St. Xaviers School

Syllabus and Lesson Planner

Class	11	Syllabus		
Subject	BIOLOGY			
Tr's Name		Date		
Ch. No.	Name of Chapter	Topic	Month	Week
1	THE LIVING WORLD	CHARACTERISTICS OF LIVING ORGANISMS, NEED FOR CLASSIFICATION, THREE DOMAINS OF LIFE, TAXONOMY, SYSTEMATICS, TAXONOMICAL HIERARCHY, CLASSIFICATION OF HOUSE FLY, WHEAT, MANGO & HUMAN BEING, BINOMIAL NOMENCLATURE WITH ITS RULE AND SIGNIFICANCE, TAXONOMICAL AIDS-BOTANICAL GARDEN, ZOOLOGICAL PARK, HERBARIA, KEYS, THREE SYSTEMS OF CLASSIFICATION-ARTIFICIAL, NATURAL & PHYLOGENETIC	APRIL & MAY	6 WEEKS
2	BIOLOGICAL CLASSIFICATION	FIVE KINGDOM CLASSIFICATION WITH ITS CHARACTERISTICS, KINGDOM MONERA-BACTERIA ITS CLASSIFICATION ACCORDING TO SHAPE, NUTRITION, & MODE OF RESPIRATION, DIFFERENCES BETWEEN GRAM +VE & GRAM -VE BACTERIA, TYPES OF REPRODUCTION-FISSION, CONJUGATION, TRANSDUCTION AND TRANSFORMATION, ROLE OF DIFFERENT TYPES OF ARCHEBACTERIA, MYCOPLASMA 3 DISTIGUISH FEATURES, ECONOMIC IMPORTANCE WITH REFERENCE TO ROLE OF BACTERIA IN SEWAGE TREATMENT, ANTIBIOTICS, ENERGY PRODUCTIONAND HOUSEHOLD PRODUCTS(CURD & CHEESE ONLY)	JUNE	2 WEEKS
3	PLANT KINGDOM	ALGAE-CHARACTRISTICS, EXAMPLES OF CHLOROPHYCEAE,PHAEOPHYCEAE, RHODOPHYCEAE, ECONOMIC IMPORTANCE, BRYOPHYTA-GENERAL CHARACTRISTICS, DISTINCTIVE FEATURES OF LIVERWORTS AND MOSSES, GRAPHIC OUTLINE OF LIFE CYCLE OF FUNARIA WITH REFERENCE TO ALTERNATION OF GENERATION, ECONOMIC IMPORTANCE OF BRYOPHYTES, PTERIDOPHYTA-CHARACTERISTICS, CLASSIFICATION, LIFE CYCLE OF FERN, HOMOSPORY & HETEROSPORY, ECONOMIC IMPORTANCE, GYMNOSPERMS-CHARACTERISTICS, LIFE CYCLE OF PINUS, ECONOMIC IMPORTANCE	JULY	2 WEEKS
4	ANIMAL KINGDOM	ANIMAL KINGDOM-GENERAL CHARACTERISTICS, NON CHORDATA-FIVE DISTINGUISHING CHARACTERS WITH TWO EXAMPLES, CHORDATA-THREE DISTINGUISHING CHARACTERS WITH TWO EXAMPLES OF EACH	JULY	2 WEEKS
5	ANATOMY OF FLOWERING PLANTS	PLANT TISSUES-MERISTEMATIC TISSUES & ITS CLASSIFICATION, PERMANENT TISSUES & ITS STRUCTURE & FUNCTION OF SIMPLE AND COMPLEX TISSUES, TISSUE SYSTEM-EPIDERMAL, GROUND & VASCULAR TISSUE SYSTEM, INTERNAL STRUCTURE OF ROOT, STEM & LEAF, CELLULAR DIAGRAMS OF T.S. OF ROOTS & STEM AND V.S OF MONOCOT & DICOT LEAVES ARE REQUIRED	AUGUST	2 WEEKS
6	PHOTOSYNTHESIS	PHOTOSYNTHESIS-SITE, PIGMENTS, CONTRIBUTION OF PRIESTLY, SACHS, ENGLEMANN, VAN NEIL, DIFFERENCES BETWEEN ABSORPTION AND ACTION SPECTRA, PHOTOCHEMICAL & BIOSYNTHETIC PHASE, PIGMENT SYSTEMS, CYCLIC & NON CYCLIC PHOTOPHOSPHORYLATION, CHEMIOSMOTIC HYPOTHESIS, C3 & C4 CYCLEPHOTORESPIRATION, BLACKMAN'S LAW OF LIMITING FACTORS	AUGUST	2 WEEKS
7	RESPIRATION IN PLANTS	TYPES OF RESPIRATION, MECHANISM OF RESPIRATION, GLYCOLYSIS, KREB'S CYCLE, ETS (ONLY FLOW CHART), OXIDATIVE PHOSPHORYLATION, FERMENTATION, RQ	AUGUST	1 WEEK
	RESPIRATORY SYSTEM			

8		RESPIRATORY ORGANS, MECHANISM OF PUMONARY GAS EXCHANGE, BREATHING PROCESS, REGULATION OF RESPIRATION, TRANSPORT OF OXYGEN, OXYGEN DISSOCIATION CURVE, TRANSPORT OF CO2, CHLORIDE SHIFT, PULMONARY AIR VOLUMES AND LUNG CAPACITIES, RESPIRATORY DISORDERS	SEPTEMBER	2 WEEKS
9	CIRCULATORY SYSTEM	BLOOD- COMPOSITION, BLOOD GROUPS, RH FACTOR, BLOOD CLOTTING, OPEN & CLOSED VASCULAR SYSTEM, EXTERNAL & INTERNAL STRUCTURE OF HEART, LYMPHATIC SYSTEM, DISORDERS, STRUCTURE OF ARTERY & VEIN	OCTOBER	2 WEEKS
10	EXCRETORY SYSTEM	MODES OF EXCRETION-AMMONOTELISM, UREOTELISM, URICOTELISM, HUMAN EXCRETORY SYSTEM-STRUCTURE & FUNCTION, URINE FORMATION, OSMOREGULATION, REGULATION OF KIDNEY FUNCTION, RENIN-ANGIOTENSIN, ANF, ADH, DIABETES INSIPIDUS, ROLE OF ERYTHROPOIETIN, DISORDERS, DIALYSIS & ARTIFICIAL KIDNEY	OCTOBER	1 WEEK
11	NEURAL CONTROL & COORDINATION	NEURON & NERVES, NERVOUS SYSTEM IN HUMAN, CNS, PNS, ANS, GENERATION & CONDUCTION OF NERVE IMPULSES, REFLEX ACTION & REFLEX ARC, SENSE ORGANS- EYE & EAR WITH THE HELP OF DIAGRAMS	NOVEMBER	2 WEEKS
12	CHEMICAL COORDINATION & INTEGRATION	ENDOCRINE GLANDS & HORMONES, HYPOTHALAMUS, PITUITARY, PINEAL, THYROID, PARATHYROID, ADRENAL, PANCREAS, GONADS, MECHANISM OF HORMONE ACTION, DISORDERS DUE TO HYPO & HYPERSECRETION OF HORMONES, HORMONES OF GI TRACT	NOVEMBER	1 WEEK
13	LOCOMOTION & MOVEMENT	TYPES OF MOVEMENT-CILIARY, FLAGELLAR, MUSCULAR, SKELETAL MUSCLES-CONTRACTILE PROTEINS, & MUSCLE CONTRACTION-SLIDING FILAMENT THEORY, SKELETAL SYSTEM & ITS FUNCTION-NUMBER & NAME OF BONES OF AXIAL & APPENDICULAR SKELETON, JOINTS, DISORDERS	DECEMBER	3 WEEKS
14	BIOMOLECULES	PROTEINS-AMINO ACIDS, ZWITTERIONS, , CARBOHYDRATES, LIPIDS, ENZYMES-GENERAL PROPERTIES, NOMENCLATURE, & CLASSIFICATION, CO FACTORS, COENZYMES, METAL IONS & PROSTHETIC GROUPS, FACTORS AFFECTING ENZYME ACTIVITY	JANUARY	1 WEEK
15	CELL CYCLE & CELL	CELL CYCLE, MITOSIS-VARIOUS STAGES, MEIOSIS, DEFINITION OF C VALUE, PROPHASE I OF MEIOSIS DIVISION WITH DIAGRAMS, SIGNIFICANCE OF MITOSIS & MEIOSIS, DIFFERENCES BETWEEN MITOSIS & MEIOSIS	JANUARY	1 WEEK
16	CELL: THE UNIT OF LIFE	CELL THEORY, STRUCTURE OF PROKARYOTIC & EUKARYOTIC CELLS, PLANT CELL & ANIMAL CELL, CELL ENVELOPE, CELL ORGANELLES,	JANUARY	1 WEEK
17	PLANT GROWTH & DEVELOPMENT	SEED GERMINATION, PHASES OF PLANT GROWTH, DIFFERENTIATION, DEDIFFERENTIATION & REDIFFERENTIATION, GROWTH RATE, PLANT GROWTH REGULATORS, AUXANOMETER, FACTOR AFFECTING GROWTH	JANUARY & FEBRUARY	2 WEEKS