FARINGDON COMMUNITY COLLEGE

Year 12 Biology – Outline Programme of Study

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Big ideas/ topics	Module 2 Foundations in Biology	Module 2 Foundations in Biology	Module 2 Foundations in Biology Module 3 Exchange and Transport	Module 3 Exchange and transport	Module 4 Biodiversity Evolution and disease	Module 5 Communication, homeostasis and disease
Key Knowledge	2.1.1 Cell structure The ultrastructure of eukaryotic and prokaryotic cells. Microscopy 2.1.2 Biological molecules Structure of water, proteins, carbohydrates and fats	2.1.3 Nucleotides and nucleic acids. The structure and function of DNA and RNA in replication and protein synthesis 2.1.5 Biological membranes. The structure of membranes and how molecules are transported through them 2.1.6 Cell division, cell diversity and cellular Organisation – mitosis, meiosis and stem cells	2.1.4 Enzymes The structure and mode of action of enzymes 3.1.1 Exchange surfaces. The structure of and need for specialised exchange surfaces 3.1.3 Transport in plants The structure of plant transport tissues and the modes of action of transpiration and translocation	3.1.3 Transport in plants. The structure of plant transport tissues and the modes of action of transpiration and translocation 3.1.2 Transport in animals. The structure and function of the heart and how oxygen and carbon dioxide are transported in the blood	4.1.1 Communicable diseases, disease prevention and the immune system The transmission, prevention and how the body responds to infectious diseases. 4.2.1 Biodiversity Different levels of biodiversity and how important it is to preserve. 4.2.2 Classification and evolution. The classification of living organisms and how evolution takes place via natura selection.	5.1.1 Communication and homeostasis Introduction to homeostasis 5.1.2 Excretion as an example of homeostatic control Structure and function of the liver and kidney

Further information and reading list
• OCR Biology A • Text books Text book 2 • https://www.physicsandmathstutor.com/biology-revision/a-level-ocr-a/ • https://www.savemyexams.co.uk/a-level/biology/ocr/17/ •
Ways to support and extend student learning in this subject
• Essential maths skills for Biology • Oxford Revise • Biological Science review – accessed through the school library. • Maths for Biology OCR resources • Revision checklists