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| Subject biology, class-xi-Diversity in the Living WorldBiological Classification Plant KingdomAnimal KingdomCell: Structure and Function Cell theory and cell as the basic unit of life: Structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, Golgi bodies, lysosomes, vacuoles;Structural Organisation in Plants and Animals 5. Morphology of Flowering PlantsFLOWER Inflorescence, Flower and its parts Aestivation and Placentation7. Structural organization in AnimalsMorphology ,anatomy and functions of different systems of frog.Plant Physiology 13. Photosynthesis in higher Plantsn, Role of chlorophyll, Cyclic and noncyclic photophosphorylation, Calvin Cycle, Hatch and Slack Cycle, Photorespiration 14. Respiration in PlantsGlycolysis, Fermentation, Aerobic respiration, TCA cycle, ETS and oxidative phosphorylation, and RQ values. 15. Plant Growth and DevelopmentPlant growth RegulatorsBiomolecules Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, nucleic acids, enzymes, types, properties, enzyme action. Cell Cycle and Cell Division Cell cycle, mitosis, meiosis and their significanceHuman Physiology 17. Breathing and Exchange of Gases 18. Body Fluids and Circulation 19. ExcretoryProducts and Their Eliimination20. Locomotion and Movement 21. Neural Control and Coordination 22. Chemical Coordination and Integration | LEARNING OUTCOMESStudents will be able to differentiates organisms, phenomena and processes based on certain characteristics and salient features, such as, prokaryotes and eukaryotes-understand and differentiate between Living and Non living organismsStudents will be able to evaluate the importance of botanical garden in educating public about country’s plant wealth and stimulate people to grow more treesclassifies organisms, phenomena and processes, based on certain characteristics / salient features systematically in more scientific and organized manner; such as five kingdom classification system of organisms under various hierarchical structural organizations; natural resources, etc.-Explain and comprehend the characteristic features of different kingdom (monera, protista, fungi) with examples, their physiology and their connectivity to different kingdomStudents will be able to learn, understand the concept and classify Animal kingdom under different phylum porifera, cnidaria, ctenophore, platyhelminthes, aschelminthes, annelid, mollusca, arthropoda, echinodermata, chordata. They will explore their critical thinking by Connecting the lower forms of organisms to the higher forms which led to evolution.-understand about the Cell theory and its different Discoveries and inventions of Cell -differentiate between prokaryotic and eukaryotic; unicellular and multicellular ---able to understand about totipotant cell and its various application in day to day lifeTo anaylse and draw structure and function of different cell organelles-to understand the Primary & secondary functions of root,stem & leaf etc along with their modification-know about flower and its parts, aestivation, placentaion, fruitdifferent families.-to understand structure and working of various systems of frog.-Identify frog and explain its features.To Comprehend new terms and cycles pertaining to Photosystems I & II- learnt about the mechanism of light and dark reaction in the process of photosynthesis -able to synthesized the importance of light, water and CO2 for the light and dark reaction of photosynthesis along with the role of stomata - understood and analyzed the C3 -C4 cycleTo analyse the steps of metabolic enzymes mediated cycles of respiration To understand the role of Auxin, Gibberellin, Cytokinin, Ethlene, ABA in Plant growth and development-able to understand about the structure and function of different Bio macromolecules and enzymes -Know the structures and functions of biomolecules (DNA, proteins, lipids, carbohydrates- relate the function of biomolecules and enzymes in day to day activities. -knowledge of importance of cell divisionunderstand the steps and phases of Mitosis and Meiosis-understand about the various stages of Mitosis in cell and relate with various examples of cell division -Differentiate between amitosis , mitosis and meiosis - understand the various phases of meiotic cell division of Meiosis I & II and relate it with the gamete formation in gonads. - evaluate and analyse the importance of meiosis in maintaining the DNA consistency of cellTo familiarize with different Respiratory organs To make them understand and differentiate the concept of breathing and respiration. To make them aware about the working of respiratory system -To educate them with the Disorders of respiratory systemTo correlate them with day to day lifeTo comprehend the mechanism of breathing, Calculate respiratory Quotient-knowledge of working of heart and heart sound. To understand hypertension, CAD, Angina pectoris Cardiac arrest, heart failureTo understand different types of bones associated with various movement- To make them aware of the mechanism of muscle contraction Skeletal System -To explore the working of various joints To understand the cause of different Muscular DisordersTo familiarize with different parts of Neural System -To study different parts of brain and their function. Able to evaluate how information passes from one neuron to another. Analyze how an action potential is generated and propagatedTo explore about Reflex Action and Arc and analyze critically its involvement with day to day life. To illustrate conduction of nerve impulse with diagram. To make them understand about the different sensory organ like eyes, ear and study the mechanism of Sensory Reception and ProcessingAppreciate the importance of different Endocrine glands and the hormones they secrete. To apply the learning to determine the effect of hypo and hyper secretion of hormones from different glands. | INNOVATIVE/ART INTEGRATION/EXPERENTIAL LEARNING/INTERDISCIPLINARY.To study different parts of microscope and its working -To develop skill to relate evolution and classification-classify the common specimens like human,mango,lion,tiger etcAnd learn and write its scientific names by pair and share----experiential learning1.To study different parts of microscope and its working 2.To observe different slides of the kingdom monera and protista and comment on it 3.To observe different specimens and slides of kingdom Fungi and comment on it 4.To observe the different specimens of plant kingdom and comment on it---EXPERENTIAL LEARNING TO MAKE COLOURFUL FLOW CHART OF KINGDOM PLANTAE—ART INTEGRATION1.To observe the different specimens of animal kingdom and comment on it.\_EXPERENTIAL LEARNINGTo draw flow chart of kingdom animalia with example. ---ART INTEGRATION To observe model and slides of different cell.-----art integrationRole playing on structure and function of various organelles.----art integration,integration with englishDissection of flowers to understand floral description and floral formula. Family: Solanaceae- experiential learningDraw diagrams of aestivation,placentation etc-collect different type of phyllotaxy of leaves.-Art integrationTo observe videos of different system of frog in smart class---integration with IT To draw diagrams of system of frog.---Art integrationDrawing various cycles and discussion about enzyme mediated processes.—art integration-Separate plant pigments through paper chromatography---experiencial learning.To observe the stomata in the lower and upper epidermis of leaf and find the stomatal index-----experiential learning and integration with mathsPair and Share with Peer teaching methods Interactive Discussion and Reasoning Questionnaire1.To prove that heat destroys the activity of enzymes and not the catalyst.-experiential learning 2. to prove that change of pH inhibits the enzyme activity and draw graph to show effect of various factor--MATHS Draw structural formula of various biomolecules --- INTEGRATION WITH MATHS AND CHEMISTRY1.To observe the different stages of meiosis through permanent slides 2.To prepare the onion root tip slide and to observe different stages of mitosis Art Integrated Activity Prepare Mitosis and Meiosis Cards Using Beautiful colours and creativity to show crossingover, terminalisation of chaismata, chromosomes moving over spindle fibers . Students will be able to identify that cuts and wound heals due to the process of cell divisionTo take deep breath to notice changes in chest cavity and stomach.---EXPERIENCIAL LEARNINGTo prepare working model of human respiratory system by using plastic container and straw.----ART INTEGRATION Art Integrated Activity Rhythm and Rap – Students will Prepare a Rap song on Human Systems (Circulatory, Digestive, Respiratory, Nervous etc. )and prepare a video. This activity can be in a Pair or groupTo test the presence of Sugar in Urine To test the presence of Albumin in Urine---with chemistry,experiencial learningTo observe videos related to working of various human system. Sports Integrated Activity Yoga and Muscle Contraction and Relaxation- Spread your mats and perform : Sukhasana, Tadasana, Shashankasana, Padamasana, Naukasa-.Study of different types of bones and cartilage of human body by modelsAnd relate it with our body -To identify different bones of skull vertebral column, sternum, girdles, Forelimb and Hind limb from the human skeleton and comment on it.---experiencial learning--Role play of joints with various day to day life activities -with English,art integrationTo observe the reflex action in day to day life by observing sudden withdraw of body on coming in contact with hot, cold or pointed objects, jerking of knee when hit below knee cap. -Closing of eye when strong light is suddenly focused on it---experiencial learning–To study the defects of eye by making ray diagram of myopia (short sight) and hypermetropia (long sight) -To draw T.S. of Cochlea and Eye---with physics. -Watering of mouth by seeing delicious food. --mind map of various glands and its hormones.Art integration |

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