Academic planner 2023 -2024
CLASS -XI
Biology

Date & number of days	Topics/ Content	Teaching pedagogy	No. Of Assignments/H.W	Activities/practicals
1/7/23 - 15/7/23 No.of days-12	Chapter-1: The Living World What is living? Biodiversity; Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature	Discussion method	TBQs and Assignment based on the chapter	To study the parts of the compound microscope
	Chapter-2: Biological Classification Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups: Lichens, Viruses and Viroids.	Observation based	TBQs and Assignment based on the chapter	Study of Spedimens/slides/model and identifications with reasons, Bacteria, yeast, oscillatoria, spirogyra, Rhizopus, mushroom, liverwort
16/7/23 - 30/7/23 No.of days-12	Chapter-3: Plant Kingdom Salient features and distinguishing features of plants into major groups - Algae, Bryophyta, Pteridophyta, Gymnospermae	UT I Chapter 1 & 2	Syllabus chapter 1 and 2	
1/8/23 - 15/8/23	Chapter 4			
No. of days -11	Chapter-4: Animal Kingdom Salient features and classification of animals non-chordates up to phyla level and chordates up to class level (three to five salient features and at least two examples of each category).	Observation based	TBQs and Assignment based on the chapter	study of virtual specimens/slides/ model and identification with reason. Amoeba ,hydra, liver fluke, honey
16/8/23 - 31/8/23	Chapter-5: Morphology of Flowering Plants			To Study modifications of roots, leaves and stem.

No.of days-13	Morphology of different flowering plants, the root, stem, leaf , inflorescence, flower, fruit, seed. Description of family Solanaceae	Students would be given a field trip	Assignment based on Ch-5	Study & identify different types of inflorescences(
	Chapter 6: Anatomy of flowering plants	Direct instruction		Preparation and study of TS of dicot
	Anatomy and functions of tissue systems in dicots and monocots	and observation		Study of distribution of stomata on the
	Chapter -7 Structural organisation in animals	Pair teaching		
	Morphology, Anatomy and functions of different systems(digestive, circulatory, respiratory, nervous and reproductive) of frog		TBQs and Assignment based on the chapter	
1/9/23 - 15/9/23	Chapter- 8 Cell : The unit of life	Animated videos	TBQs and Assignment based on the chapter	To demonstrate osmosis by potato osmometer
No.of days-11	Cell theory & cell as basic unit of life,	Padlet and sway		
	Structure of prokaryotic & eukaryotic cells			
	Plant and animal cell;cell envelope;cell membranecell wall; the cell organelles,structure and function of endomembrane system,endoplasmic reticulum, golgi bodies, lysosomes, vacuoles mitochondria, ribosomes,plastids, plastids ,ribosomes		TBQs and Assignment based on the chapter	To separate & study the Plant Pigments by Paper Chromatography.
	mitochondria, plastids, ribosomes, cytoskeleton, cilia and			
	flagella, nucleus and types of chromosomes			
16/9/23 - 31/9/23	Term I examination	Syllabus Chapters 1	Syllabus Chapters 1 to 8	
No.of days-12				
1/10/23- 15/10/23 No. of days 10	Chapter-9: Biomolecules Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, nucleic acids, enzymes, types, properties, enzyme action	Reciprocated teaching	TBQs and Assignment based on the chapter	To test for glucose, sucrose, starch, proteins & fats & to show their presence in suitable plant &

16/10/23 - 31/10/23 No. of days 9	Chapter-10: Cell Cycle and Cell Division Cell cycle, mitosis, meiosis and their significance		TBQs and Assignment based on the chapter	Study of mitosis in onion root tip and animal cells from
1/11/23 - 15/11/23 No. of days 9	Chapter-13: Photosynthesis in Higher Plants Photosynthesis as a mean of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.			To compare the rate of transpiration from the upper & lower surfaces of the leaf
16/11/23 - 30/11/23 No. of days 12	Chapter-14: Respiration in Plants Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient.	UT II	TBQs and Assignment based on the chapter	To study the rate of respiration in germinating seeds having different substances such as wheat(carboby
	Chapter-15: Plant - Growth and Development Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA	Direct instruction	TBQs and Assignment based on the chapter	To demonstrate plasmolysis & deplasmolysis in leaf peels
	Chap. 17 Breathing and exchange of gases : Breating and Exchange of Gases Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing	Project based learning	TBQs and Assignment based on the chapter	
1/12/23 - 15/12/23 No. of days 12	Chapter- 17 Contd.			

	Chapter-17 **Breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration,** **respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory** **disorders**		**TBQs and Assignment based on the chapter**	
	Chapter- 18			
	Chapter-18 **Body Fluids and Circulation** **Composition of blood, blood groups, coagulation of blood; composition of lymph and its function;** **human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac** **output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system -** **hypertension, coronary artery disease, angina pectoris, heart failure.**	**Project based learning**	**TBQs and Assignment based on the chapter**	
16/12/23 - 31/12/23	**Chapter- 19**	**Class test for term II**	**Syllabus Chapter 13 Photosynthesis in higher plants**	
No. of days 13	**Chapter-19: Excretory Products and Their Elimination** **Modes of excretion - ammonotelism, ureotelism, uricotelism; human excretory system - structure** **and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin,** **atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders -** **uraemia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant**	**Art integration**	**Assignment**	**To test the given sample of urine for the presence of urea, sugar, albumin & bile salts**

	Chapter-20: Locomotion and Movement **Types of movement - ciliary, flagellar, muscular; skeletal muscle- contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal system - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.**	**Cooperative learning**	**TBQs and Assignment based on the chapter**	**Study & identification of human bones & joints with the help of virtual images models**
	Chapter-21: Neural Control and Coordination **Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse**		**TBQs and Assignment based on the chapter**	**Study & description of some flowers & their parts from solanaceae**
1/1/24 - 15/1/24	**WINTER BREAK**	**WINTER BREAK**	**WINTER BREAK**	**WINTER BREAK**
No.of days-NIL				
16/1/24 - 31/1/24	**Chapter 22 Chemical Coordination and Integration**			
No.of days-13	**Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease.** **Note:** **Diseases related to all the human physiological systems to be taught in brief.**	**Project based learning**	**TBQs and Assignment based on the chapter**	
1/2/24 - 15/2/24	**Doubts and problems to be taken up**	**Revision**	**Revision**	**Revision**

No.of days-12	**Revision**			
	Annual Examination	**Complete syllabus**		