A Level Biology AQA Masterclass Plan

Lesson	Date	Content	Pages to summarise
0	**Year 1**	Welcome module	Book 1: Pages 304-313 Take some time to get your head around the glossary
Q.01	8-14 Sept 2026	**Content:** Maths: Magnification and graticule calculations 1.1 Introduction to biological molecules 1.2 Carbohydrates and monosaccharides 1.3 Carbohydrates – disaccharides and polysaccharides 1.4 Starch, glycogen and cellulose	Pages: 1-15
Q.02	15-21 Sept 2026	**Content:** Maths: Haemocytometer, dilution plating, water potential and percentage change 1.5 Lipids 1.6 Proteins	Pages: 16-22
Q.03	22-28 Sept 2026	**Content:** Maths: measures of centre, Q_{10} temperature coefficient 1.7 Enzyme action 1.8 Factors affecting enzyme action 1.9 Enzyme inhibition Prac 1. Investigation into the effect of a named variable on the rate of an enzyme-controlled reaction	Pages: 23-35
Q.04	29 Sept – 5 Oct 2026	**Content:** Maths: Hardy Weinberg Equations 2.1 Structure of RNA and DNA 2.2 DNA replication 2.3 Energy and ATP 2.4 Water and it's functions	Pages: 36-55
Q.05	6-12 Oct 2026	**Content:** Maths: Respirometer and potometer calculations 3.1 Methods of studying cells 3.2 The electron microscope 3.3 Microscopic measurements and calculations	Pages: 56-66
Q.06	13-19 Oct 2026	**Content:** Maths: Cardiac output and minute ventilation 3.4 Eukaryotic cell structure 3.5 Cell specialisation and organisation	Pages: 67-74

Q.07	20 Oct – 2 Nov 2026	**Content:** Maths: Quadrat calculations, The Lincoln Index, Standard deviation, Simpsons diversity index. 3.6 Prokaryotic cells and viruses 3.7 Mitosis 3.8 The cell cycle Prac 2. Preparation of stained squashes of cells from plant root tips; setup and use of an optical microscope to identify the stages of mitosis in these stained squashes and calculation of a mitotic index	Pages: 75-83
		Half term	
Q.08	3-9 Nov 2026	**Content:** Maths: Statistical tests – the null hypothesis, writing a null hypothesis, p-values and critical value tables. How to we choose a stats test? 4.1 Structure of the cell surface membrane Prac 4. Investigation into the effect of a named variable on the permeability of cell-surface membranes	Pages: 84-86
Q.09	10-16 Nov 2026	**Content:** Maths: The paired and unpaired t-test 4.2 Diffusion 4.3 Osmosis 4.4 Active transport 4.5 Co-transport and absorption of glucose in the ileum Prac 3. Production of a dilution series of a solute to produce a calibration curve with which to identify the water potential of plant tissue	Pages: 87-101
Q.10	17-23 Nov 2026	**Content:** Maths: The Spearman's rank correlation coefficient 5.1 Defence mechanisms 5.2 Phagocytosis 5.3 T Lymphocytes and cell-mediated immunity 5.4 B lymphocytes and humoral immunity	Pages: 102-110
Q.11	24-30 Nov 2026	**Content:** Maths: The Chi-squared test 5.5 Antibodies 5.6 Vaccinations 5.7 Human immunodeficiency virus (HIV)	Pages: 111-127
Q.12	1-7 Dec 2026	**Content:** 6.1 Exchange between organisms and their environment 6.2 Gas exchange in single-celled organisms and insects 6.3 Gas exchange in fish 6.4 Gas exchange in the leaf of a plant	Pages: 128-138

Q.13	8-14 Dec 2026	**Content:** 6.5 Limiting water loss 6.6 Structure of the human gas exchange system 6.7 The mechanism of breathing 6.8 Exchange of gases in the lungs Prac 5. Dissection of animal or plant gas exchange or mass transport system or of organ within such a system	Pages: 139-150
		December break	
Q.14	15 Dec 2026 – 4 Jan 2027	**Content:** 6.9 Enzymes and digestion 6.10 Absorption of the products of digestion	Pages: 151-160
Q.15	5-11 Jan 2027	**Content:** 7.1 Haemoglobin 7.2 Transport of oxygen by haemoglobin	Pages: 161-169
Q.16	12-18 Jan 2027	**Content:** 7.3 Circulatory system of a mammal 7.4 The structure of the heart 7.5 The cardiac cycle 7.6 Blood vessels and their functions	Pages: 170-182
Q.17	19-25 Jan 2027	**Content:** 7.7 Transport of water in the xylem 7.8 Transport of organic molecules in the phloem 7.9 Investigating transport in plants	Pages: 183-199
Q.18	26 Jan – 1 Feb 2027	**Content:** 8.1 Genes and the triplet code 8.2 DNA and chromosomes 8.3 The structure of ribonucleic acid 8.4 Protein synthesis – transcription and splicing 8.5 Protein synthesis – translation	Pages: 200-219
Q.19	2-8 Feb 2027	**Content:** 9.1 Mutations 9.2 Meiosis and genetic variation	Pages: 220-228
Q.20	9-22 Feb 2027	**Content:** 9.3 Genetic diversity and adaptation 9.4 Types of selection Prac 6. Use of aseptic techniques to investigate the effect of antimicrobial substances on microbial growth	Pages: 229-236

Q.21	23 Feb – 1 Mar 20276	**Content:** 10.1 Species and taxonomy 10.2 Diversity within a community 10.3 Species diversity and human activity	Pages: 237-248
Q.22	2-8 Mar 2027	**Content:** 10.4 Investigating diversity 10.5 Quantitative investigations of variation	Pages: 248-265
Q.23	9-15 Mar 2027	**Content:** 11.1 Overview of photosynthesis 11.2 The light-dependent reaction 11.3 The light-independent reaction Prac 7. Use of chromatography to investigate the pigments isolated from leaves of different plants, eg. leaves from shade-tolerant and shade intolerant plants or leaves of different colours Prac 8. Investigation into the effect of a named factor on the rate of dehydrogenase activity in extracts of chloroplasts	Pages: 266-282
Q.24	16-22 Mar 2027	**Content:** 12.1 Glycolysis 12.2 Link reaction and Kreb's cycle 12.3 Oxidative phosphorylation 12.4 Anaerobic respiration Prac 9. Investigation into the effect of a named variable on the rate of respiration of cultures of single-celled organisms	Pages: 283-297
Q.25	23 Mar – 12 Apr 2027	**Content:** 13.1 Food chains and energy transfer 13.2 Energy transfer and productivity 13.3 Nutrient cycles	Pages: 298-310
Q.26	13-19 Apr 2027	**Content:** 13.4 Use of natural and artificial fertilisers 13.5 Environmental issues concerning the use of nitrogen-containing fertilisers	Pages: 311-323
Q.27	20-26 Apr 2027	**Content:** 14.1 Survival and response 14.2 Plant growth factors Prac 10. Investigation into the effect of an environmental variable on the movement of an animal using either a choice chamber or a maze	Pages: 324-333
Q.28	27 Apr – 3 May 2027	**Content:** 14.3 A reflex arc 14.4 Receptors 14.5 Control of heart rate	Pages: 334-345

Q.29	4-10 May 2027	**Content:** 15.1 Neurones and nervous coordination 15.2 The nerve impulse	Pages: 346-353
Q.30	11-17 May 2026	**Content:** 15.3 Passage of an action potential 15.4 Speed of the nerve impulse	Pages: 354-359
Q.31	18-24 May 2027	**Content:** 15.5 Structure and function of synapses 15.6 Transmission across a synapse	Pages: 360-366
Q.32	25 May – 7 June 2027	**Content:** 15.7 Structure of skeletal muscle 15.8 Contraction of skeletal muscle	Pages: 367-377
Q.33	8-14 June 2027	**Content:** 16.1 Principles of homeostasis 16.2 Feedback mechanisms	Pages: 378-385
Q.34	15-21 June 2027	**Content:** 16.3 Hormones and the regulation of blood glucose concentration 16.4 Diabetes and its control Prac 11. Production of a dilution series of a glucose solution and use of colorimetric techniques to produce a calibration curve with which to identify the concentration of glucose in an unknown 'urine' sample	Pages: 386-393
Q.35	22-28 June 2027	**Content:** 16.5 Control of blood water potential – structure of the nephron 16.6 Role of the nephron in osmoregulation 16.7 The role of hormones in osmoregulation	Pages: 394-415
		Summer break	