rate, balanced diet	Y		
Keeping healthy	Heart disease	N/A			
Nerves and hormones	Hormones in our bodies	Hormones secreted by gland, target organ	Y		
Nerves and hormones	Tropisms - hormone control of plant growth	Sensitivity to light, moisture and gravity, hormones, auxin, phototropism, geotropism, gravitropism, unequal growth, experiments	Y		
Nerves and hormones	Uses of plant hormones	Uses of hormones as weed killers and rooting hormones	Y		
Nerves and hormones	The nervous system	Nervous system, react, coordinate behaviour, receptors (eye, ear, balance, taste, skin receptors) receptor cells	Y		

TOPIC	HEADING	AQA KEYWORDS	AQA CORE	AQA ADDITIONAL	AQA EXTENSION
Nerves and hormones	The reflex arc	Neurones, brain, reflex arc, receptor, sensory, relay, motor neurone, impulse, CNS, synapse, effector (muscle, gland)	Y		
Nerves and hormones	The synapse	Synapse	Y		
Nerves and hormones	The brain and mind	N/A			
Nerves and hormones	Hormone control of the menstrual cycle	Hormone, pituitary, ovary, FSH, oestrogen, LH, FSH and action,	Y		
Nerves and hormones	Controlling fertility	Oral contraceptives - oestrogen, progesterone and fertility drugs, IVF, embryo	Y		
Photosynthesis	The leaf and photosynthesis	Photosynthesis word equation, explanation, limiting factors (light, temp, CO_2, fate of glucose nitrates for protein		Y	
Photosynthesis	Transpiration and plant transport	Plant adaptations for exchange, root hairs, flattened leaves, stomata, water loss, evaporation, guard cells. Xylem, transpiration stream, phloem		Y	
Proteins and enzymes	Proteins	Folded chains of amino acids (structural, hormones, antibodies, catalysts)		Y	
Proteins and enzymes	How proteins are made	Genes code for specific amino acids		Y	
Proteins and enzymes	Enzymes	Enzymes as biological catalysts. Shape, influence of temp and pH		Y	
Tissues, organs and organ systems	Effect of exercise on the body	Changes during exercise - heart and breathing rate, oxygen debt.		Y	
Tissues, organs and organ systems	Cells, tissues, organs and organ systems	Cell differentiation in multicellular animals, tissues (muscle, gland, epithelia), organs (stomach), systems (digestive system components). Plant tissues (epidermis, mesophyll, xylem and phloem) and organs (stem, root, leaf)		Y	

TOPIC	HEADING	AQA KEYWORDS	AQA CORE	AQA ADDITIONAL	AQA EXTENSION
Tissues, organs and organ systems	Blood and circulatory system	Role of plasma, red, white cells and platelets. Haemoglobin. Circulatory system, heart, named chambers, and blood vessels, arteries, veins, capillaries. Blood		Y	
Tissues, organs and organ systems	Gas exchange and the lungs	Lungs, thorax, ribcage, abdomen, diaphragm, breathing, diffusion, ventilation movements, pressure changes			Y
Tissues, organs and organ systems	Digestive system and digestive enzymes	Breakdown of large food molecules, salivary glands, pancreas, small intestine, protease, lipase, role of HCl and bile		Y	
Tissues, organs and organ systems	The kidney and water balance	Waste products, urea, water/ion balance, kidney process, dialysis, kidney transplant, tissue type rejection, antigen, antibody			Y
Tissues, organs and organ systems	The skeleton and joints	N/A			