

Biology Edexcel Salters (A)**TERM 1 TOPIC LIST****Topic 1 Lifestyle, health and risk**

- 1.1 Heart and circulation
- 1.2 Water: solvent
- 1.3 Blood vessels: structure and function
- 1.4 Cardiac cycle
- 1.5 atherosclerosis
- 1.6 blood clotting process
- 1.7 - 1.10 CV disease: risk factors mortality
- 1.11 energy budgets and diet
- 1.12 -1.13 carbohydrates: structure, bonding and function
- 1.14 - 1.15 lipids: structure, bonding, function and disease
- 1.16 Coronary heart disease
- 1.17-1.18 invertebrate in research; CVD benefits and risks

Topic 2 Genes and health

- 2.1 Gas exchange
ficks law
adaptations for gas exchange
- 2.2 structure & properties of cell membranes
- 2.3 osmosis
- 2.4 transport in cells: passive & active
transport of materials (endo- & exo-cytosis)
- 2.5 - 2.8 DNA/ RNA: structure, function, bonding
Protein synthesis: transcription and translation
nature of genetic code
- 2.9 Amino acid structure and function
proteins
- 2.10. Enzyme structure and function
- 2.11 DNA replication
- 2.12 mutations
- 2.13 genes, alleles, inheritance
- 2.14 Cystic fibrosis and gene mutation
- 2.15-2.16 genetic screening and ethics

TERM 2 TOPIC LIST**Topic 3 Voice of the genome**

- 3.1 - 3.3 cell structure and ultrastructure (eukaryotic)
- 3.4 - 3.5 cell structure and ultrastructure (prokaryotic)
- 3.6 sexual reproduction: gametes
- 3.7 process of fertilisation
- 3.8 chromosomes, genes and sex
- 3.9 - 3.10. cell division: mitosis and meiosis
- 3.11 Stem cells: in medicine and ethics
- 3.12 cell specialisation
- 3.13 cells, tissues and organs organisation
- 3.14 - 3.15 Genotype. Epigenetics and phenotype

Topic 4 Biodiversity and natural resources

- 4.1 - 4.2 concept of biodiversity and measurement
- 4.3 niche and adaptations to environment
- 4.4 natural selection and evolution
- 4.5 allele frequencies and populations
- 4.6 classification of species
- 4.7 - 4.8 cell structure and ultrastructure (plant)
- 4.9 - 4.10 cellulose/starch formation and structure
- 4.11 plant: xylem and phloem (transport)
- 4.12 inorganic ions and role in plants
- 4.13 Drug testing: protocols
- 4.14 bacterial growth conditions
- 4.15 use of plant fibres and starch
- 4.16 conservation of endangered species

