HIGHGATE WOOD SCHOOL: CURRICULUM MAP FOR KEY STAGE 5

Year 12

Subject: Biology

Fortnight	Teacher 1		Teacher 2		Notes
1	**3.1 Biological molecules** 3.1.1 Monomers and polymers	Practical (CPAC) Intro	**3.2 Cells** 3.2.1 Cell structure 3.2.1.3 Methods of studying cells	Microscopy practicals	Course Intro
2	3.1.2 Carbohydrates	Food tests/calibration curves/colourimetry/chromatography	3.2.1.1 Structure of eukaryotic cells	Cell analogy and poster	
3	3.1.3 Lipids		3.2.1.2 Structure of prokaryotic cells and of viruses		September Test
4	3.1.4 Proteins	**Required practical 1**: Investigation into the effect of a named variable on the rate of an enzyme-controlled reaction	3.2.2 All cells arise from other cells DNA Replication	**Required practical 2**: Preparation of stained squashes of cells from plant root tips;	Test review
5	3.1.5 Nucleic acids are important information-carrying molecules 3.1.6 ATP		3.2.3 Transport across cell membranes	**Required practical 3:** Production of a dilution series of a solute to produce a calibration curve with which to identify the water potential of plant tissue.	
6	3.1.7 Water 3.1.8 Inorganic ions		3.2.4 Cell recognition and the immune system	**Required practical 4:** Investigation into the effect of a named variable on the permeability of cell-surface membranes.	November Test

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7	**3.4 Genetic information, variation and relationships between organisms**		**3.3 Organisms exchange substances with their environment** 3.3.1 Surface area to volume ratio	Insect dissection Fish dissection	Test review
8	3.4.1 DNA, genes and chromosomes		3.3.2 Gas exchange	Lung volume pracs	December Test
9	3.4.2 DNA and protein synthesis		3.3.3 Digestion and absorption		Test review
10	3.4.3 Genetic diversity can arise as a result of mutation or during meiosis		**3.3.4 Mass transport**		
11	3.4.4 Genetic diversity and adaptation 3.4.5 Species and taxonomy	**Required practical 6:** Use of aseptic techniques to investigate the effect of antimicrobial substances on microbial growth.	3.3.4.1 Mass transport in animals	**Required practical 5:** Dissection of animal or plant gas exchange system or mass transport system or of organ within such a system Heart and Pluck dissection	
12	3.4.6 Biodiversity within a community 3.4.7 Investigating diversity		3.3.4.1 Mass transport in animals		
13			3.3.4.2 Mass transport in plants	Stomata practical Potometer practical Transpiration practical	
14			3.3.4.2 Mass transport in plants		March Test
15			March test Review		MockMockMock exam
16	**3.5 Energy transfers in and between organisms** 3.5.1 Photosynthesis	Floating leaf disc practical Algal ball practical	MockMockMock Review		Review

17	3.5.1 Photosynthesis	**Required practical 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.	Revision		MockMock exam
18	Revision		**3.5 Energy transfers in and between organisms** 3.5.3 Energy and ecosystems		Review
19	**Y12 Exams (Mocks Topics 1-4)**				
20	Work experience				
21	3.5.1 Photosynthesis	**Required practical 8**: Investigation into the effect of a named factor on the rate of dehydrogenase activity in extracts of chloroplasts.	3.5.4 Nutrient cycles		