BUDHA DAL PUBLIC SCHOOL , SAMANA

LESSON PLAN

Subject : Biology TERM - 1

CLASS - XI

Syllabus :

1. Diversity of living Organisms
2. Structural organization in Animals and Plants
3. Cell structure and function.
4. Plant Physiology
5. Human Physiology

Topic 1 : The living World

Teaching Aids	Black board, Smart Board, Book, Vedanta's study
Learning Objectives	Students will come to know that cellular organization, metabolism, growth, reproduction, consciousness are the defining features of living organism key is a list of alternate characters in which by selection and elimination one can easily identify the name and taxonomic position.
Content	1. What is living? 2. Diversity in the living world? 3. Taxonomic categories 4. Taxonomical Aids
Pre-existing knowledge	What are characteristics of living organisms?
Learning process Explanation	Use of various informational resources, group discussion to derive explanations of chosen concept.
Elaboration	to observe relationship of the concept in other areas. Expanded understanding of original topic
Activity related to Art	A colourful chart explaning Taxonomical hierarchy to be prepared by students.
Evaluation	Answering open ended questions by using observations, evidence and previously accepted explanations.

Topic 2 : Biological Classification

Teaching Aids	Book, Zoom class, Videos, BYJU's study materials
Learning Objectives	Students will come to know that Artificial system of classification is based on one or few morphological characters of organism which may not have any phylogenetic significance. Natural classification is based on the overall morphological and anatomical characteristics which indicate natural relationship among organisms.
Content	1. Kingdom Monera 2. Kingdom Protista 3. Kingdom Fungi 4. Kingdom Planted 5. Kingdom Animalia 6. Viruses , viroide, Lichens
Pre-existing knowledge	1. Why is Biological classification done? 2. Name five kingdom of Whittaker's Classification.
Learning process Explanation	Using various information resources, group discussion to derive definitions and explanations of the chosen concept.
Elaboration	Expanded understanding of original concept.
Activity related to Art	Prepare a colourful charts showing the characteristics of five kingdoms.
Evaluation	Answering open ended questions by using observations, evidence and previously accepted explanations.

Topic 3 : Plant Kingdom

Teaching Aids	Book, Zoom class, Videos, BYJU's study materials
Learning Objectives	The Students will come to know that owing to vast diversity of living organisms, there arises a need to classify them so as to study and place them in orderly manner. There are three principle systems of classification artificial, natural and phylogenetic.
Content	1. Algae 2. Bryophytes 3. Ptreidophytes 4. gymosperms 5. Anglosperms 6. Plant life cycles and alternation of generations.
Pre-existing knowledge	Give some examples of Algae. What are characteristics of Algae? What are Bryophytes?
Learning process Explanation	Using various informational resources, group discussions to derive definitions and explanations of the chosen concept.
Elaboration	Expanded understanding of original concept.
Activity related to Art	Prepare a colourful charts showing three different life cycles in Plantal.
Evaluation	Answering open ended questions by using observations, evidence and previously accepted explanations.

Topic 4 : Animal Kingdom

Teaching Aids	Book, Zoom class, Videos, Vedanta's study material
Learning Objectives	The Students will come to know that Although there are different animals yet there are common fundamental features in various individuals in relation to the arrangement of cells, body symmetry, nature of coelom, patterns of digestive, excretory, circulatory or reproductive systems.
Content	1. Basis of Classification 2. Classification of animals.
Pre-existing knowledge	1. What are diploblastic and triploblastic animals? 2. What is Bilateral symmetry?
Learning process Explanation	Use of various informational resources, group discussions to derive definitions and explanations of the chosen concept.
Elaboration	To make connections of the concept to real world situations.
Activity related to Art	To prepare colourful chart showing animals of Phylum Arthropoda and Phylum Echinodermata.
Evaluation	Demonstrating an understanding or knowledge of the concept or skill.

Topic 5 : Morphology of Flowering Plants

Teaching Aids	Book, Zoom class, Videos, BYJU's study material
Learning Objectives	Students will come to know that the angiosperms are most diverse and wide spread of all plant groups. Plant morphology includes study of root, stem, leaves, flowers, fruits and seeds and their modifications. Depending upon their habitat they can be classified as hydrophytes, mesophytes and xerophytes. The body of a flowering plant can be divided into 1. root system 2. shoot system
Content	1. The Root 2. The Stem 3. The leaf 4. The inflorescence 5. The fruit 6. The seed 7. Description
Pre-existing knowledge	1. What are herbs, shrubs and trees? 2. What are annuals, biennials and perennials?
Learning process Explanation	Using various resources group discussion to derive definitions and explanations of the chosen concept
Elaboration	Observing relationships of the concept in other content areas.
Activity related to Art	To prepare a colourful chart showing part of a flower.
Evaluation	Demonstrating an understanding or knowledge of the concept or skill.

Topic 6 : Anatomy of Flowering plants

Teaching Aids	Book, Zoom class, Videos, BYJU's study material
Learning Objectives	Students will come to know that Plant anatomy is the branch of biology which deals with the study of gross internal structure of plant organs as observed after section cutting. All plant organs are made up of different kinds of tissues of perform different functions
Content	1. The Tissues 2. The Tissue system 3. Anatomy of dicots and Monocots 4. Secondary growth
P.K. testing	1. What are Meristems? 2. What are characteristics of meristem tic cells?
Learning process Explanation	Using various informational resources, group discussion to derive definition and explanation of the chosen concept.
Elaboration	Observing relationship of the concept in other content areas.
Activity related to Art	Prepare a beautiful colourful chart showing secondary growth in stem.
Evaluation	Demonstrating an understanding or knowledge of the concept or skill.

Topic 7 : Structural Organization in Animals

Teaching Aids	Book, Zoom class, Videos, Vedants study materials
Learning Objectives	Students will come to know that Tissues are organised layers or masses of structurally similar cells of common embryonic origin and same function. All complex animals consist of only four basic type of tissues : epithelial, muscular, connective and nervous tissue.
Content	1. Animal Tissues 2. Organ and Organ system 3. Earth worm 4. Cockroach 5. Frog
P.K. testing	1. What are diploblastic and triploblastic animals? 2. Name different types of animal tissues.
Learning process Explanation	Using various informational resources group discussion to derive definition and explanation of the chosen concept.
Elaboration	Observing relationship of the concept in other content areas.
Activity related to Art	Prepare a beautiful colourful chart showing organ systems of earthworm.
Evaluation	Demonstrating an understanding or knowledge of the concept or skill.

Topic 8 : Cell the basic unit of Life

Teaching Aids	Book, Zoom class, Videos, Vedants study materials
Learning Objectives	Students will come to know that cell is a basic unit of life. All life begins as a single cell. Organism which are made up of single cell are called unicellular organisms e.g. Chlamydomonas. The organisms which are made up more than one cell or many cells are called multicellular organisms. Cells are structural and functional units of life.
Content	1. Discovery of cell 2. Cell theory 3. Types of cells 4. Prokaryotic and Eukaryotic cells 5. Plant cell and animal cell 6. Structure and functions of various cell organelles
P.K. testing	1. What are unicellular and multicellular organisms? 2. What is cell theory?
Learning process Explanation	Using various informational resources group discussion to derive definition and explanation of the chosen topic.
Elaboration	Observing relationship of the concept in other content areas.
Activity related to Art	Prepare a chart (colourful of plant cell and animal cell).
Evaluation	Demonstrating an understanding or knowledge of the concept or skill.