

**Biology B**

## START OF TERM 1 NOTES

<b>Topic 5</b>	<b>Energy for Biological Processes</b>
5.1	Aerobic respiration
5.2	Glycolysis
5.3	Link reaction and Krebs Cycle
5.4	Oxidative phosphorylation
5.5	Anaerobic respiration
5.6	Photosynthetic pigments
5.7	Photosynthesis: Light dependent and light-independent stages
<b>Topic 6</b>	<b>Microbiology and pathogens</b>
6.1	Microbial techniques
6.2	Bacteria as pathogens
6.3	Action of antibiotics
6.4	Antibiotic resistance
6.5	Other pathogenic agents
6.6	Problems of controlling endemic diseases
6.7	Responses to infection: Cell mediated response; humoral immune response; Immune cells: Structure and function Immunity types: Passive, active, natural or artificial Vaccination
<b>Topic 7</b>	<b>Modern Genetics</b>
7.1	Using gene sequencing PCR process
7.2	Factors affecting gene expression Transcription factors, RNA splicing Epigenetic modification
7.3	Stem cells Types and source of stem cells Epigenetic modification/ differentiation of stem cells Ethics
7.4	Gene technology Modification; models etc
START OF TERM 2 NOTES	
<b>Topic 8</b>	<b>Origins of Genetic Variation</b>
8.1	Origins of genetic variation/fertilisation
8.2	Transfer of genetic information Definitions Genetic crosses and pedigree diagrams Inheritance of genes Sex linkage Chi-squared tests
8.3	Gene pools
<b>Topic 9</b>	<b>Control systems</b>
9.1	Homeostasis
9.2	Chemical control in mammals
9.3	Chemical control in plants
9.4	Structure and function of the mammalian nervous system
9.5	Nervous system transmission
9.6	Effects of drugs in the nervous system
9.7	Detection of light by mammals

9.8	Control of heart rate in mammals
9.1	Osmoregulation
<b>Topic 10</b>	<b>Ecosystems</b>
10.1	The nature of ecosystems
10.2	Energy transfer through ecosystems
10.3	Changes in ecosystems: biotic and abiotic factors
10.4	Human effects on ecosystems