

Topic 5 On the wild side	
5.1	Ecosystems; communities; population
5.2-5.3	Biotic and abiotic factors; concept of niche; habitats
5.4	Succession from colonisation; climax communities
5.5 -5.9	Reaction of photosynthesis; ATP for energy; light-independent reactions of photosynthesis; role of chloroplasts in photosynthesis
5.10.-5.11	Calculations of: productivity, efficiency of biomass and energy transfer between trophic levels
5.12-5.15	Climate change: Causes, evidence, data extrapolation, models
5.16	Enzyme activity: Effects of temperature and impact
5.17	Evolution
5.18	Role of scientific community
5.19	Isolation, gene flow and speciation
5.20.	Scientific research and conclusions: Evaluation
5.21	Knowledge of carbon cycle
5.22	Management of human needs and conservation
Topic 6 Immunity, infection and forensics	
6.1	Determination of time of death of a mammal
6.2	Role of microorganisms in decomposition and recycling of carbon
6.3-6.4	DNA: profiling and PCR
6.5	Structure of bacteria and viruses
6.6	HIV and TB
6.7	Non-specific responses of body to infection
6.8-6.9	Specific responses of body to infection: Antibodies, role of cells and differences between the immune cells
6.10.	Genes, mRNA
6.11	Entry of pathogens in body
6.12-6.13	Immunity and evolutionary race of pathogens
6.14	Antibodies: Bacteriostatic and bactericidal
6.15	Hospital acquired infections and prevention
START OF TERM 2 NOTES	
Topic 7 Run for your life	
7.1	Movement: Structures involved, process and functions
7.2	Process of skeletal muscle contraction: Sliding filament theory
7.3	Respiration: aerobic & anaerobic respiration process
7.4	Roles of glycolysis
7.5	Link reaction and Krebs cycle
7.6	Oxidative phosphorylation and electron transport chain
7.7	Lactate in anaerobic respiration
7.8-7.9	Heart: Cardiac muscle; electrical activity of heart; cardiac output;
7.1	Muscle fibres
7.11-7.13	Homeostasis; Thermoregulation; feedback control mechanisms

7.14-7.15	Sports: Medical surgery and prostheses; ethics
7.16	Genes: Control by transcription factors and hormones
Topic 8	Grey Matter
8.1-8.2	Neurons; Schwann cells; myelination; sensation pathways
8.3	Action potentials/nerve impulses and membrane permeability to sodium and potassium
8.4	Synapses: structure and function
8.5	Nervous system of organisms: sight
8.6	Plants: phytochrome and IAA
8.7	coordination of nervous and hormonal control in animals
8.8 - 8.9	human brain: structure, function and imaging
8.10.	critical period in mammals
8.11-8.12	animal models: in research and ethics
8.13	habituation
8.14-8.15	brain chemicals: in disease and synaptic transmission
8.16	genome sequencing
8.17-8.19	Genetically modified organisms; contribution of nature and nurture