DIRECTORATE OF SCHOOL EDUCATION, GOVERNMENT OF TAMILNADU, CHENNAI - 600 006.

SCIENCE SYLLABUS - BIOLOGY

Chapter - I

Characteristics features of life

STANDARD VI **NUTRITION**

Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Knows the role of Phtotosynthesis 2. Understands that due to photosynthesis plants drive the entire Bio-sphere. 3. Recognises that there is Heterotrophic mode of nutrition is some plants like Fungi. 4. Realises that any type of feeding will provide only six types of basic nutri-ents.	**1.1. Nutrition** **1.1.1. Need for Nutrition** **1.1.2. Autotrophism & Heterotrophism - Definition and explanation.** **1.1.3. Heterotrophic modes of Nutri-tion - Holozoic nutrition, Parasit-ism. Saprophytism.** **1.1.4. Basic ingredients in all types of food - Carbohy-drates, Proteins, Lipids, Vitamins, Minerals and water.**	1. Synthesis of food by plants has to be put up through a chart. 2. Plants are the ultimate source of energy to all living organisms is to be explained using food-web and food-chain.	1. Diagrams of a green plant 2. Diagrams of plant, and animal para-sites, saprophytes like **Mucor** and **Agaricus**.	1. How are green plants capable of leading autotophic existence? 2. Why are Fungi heterotrophic? 3. What is the process by which energy is trapped in sunlight? 4. Why does photosynthesis occur only in plants?	

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SCIENCE SYLLABUS - BIOLOGY

Chapter - I

1. Characteristic Features of Life

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Understands that growth is the manifestation of living nature. 2. Recognises the process of growth in plants and animals 3. Realises the range in sizes of organisms.	**1.2. Growth** **1.2.1. Definition - size and form of animals and plants.** **1.2.2. Unicellular and multicellular organisms - Limited and Unlimited growth.** **1.2.3. Factors affecting growth.** **1.2.4. Various sizes of animals - microlevels to megasizes (Whales, Sequoia trees.)**	1. Watching the growth of shoot in young seedlings. 2. Measuring the linear growth of roots in germinating seeds / bulbs.	1. Sketches of germination stages in bean. 2. A comparative diagram of small and large animals	1. How does growth take place in the shoot and root systems? 2. What are the factors affecting growth?	

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Chapter - I
1. Characteristic Features of Life

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Understands that metablism is essential for release of energy in cells. 2. Realises biochemical nature of life activities in living organisms.	**1.3. Metabolism** **1.3.1. Definition - Anabolism and Catabolism with examples.** **1.3.2. Photosynthesis - a basic process.** **1.3.3. Energy content of food.** **1.3.4. Chemical nature of life activities.**	1. Interconversion of biomolecules using simple charts.	1. A simple experiment to show release of oxygen during photo-synthesis. 2. A simple experiment to show release of carbon dioxide during respiration.	1. What is the nutrient synthesised during photosynthesis? 2. Why do we respire?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Knows that plants respond to stimuli by exhibiting tropic movements. 2. Identifies flowers blossoming during day and night.	**1.4. Stimulus and Response** **1.4.1. Various types of stimuli.** **1.4.2. Organisms responding to stimuli** **1.4.3. Thigmotropism (Touch-me-not plant)** **1.4.4. Opening and closing of flowers.** **1.4.5. Receptor organs in animals - Sense of vision, hearing, touch and taste.**	1. Handling touch-me-not plants. 2. Feeling tastes such as sweet, salt, sour and bitter at different regions of the tongue, keeping the eyes closed.	1. Diagrams showing sense organs in animals. 2. Pictures relevent to the content.	1. Can you name the flowers that open during night time? 2. In a plant grown indoor, the branch of a stem grows towards the open window. What is the reason? 3. Why are the important sense organs situated in head region of the animals?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Differentiates locomotion in animals and movement in plants.	**1.5. Locomotion** **1.5.1. Need for Locomotion** **1.5.2. Locomotion in unicellular organisms** **1.5.3. Types of Locomotion in animals** **1.5.4. Speed of movement in animals - a comparative study.**	1. Watching the movement of earthworms and land snail 2. Observing swimming movement of an aquarium fish. 3. Observing the leg movement of a dog while walking and running.	1. Pictures showing animals on the move.	1. How do lower plants such as Chlamydomonas and volvox move? 2. Explain how a fish swims in water?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Knows that reproduction is a basic feature of any living organism. 2. Understands that floral parts are meant for sexual reproduction. 3. Recognises sexual dimorphism in animals. 4. Knows symbols used to denote male and female nature.	**1.6. Reproduction** **1.6.1. Sinificance of reproduction** **1.6.2. Reproduction in plants - Vegetative, Asexual and Sexual.** **1.6.3. Reproduction in Animals - Asexual and Sexual** **1.6.4. Gestation periods in animals** **1.6.5. Sexual dimorphism in animals**	1. Encouraging students to rear easily reproducible fishes like Guppies. 2. Charts showing asexual reproduction. 3. Can show sexual dimorphism in cockroach.	1. Pictures of animals with their young ones. 2. Pictures showing budding and Sporulation.	1. Mention the differences seen between male and female birds. 2. Can a kitten / puppy reproduce? If not why? 3. Name the male and female sex organs in animals.	

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SCIENCE SYLLABUS - BIOLOGY
Chapter - II
2. Biodiversity

STANDARD VI

Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Knows the structure of virus. 2. Identifies the size and shapes of viruses. 3. Classifies different types of viruses based on their host. 4. Wonders at the living and non-living nature of viruses	**2.1. Biodiversity** **2.1.1. Definition and signficance** **2.1.2. Introduction to Viruses.** **2.1.3. Discovery and history of the study of viruses.** **2.1.4. Virus - Structure** **2.1.5. Size and shapes of viruses** **2.1.6. Classification of viruses based on their hosts - Plant, Animal and Bacterial viruses.** **2.1.7. Viruses are both living and non-living forms.** **2.1.8. Viruses and diseases.**	1. Charts showing different ecosystems exhibiting biodiversity. 2. Charts to show peculiarties of viruses to create awareness and wonder.	1. Labelled sketches of viruses.	1. Why are viruses considered as forms between non-living and living. 2. What are the common viral diseases in Plants, Animals and Humans?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Discriminates between virus and bacteria.	**2.2. Biodiversity - Introduction to Five kingdoms system.** **2.2.1. Monera - Bacteria** **2.2.2. Discovery and history of the study of Bacteria.** **2.2.3. Structural organisation of a Bacterium** **2.2.4. Classification of Bacteria** **2.2.5. Beneficial and harmful bacteria**	1. Structure of a Bacterium could be explained through models and charts. 2. Types of bacteria can be explained using appropriate charts.	1. Sketches of bacteria.	1. How are the Bacteria useful in Biotechnological studies? 2. Provide a list of useful Bacteria.	

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1	2	3	4	5	6
1. Knows structure and organisation of Cyanobacteria. 2. Understands the existence of Plasmodium in man 3. Realises how mosquito causes malaria in man.	**2.3. Protista** **- Introduction to the study of Protista** **2.3.1. Microalgae - Features, nutrition, groups.** **2.3.2. Pyrrophyta - Dianoflagellates.** **2.3.3. Ascomycetous - Yeasts, features, nutrition groups.** **2.3.4. Protozoan Classification Ciliophora, Mastigophora, Sarcodina, Sporozoa.** **Ex. Plasmodium**	1. Pictures showing different Protistants	1. Life cycle showing **Plasmodium** within the mos uito and human system.	1. What is the role of yeast in fermentation? 2. What is the role of **Plasmodium** in causing malaria?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Realises the importance of macroalgae in an environment. 2. Understands the importance of Bryophytes in environment.	**2.4. Plantae - Introduction to the study of Plantae.** **2.4.1. Biodiversity among plants.** **2.4.2. Macroalgae - Red algae, Brown algae, green algae.** **2.4.3. Non vascular Cryptogams. Bryophyta - Funaria - Mosses, Riccia.** **2.4.4. Vascular cryptogams. Selaginella, Nephrolepis.** **2.4.5. Gymnosperms. Conifers, Cycadales.** **2.4.6. Angiosperms Monocots, Dicots Differences between Monocots and Dicots**	1. Charts to be used for explanation purposes 2. Video clippings on Bryophytes, Pteridophytes, Gymnosperms and Angoiosperms. 3. Plant specimens to be used in the class.	1.	1. Explain the classification of plants. 2. What is the basis for the classification?	

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1	2	3	4	5	6
1. Knows the system of animal classification 2. Realises that taxonomy makes the study of animals easier. 3. Understands that taxonomy is a man made system 4. Knows that either Greek or Latin terms are used in naming	**2.5.0. Animalia - Introduction** **2.5.1. General characters of the following groups with examples** **1. Porifera** **2. Coelenterata** **3. Platyhelminthes** **4. Aschelminthes** **5. Annelida** **6. Arthropoda** **7. Echinodermata** **8. Chordata**	1. Examples to be explained using preserved specimens	1. Labelled figures of animals should be used for discussion.	1. Name some useful Coelenterates 2. Write down the harmful effects of parasitic Platyhelminthes and Aschelminthes. 3. Write notes on economically important Annelids and Arthropods. 4. What is the basis for the classification of animals?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Knows that study of man is a discipline 2. Understands that people differ due to places of living. 3. Realises that all human beings belong to one species. 4. Analyses unity in diversity among humans.	**2.6. Anthropology** **- a study of humans** **2.6.1. Racial differences - related to geographical distribution**	1. Relevant pictures	1. Relevant pictures	1. How does a Mangoloid man differ from a Negroid man? 2. What is the Zoological name of man?	

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Chapter - III
3. Structure and Function of the living

STANDARD VI

Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recognises major types of root systems. 2. Recognises the differences between primary, secondary and tertiary roots. 3. Understands that since monocots are herbacious fibrous root system is sufficient.	**3.1. Root System** **- Structure and Function** **3.1.1. Two types of Root systems.** **3.1.2. Tap root system - description** **3.1.3. Fibrous root system - description** **3.1.4. Functions of root system** **3.1.5. Modified roots.**	1. Growth of roots towards water using germinating seeds to be demonstrated. 2. Root system of **Amaranthus** is to be shown for tap root system. 3. Root system of paddy or grass to be shown for monocots. 4. Presence of root pockets in aquatic plants is to be shown. 5. Carrot, beet-root, radish can be shown for modified roots.	1. Diagram showing tap root system. 2. Diagram showing fibrous root system.	1. What are the differences between tap root and fibrous root systems? 2. What are the differences between tap roots and secondary roots? 3. How do we consider prop roots as roots?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recognises the characteristic features of shoot system. 2. Understands that the stem supports leaves and flowers and helps them in their functioning. 3. Recognises the role of stem in the conduction of food and water. 4. Understands that sometimes stems may be weak, climbing and underground.	**3.2. Shoot System and Functions** **3.2.1. Parts of shoot system** **3.2.2. Characters of shoot system** **3.2.3. Functions of stem** **3.2.4. Parts of a flower and their functions.** **3.2.5. Modified stems.**	1. Positively phototropic nature of the stem can be demonstrated with suitable experiments. 2. Presence of nodes internodes and axillary buds can be explained using a plant. 3. Parts of a flower can be explained using flowers.	1. Labelled sketch of the shoot system of **Amaranthus.** 2. A diagram to show parts of a flower. 3. Sketch of a climber and an underground stem, like ginger.	1. How can you prove that potato tuber is a stem? 2. Can plants reproduce without flowers. 3. Why do some plants need support?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recognises the presence of stomata in the leaves 2. Sees the relationship between the process of transpiration and stomata 3. Anlyses the role Transpiration in plants. 4. Recognises that chloroplasts are involved in photosynthesis 5. Understands the biochemical process of photosynthesis with reference to raw materials and end products	**3.3. Leaf : Structure and functions** **3.3.1. Internal Structure of a Leaf** **3.3.2. Role of Stomata** **3.3.3. Transpiration** **3.3.4. Photosynthesis** **3.3.5. Respiration**	1. Transpiration to be explained through experiments 2. Photosynthesis to be explained as a biochemical process for production of food. 3. To perform simple experiments on photosynthesis - testing for starch, need for light, release of oxygen as a byproduct.	1. Labelled diagram of T.S. of leaf. 2. Sketches of experiments on photosynthesis	1. Why do plants adopt measures to minimise Transpiration? 2. Do aquatic plants respire? 3. What is the role of light energy in photosynthesis? 4. Why is photosynthesis described as biochemical in nature? 5. How does photosynthesis help in minimising air pollution?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Understands the need for digestion 2. Realises the role of enzymes in breakdown processes. 3. Recognises animals having intracellular and extracellular digestion	**3.4. Human Digestive System** **3.4.1. Process of Degestion** **3.4.2. Intra and extra cellular digestion** **3.4.3. Digestive system-organisation** **3.4.4. Organs of Digestion** **3.4.5. End products of Digestion**	1. Polymeric nature of food constituents is to be explained using charts 2. A simple salivary amylase experiment could be done to explain breakdown of starch. 3. Examines specimen of sheep alimentary canal	1. Labelled diagram of digestive system in man 2. Comparative structure of stomach in frog, bird and a mammal.	1. Why do animals need food? 2. What type of food gets digested early? 3. Why should the food be digested? 4. How is the nature of alimentary canal related to type feeding?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Realises the need for circulatory system in a multicellular animal. 2. Knows the role of blood in circulation 3. Understands the pumping nature of heart. 4. Realises the reason for red colour in blood 5. Relates circulation and respiration.	**3.5. Human circulatory system** **3.5.1. A Transport system within the body.** **3.5.2. Blood - the circulating medium** **3.5.3. Closed type of circulation**	1. Observes the wing of a live cockroach under a microscope. 2. Observes clotting time of blood. 3. Observes pulse rate at rest. 4. Observes pulse rate after some exercise. 5. Observes clotting time of blood.	1. Labelled diagram of the heart 2. Explanatory diagram to show systemic (body) circulation 3. A comparative diagram showing inner structure of heart in different vertebrates.	1. Why is the blood circulating? 2. What is the difference between an artery and a vein? 3. What is the role of heart?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Understands the significance of excretion 2. Sees relationship between circulation and excretion 3. Realises the role of kidney in water balance. 4. Recognises the amount of urine excreted by humans every day. 5. Understands the concept of selective filtration and reabsorption. 6. Understands the difference between excretion and defaecation.	**3.6. Human Excretory System.** **3.6.1. Excretory products.** **3.6.2. Excretory organs** **3.6.3. Kidney in Vertebrates** **3.6.4. Functional units in a kidney - Nephron**	1. A model of a nephron can be made using china clay and the process explained. 2. Students should be helped to realise realising of less urine during summer and more during winter. 3. Charts should be used to discuss the structure and function of excretory organs	1. Labelled diagram of the excretory system of a human	1. Draw a labelled picture of Nephron and explain its working. 2. Explain the role of Kidneys in maintaining water - Balance in our body. 3. Why is Kidney failure fatal?	

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Chapter - IV
4. Our Environment

STANDARD VI

Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recalls that the factors controling life in an ecosystem may be living or non-living. 2. Understands the presence of many types of Ecosystems.	**4.1. Ecosystem - Definition** **4.1.1. Biotic components** **4.1.2. Abiotic Component of Ecosystem** **4.1.3. Introduction to types of Ecosystems**	1. Interdependence of animals and plants to be explained using charts and Eco-walks 2. Visit a small pond and explain the concept of Ecosystem.	1. Diagrams related to biotic and abiotic components.	1. Make a list of biotic and abiotic components from your surrounding 2. Do types of plants differ in different environments? 3. How do animals help the plants?	

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Chapter - IV
4. Our Environment

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recognises the occurence of plants in water 2. Recognises that in addition to algae higher plants also occur in aquatic media. 3. Recognises that most of the plants are meso-phytes. 4. Records the differences between terrestrial and aquatic life. 5. Finds out reasons for the successful life of cock-roaches and rats.	**4.2.1. Aquatic life** **4.2.2. Hydrophytes with examples.** **4.2.3. Aquatic animals** **4.2.4. Microscopic organisms (Plankton)** **4.2.5. Terrestrial life** **4.2.6. Mesophytes and xerophytes** **4.2.7. Terrestrial animals** **4.2.8. Cockroach and Rat - a study**	1. External characters unique to the aquatic plants to be explained using specimens 2. Adaptations in xerophytes to be explained. 3. Discussion regarding habitat of Cockroach / role of Cockroach, feeding habits, Rat. (as a pest of paddy and disease carrier - plague)	1. Showing actual specimens of Eicchornia, Pistia, Vallisneria, algae 2. Labeled sketches of Opuntia to be shown. 3. Observing rat in paddy fields. 4. Role of Cock-roach in de-stroying crop agriculture 5. Role or rat in carrying patho-gen like pasteuralla	1. Name a few plants occur in pond. 2. How do plants float in water? 3. What type of plants do you get in land? 4. Is there any difference in the plants on hills and dry lands?	

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Chapter - IV
4. Our Environment
4.2. Role of Plants

STANDARD VI

Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Knows the importance role of plants in purifying the air. 2. Understands the necessity of plants cover for precipitation of water vapour and rain fall. 3. Role of plants in soil conservation 4. Realises the value of animals in upkeeping of the environment or conserving the environmental quality. 5. Analyses the role of mosquitoes in decomposing organic matter in an aquatic ecosystem. 6. Role of earth worms, mites, millipedes, centipedes, in the decomposition of soilid wastes.	**4.3.1. Role of plants** **4.3.2. Photosynthesis purifiying air.** **4.3.3. Source of rain** **4.3.4. Role in conservation of soil** **4.3.5. Ornamental avenue trees - values.** **4.3.6. Role of animals scavengers - Cockroach.** **4.3.7. Decomposers - chironomous larvae** **Mosquito larvae - detritous feeders** **4.3.8. Recycling by earthworms, mites, millipedes, centepedes.**	1. Evolution of oxygen during photosynthesis to be demonstrated using aquatic plants. 2. Role tobe explained using charts 3. Role of plants in benefiting humankind - using charts 4. Rearing mosquito larvae in a bottle 5. Collecting Chironomous larvae from gutters and observing under dissection microscope.	1. Expriement to show evolution of Oxygen 2. A forest - picture 3. Video clippings of Tropical Rain Forests.	1. Explain photosynthesis? 2. Why do under water divers carry oxygen cylinders 3. Why should we protect trees? 4. Where do we find cockroaches? How do they survive there? 5. Whatis the food of mosquito larvae? 6. Why do we consider earthworms as the “friend of the farmers”?	

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Chapter - IV
4. Our Environment 4.4. Terrestrial Life 4.5. Role of Mankind in environment

STANDARD VI

Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recognises that human depends on environment. 2. Understands the need and effect of industrialisation. 3. Realises the effect of urbanisation. 4. Considers the role of human in conserving nature. 5. Realises the difference between terrestrial and aquatic life. 6. Wonders at the successful life of cockroaches and rats.	**4.4.1. Terrestrial life** **4.4.2. Mesophytes and xerophytes** **4.4.3. Terrestrial animals** **4.4.4. Cockroach and Rat - a study** **4.5. Role of mankind in environment.** **4.5.1. Needs of mankind impact on environment** **4.5.2. Man made environmental changes** **4.5.3. Interaction with the environment.**	1. Charts to show human's impact on environment. 2. Adaptations in xerophytes to be explained. 3. Habitat of Cockroach role of Cockroach, organization Cockroach, feeding habits, rat. (as a pest of paddy and disease carrier plague)	1. Human in the midst of biosphere 2. Role of human in the conservation of land, air and water 3. Role of industry in upsetting the balance in nature. 4. Interactions with plants and animals 2. Label to sketches plants of opuntia to be shown 3. Observing Cockroach in sewage system. Observing rat in paddy fields. 4. Role of Cockroach in destroying crop agriculture. 5. Role or rat carry in pathogen like pasteuralla	1. Why do we consider man as a social animal? 2. How can we protect the environment? 3. How can an industry affect the environment? 4. What are our requirement from industries to contain pollution? 3. What type of plants you get arround in the land. 4. Is there any difference in the plants on hills and dry lands.	

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Chapter - V
5. Application Biology

STANDARD VI

Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Know the importance of plants as source of food. 2. Relates plants with objects of daily use.	**5.1. Uses of plants and animals** **5.1.1. Uses of rubber** **5.1.2. Ornamental plants - avenue trees.** **5.1.3. Insect pollination** **5.1.4. Dispersal of seeds** **5.1.5. Cattle, Chichen, fishes** **5.1.4. Prevention of cruelty to animals**	1. Charts to show Ornamentalplants 2. Collection of few ornamental plants. 3. Collection of fruits and seeds meant for various uses	1. Picture showing rubber plant 2. Photographs and pictures of ornamental plants, and fishes	1. Name few useful plant products. 2. What is SPCA? 3. In what way ornamental plants add value to our life. 4. How do animals help the plants?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Realises the importance of Medicinal plants 2. Relates the diseases with appropriate plants 3. Analysis at the role of plants in curing diseases	**5.2. Medicinal plants.** **5.2.1. Importance of medicinal plants - identifying and culturing** **5.2.2. Ginger** **5.2.3. Babool tree (VEL)** **5.2.4. Garlic** **5.2.5. Madar, calotropis** **5.2.6. Vinca rosea**	1. Importance of Medicinal plants to be shown along with the products 2. Collecting of few Medicinal plants and preparing a herbarium.	1. Display of Medicinal plants 2. Photographs and pictures of Medicinal plants.	1. Name few products obtained from Medicinal plants. 2. What are the medicinal properties of ginger, garlic? 3. How ingarlic useful?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Realises the importance of plants as source of food 2. Classifies the food yielding plants based on different Criteria 3. Recognises various medicinal plants.	**5.3. Food yeilding Plants** **5.3.1. Root tubers** **5.3.2. Stem tubers** **5.3.3. Leafy vegetables** **5.3.4. Food from lower plants.** **5.3.5. Nutrional importance**	1. Collecting root tubers and stem tubers and preparing wet mounts. 2. Identification of Leafy vegetables with examples 3. Preparation of table exbiting the nutritional value of certain foold yeilding plants.	1. Labelled sketches of root and stem tubers 2. Pictures of vegetables 3. A chart showing specimens of stems and root tubers	1. Five Examples for stem and root tubers. 2. Five examples of leafy vegitables. 3. What are the types of food components obtained for edible plants.	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Realises the importance of fibres in our daily life. 2. Relates the types of fibers with their uses.	**5.4. Fibre yeilding Plants** **5.4.1. Importance of fibres** **5.4.2. Stem fibres** **5.4.3. Leaf fibres** **5.4.4. Surface fibres.**	1. Exhibiting different types of fibres 2. Extracting fibres from a plant source.	1. Diagrams of fibre yielding plants 2. Diagrams of products made from plant fibres	1. Why do we need plant fibres? 2. What in the use of fibres in plants?	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recalls the list of oil yielding plants 2. Classifies the different kinds of oils 3. Analyses the importance of fats and oils on human health	**5.5. Oil yeilding plants** **5.5.1. Vegetables fats, coconut oils** **5.5.2. Drying oils - Soyabean oil.** **5.5.3. Semi drying oil - sunflower oil.** **5.5.4. Non-drying oils - castor oil** **5.5.5. Extraction**	1. Explanation of general extraction procedure for oils 2. Exhibiting different types of oils.	1. Display different parts of plants yielding oils. Ex. Coconut. 2. Display of different typs of oil along with their sources.	1. Differentiate between drying and non-drying oils? 2. List down the steps involved in the extraction of oil.	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recognises the history of man-animal relationship. 2. Recognises the obedience shown by some animals 3. Realises that pet animals are friendly to humans	**5.6. Pet animals** **5.6.1. Dog, Cat** **5.6.2. Rabbits and Love birds.** **5.6.3. Aquarium fishes**	1. Showing pictures of pet animals. 2. Keeping an aquarium in the class room and discussion with the students on the above.	1. Pictures showing breeds of dogs and Aquarium fishes	1. How are pets valuable to humans? 2. Make a list of animals kept as pets.	

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6. Health and Hygiene

STANDARD VI

Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Realises the need for good health 2. Realises that healthiness makes life more pleasant 3. Experiences healthy feeling 4. Realises the importance of various factors in maintaining good health 5. Realises the fact that diseases would affect the general helath of a person. 6. Realises the importance of playing / physical exercise.	**6.1. Health - Geneal features.** **6.1.1. Healthy appearance** **6.1.2. Feeling healthy** **6.1.3. Health factors** **1. Food** **2. Sleep / rest** **3. Eye sight** **4. Being free from diseases** **5. Mental alertness** **6. Playing**	1. Showing pictures of a healthy child - laughing playing swimming etc., 2. Showing pictures of well maintained lusturous hair. 3. Picture showing healthy practices.	1. A Chart showing weight and height related to age. 2. Diagrams of articles useful in maintaining good health - tooth brush, coconut oil, comb, soaps, taking bath, reading in proper light, etc.	1. What is the need for sleep? 2. Why should we take care of our teeth? 3. Why do we need good light for reading? 4. What is a healthy feeling? 5. How does TV affect our lives?	

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6. Health related values and Hygiene

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recognises that healthiness is a normal condition. 2. Realises that healthiness provides physical and mental strength. 3. Realises that we should care about others, friends and family members. 4. Understands that caring for the community is a duty.	**6.2. Health related values** **6.2.1. Feeling strong and active** **6.2.2. Caring for others** **6.2.3. Showing concern about the community.**	1. Discussion about healthy feeling, physical and mental strength in the class and out - of class situation.	1. Leading a blind man 2. Taking care of an animal 3. Using a dust bin.	1. What type of help needed by a blind man 2. What will you do if you see an accident? 3. Mention any three ways of expressing concern to the needy.	

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6.3. Nutrition - value of Diet.

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recognises various Nutritional practices in animals. 2. Recalls that all food materials contain 6 basic ingredients. 3. Realises the importance of each nutrient 4. Predicts various problems if the nutrients are absent.	**6.3.0. Nutrition - Definition** **6.3.1. Constituents of food -sources.** **1. Carbohydrates** **2. Proteins** **3. Fats** **4. Vitamins** **5. Minerals** **6. Water** **6.3.2. Functions of each constituent** **6.3.3. Balanced diet.**	1. Pictures showing various sources for food constituents	1. Table to show nutrient, source and use.	1. What will happen if a person starves? 2. What is the ultimate source for all nutrients. 3. What is a balanced diet? Give two examples. 4. Mention the composition of breakfast you had.	

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Recalls the need for hygiene 2. Realises that personal hygiene will protect him / her from diseases. 3. Realises that personal hygiene provides social acceptance	**6.4.0. Personal Hygiene** **6.4.1. Need for personal Hygiene** **6.4.2. Methods of taking care of oneself** **1. Regular bathing** **2. Brushing of teeth** **3. Common cold, running nose and care** **4. Skin care** **5. Hair growing** **6. Washing, Dresses and un-dergarments** **7.Nail cutting (Manicuring)** **8. Washing hands** **9. Proper care of eye.**	1. Various products available for personal hygiene can be explained Demonstrations : 1. Tooth brushes - types (Hard, Soft, Medium) 2. Paste 3. Comb 4. Nail cutter 5. Eye lotion ointments	1. Pictue of a person showing healthy teeth and hair. 2. Diagrams of products useful in personal hygiene.	1. Why should a person take bath regularly? 2. Why should we brush our teeth? 3. How is Scabies cured? 4. Why should we wash our undergarments daily?	

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6.5. Health and Hygiene

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Expected Specific Outcomes of Learning	Content in terms of Concepts	Curriculum Transactional Strategies	Illustrations	Evaluation	Suggested No. of Periods
1	2	3	4	5	6
1. Relates health and environment. 2. Visualies a pure, clean environment. 3. Identifies air pollutants. 4. Recognises water polluting agents. 5. Realises the need for safe water. 6. Realises that maintenance of envorinment is a social responsibility.	**6.5.0. Health and environment** **6.5.1. Environmental factors affecting health.** **1. Polluted air** **2. Polluted water** **3. Sound** **6.5.2. Food and water contaminants** **6.5.3. Care of the environment - control of pollution.**	1. Show pictures of clean environments 2. Use charts showing pollution of air / water 3. Pictures of machineries produing noise with decibel levels.	1. Diagram showing an industry releasing pollutants. 2. Diagram showing food and water contaminants.	1. Why do we need a clean environment? 2. How is health related to environment? 3. What is air pollution? 4. What are the air pollutants? 5. What are the water pollutants 6. Why do we consider sound as a pollutant?	