

KS5 Year 12 Biology

<https://www.ocr.org.uk/Images/687834-download-a-level-specification.pdf>

Autumn Term		Spring Term		Summer Term	
Key knowledge: - Module 1 Practical work - Chapter 2: Basic components of living systems - Chapter 3: Biological molecules - Chapter 7: Exchange surfaces and breathing - Chapter 8: transport in animals		Key knowledge: - Module 1 Practical work - Chapter 4: Enzymes - Chapter 3: Plasma membranes - Chapter 9 Transport in plants - Chapter 10: Classification and evolution		Key Knowledge: - Module 1 Practical work - Chapter 6: Cell division - Chapter 11: Biodiversity - Chapter 12: Communicable diseases	
Pupils will be able to: Understand: Microscopy, Magnification and calibration Eukaryotic cell structure Ultrastructure of plant cells Prokaryotic and eukaryotic cells Biological elements Water, Carbohydrate, Lipids Proteins and protein synthesis Nucleic acids DNA, ATP Specialised exchange surfaces Mammalian gaseous exchange system Measuring of gas exchange Ventilation and gas exchange in other organisms Transport systems in animals Blood vessels Blood Transport of oxygen and carbon dioxide Heart	Key Vocabulary: https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F2-Foundations-in-Biology%2FDefinitions.pdf https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F3-Exchange-and-Transport%2FDefinitions.pdf https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F4-Biodiversity-Evolution-and-Disease%2FDefinitions.pdf	Pupils will be able to: Understand: Enzyme action Factors affecting enzyme activity Enzyme inhibitors Cofactors and coenzymes Function of membranes Diffusion Active transport Osmosis Transport in plants Transpiration Translocation Plant adaptations Classification Kingdoms Phylogeny Evidence for evolution Variation Adaptations Changing populations	Key Vocabulary: https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F2-Foundations-in-Biology%2FDefinitions.pdf https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F3-Exchange-and-Transport%2FDefinitions.pdf https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F4-Biodiversity-Evolution-and-Disease%2FDefinitions.pdf	Pupils will be able to: Understand: Cell cycle Mitosis Meiosis Specialisation of cells Stem cells Biodiversity Sampling Pathogens Diseases Transmission of diseases Plant defences Animal defences Immune system Preventing and treating disease	Key Vocabulary: https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F2-Foundations-in-Biology%2FDefinitions.pdf https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F3-Exchange-and-Transport%2FDefinitions.pdf https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2Fbiology%2FA-level%2FNotes%2FOCR-A%2F4-Biodiversity-Evolution-and-Disease%2FDefinitions.pdf
Assessment: Practical work Exam questions Key vocab tests		Assessment: Practical work Exam questions Key vocab tests		Assessment: Practical work Exam questions Key vocab tests	
Enrichment Opportunities:		Enrichment Opportunities:		Enrichment Opportunities:	

Year 13 Biology

<https://www.ocr.org.uk/Images/687834-download-a-level-specification.pdf>

Autumn Term			Spring Term		Summer Term	
Key knowledge: Chapter 13: Neuronal communication Chapter 14: Hormonal communication Chapter 15: Homeostasis Chapter 16: Plant responses Chapter 17: Energy for biological processes Chapter 18: Respiration		AAFPOL 1	Key knowledge: Chapter 19: Genetics Chapter 20: Patterns of inheritance and variation Chapter 21: Manipulating genomes Chapter 22: Cloning and biotechnology Chapter 23: Ecosystems Chapter 24: Populations and sustainability		AAFOP L 2 Full paper	Key Knowledge: A Level exams
Pupils will be able to: Understand: Coordination Neurones Sensory receptors Nervous transmission Synapse Organization of the nervous system The brain Reflexes and muscles Sliding filament model Hormonal communications Pancreas Blood glucose Diabetes Coordinated responses Controlling heart rate Homeostasis Thermoregulation in ectotherms and endotherms Liver Urine and diagnosis The Kidney and Kidney failure Plant hormones and responses Tropisms Energy cycles ATP synthesis Photosynthesis and factors Glycolysis Krebs cycle Oxidative phosphorylation Aerobic respiration	Key Vocabulary: https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2FBiology%2FA-level%2FNotes%2FOCR-A%2F5-Communication-Homeostasis-and-Energy%2FDefinitions.pdf https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2FBiology%2FA-level%2FNotes%2FOCR-A%2F6-Genetics-Evolution-and-Ecosystems%2FDefinitions.pdf		Pupils will be able to: Understand: Mutations and variations Control of gene expressions Body plans Inheritance Monogenic inheritance Dihybrid inheritance Phenotypic ratios Evolution Speciation DNA profiling and sequencing Genetic engineering and gene technology Natural cloning Artificial cloning Biotechnology Medicines Culturing microorganisms Immobilised enzymes Ecosystems Biomass REcycling Succession Distribution and abundance Population Competition Predator-prey Conservation Ecosystem management Environmentally sensitive ecosystems	Key Vocabulary: https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2FBiology%2FA-level%2FNotes%2FOCR-A%2F5-Communication-Homeostasis-and-Energy%2FDefinitions.pdf https://www.physicsandmathstutor.com/pdf-pages/?pdf=https%3A%2F%2Fpmt.physicsandmathstutor.com%2Fdownload%2FBiology%2FA-level%2FNotes%2FOCR-A%2F6-Genetics-Evolution-and-Ecosystems%2FDefinitions.pdf		
Assessment: Practical work Exam questions Key vocab tests			Assessment: Practical work Exam questions Key vocab tests			