

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

1. Levels of Organisation

1.1. Basics of classification

STANDARD VIII

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 classification 2. Recalls the basis for classification. 3. Familiar with characteristics of plants and animals 4. Wonders at the peculiar position of viruses and Bacteria in Taxonomy.	1.1. Basics of classification 1.1.1. Need for classification 1.1.2. Plant kingdom and animal kingdom 1.1.3. Viruses and Bacteria - position 1.1.4. Carl Linnaeus and his contribution.	1. Charts to show many methods of classification		1. Why should the plants and animals be classified? 2. Can you differentiate different animals? 3. Can you identify flowering and non-flowering plants? 4. What was the contribution made by Carl Linnaeus to Taxonomy?	

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1. Levels of Organisation

1.2. Concept of Kingdom

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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. Recognizes the diversity of living organisms 2. Understands that in addition to plants and animals there are other types of living organisms.	1.2. Five Kingdoms concept. 1.2.1. Conventional types of classification 1.2.2. General characters of Monera, Protista, Fungi, Plantae, Animalia	1. Charts to show general characters of each kingdom	1. Examples for each kingdom to be drawn	1. Provide examples for the five kingdoms? 2. Can you justify the modern classification? 3. How does fungi differ from plantae	

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1. Levels of Organisation

1.3. Classification of angiosperms

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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 necessity for classification 2. Realises the existence of many types of classification 3. Understands the role of evolution concept in classification 4. Understands that floral characters can be considered for classification	1.3. Classification - Angiosperms 1.3.1.Type of classification 1.3.2.Bentham and Hooker classification - Outline 1.3.3.Merits and demerits of Bentham and Hooker classification 1.3.4.Taxonomic hierarchy - importance	1. Charts to show classification		1. Why do we need to classify the plants. 2. How are Angiosperms divided.	

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1. Levels of Organisation

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1.4. Animal Phyla

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 basic concept in Animal Taxonomy 2. Recalls the various phyla with suitable examples 3. Knows the general characters of each phylum.	1.4. Animal phyla - General characters - Examples 1.4.1. - Protozoa - Porifera - Coelenterata - Platyhelminthes - Nematoda - Annelida - Mollusca - Echinodermata - Chordata 1.4.2. Pisces Amphibia Reptilia Aves Mammalia	1. Appropriate charts and pictures	1. Pictures to show animals of different phyla.	1. How are Annelids different from Arthropods? 2. What are chordates? 3. Name a few Echinoderms	

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1. Levels of Organisation

1.5. Binomial - Nomenclature

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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 the difficulties faced by scientists in using local names 2. Understands the necessity for scientific names for plants and animals 3. Tries to understand the etymology of scientific names	1.5. Binomial - Nomenclature 1.5.1. Definition & History 1.5.2. Necessity for Binomial - Nomenclature 1.5.3. Scientific names / Vernacular names 1.5.4. Generic name specific epithet	1. Charts	1. Table to provide scientific names for common plants	1. Explain the procedure adopted to give a scientific name for an Angiosperm 2. Can you name the plants in your school?	

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Chapter - II Bio-Diversity

STANDARD VIII

2.1. Monera

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. Recognizes the salient features of monera Relates Bacteria to the group-Monera	2.1. Monera - Bacteria- E.coli - Type study, characteristic features. 2.2. Flagella - Grams stain - Grams positive and negative - Bacteria cell wall - cell size, types.	1. Using a chart explain the salient features of the group.	1. Labelled structure of a Bacterium - E-coli	1. What are the characteristic features of the group Monera? 2. Describe the classification of Bacteria?	

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Chapter - II Bio Diversity

STANDARD VIII

2.2. General features of Protista

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. Recognizes the salient features of Protista 2. Relates the features of Paramoecium to the Protista group	2.2.1. General features of Protista 2.2.2. Type study Eg. <i>Paramoecium</i> classification, Locomotion, Nutrition, Respiration, Excretion, Irritability, Reproduction - A sexual and sexual	1. Using charts explaining the salient features of Protista 2. Use the Paramoecium culture for examining the animal under a microscope	1. Labelled diagram of entire Paramoecium 2. Diagram showing asexual reproduction (Binary fission)	1. What are the significant features of Protista? 2. How does Protista differ from Monera?	

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Chapter - II Bio Diversity

STANDARD VIII

2.3. Fungi

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. Develops skill to culture mucor on Bread 2. Observes fungi in the environment. 3. Draws sketches of different forms of fungi. 4. Recognises the salient features of fungi.	2.3.0. Fungi 2.3.1. General features of fungi 2.3.2. Vegetative Structure 2.3.3. Reproduction Vegetative Asexual Sexual	a. Culturing Mucor on Bread b. Observing Fungi under the microscope c. Collecting specimens of mushrooms, wild & cultivated for discussion	1. Sketches of fungi 2. Diagrams for reproduction	1. What are the characteristic features of fungi as a whole? 2. Write the classification of fungi into sub groups.	

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Chapter - II Bio Diversity

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2.4. Cyptogams

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
<p>Recognizes the salient features of Cryptogams</p> <p>Discriminates between a gametophyte and Sporophyte .</p> <p>Analyses the alternation of generation from different perspectives.</p>	<p>2.4 Cryptogams</p> <p>2.4.1 Introduction and general features of Cryptogams</p> <p>2.4.2 Structure of the Sporophyte</p> <p>2.4.3 Reproduction</p> <p>2.4.4 Pollination</p> <p>2.4.5 Fertilization</p> <p>2.4.6. Spirogyra - Type study</p>	<p>1. Using a chart for discribing the features</p> <p>2. Using specimens for discussion and observation</p> <p>3. Observing microcopic specimens under the microscope</p>	<p>Diagrams showing Cryptogams</p> <p>Labelled diagrams of a sporophyte</p>	<p>1. What are the salient features of a gametophyte</p> <p>2. What are the salient features of a sprophyte?</p> <p>3. Explain alternation of generation?</p>	

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Chapter - II Biodiversity

2.5. Cockroach

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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. Recognizes the salient features of Insects. 2. Relate the external and Internal structure of cockroach to class Insecta.	2.5. General features of cockroach - external structure 2.5.1 A General study of the anatomy - showing different organ systems.	1. Using a chart for discussion 2. Examining living specimens of cockroaches 3. Dissecting a cockroach to show the viscera	1. Diagram of dorsal & ventral view of cockroach 2. Labelled diagram of digestive system of cockroach 3. Labelled diagram of male and female reproductive system of cockroach	1. Describe the salient feature class Insecta 2. Briefly describe the external features of cockroach 3. Briefly describe the salient features of the internal structure of the cockroach	

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Chapter - III Structural Organisation

STANDARD VIII

3.1. Fundamental Tissue System in plants

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
<p>1. Understands that basic structure of the plant is laid by fundamental tissue system</p> <p>2. Understands that parenchyma form the bulk of the ground tissue</p> <p>3. Understands that the tissue system carries out many functions.</p>	<p>3.1. Fundamentals of tissue systems in plants</p> <p>3.1.1 Definition</p> <p>3.1.2 Types of tissues and their functions</p> <p>3.1.3 Fundamental tissue systems in stem, root and leaf.</p> <p>3.1.4. Extra stelar and Intra stelar fundamental tissues</p>	<p>1. Examines a section of the stem to see the distribution of tissue systems.</p> <p>2. Examines the T.S. of leaf to see the fundamental tissue of leaf.</p> <p>3. Examines Microslides of the tissues under the microcope.</p>	<p>1. Labelled diagram of TS of young dicot stem.</p> <p>2. Labelled diagram of TS of young dicot root.</p> <p>3. Labelled diagram of TS of young dicot leaf.</p>	<p>1. Discribe the classification of plant tissue</p> <p>2. Compare dicot root with that of a stem</p>	

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Chapter - III Structural Organisation

STANDARD VIII

3.2. Vascular Tissue System In Plants

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 the function of conduction is taken care of by vascular tissue 2. Understands that there are two types of tissues meant for conduction. 3. Relationship between the structure of xylem and the function of conduction of water. 4. Sees the relationship between the structure of phloem and its function.	3.2. Vascular tissue system in plants. 3.2.1 Definition and constituents of this system. 3.2.2 Concept of Steel 3.2.3. Xylem and its function 3.2.4. Phloem and its function	1. Xylem elements can be demonstrated by maceration of a piece of wood 2. Section of stem of balsam plant supplied with coloured water to show that xylem is involved in water conduction. 3. Simple ringing experiment to show that Phloem conducts food. 4. Macerate the tissues and show elements under the microscope.	1. Xylem elements chart 2. Phloem elements chart 3. T.S. of Stem 4. T.S. of Root 5. T.S. of leaf - charts	1. Why do we call xylem and phloem as vascular elements? 2. What is the direction of flow of water in xylem?	

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3.3. Digestive System - Human

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 digestion of food is essential 2. Realises that digestive systems of all animals have a common pattern 3. Understands that digestion happens by enzymes	3.3. Digestive system - Human 3.3.1 Organs of Digestive system 3.3.2 Process of Digestion 3.3.3. Absorption of food	1. A Chart to show the system	1. Human Digestive system	1. What is the role of salivary glands? 2. Mention the arrangement of teeth. 3. What are the various digestive glands? 4. How are proteins digested?	

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Chapter - III Structural Organisation

3.4. Respiratory System - Human

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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 location of respiratory Organ 2. Realises the importance of diaphragm. 3. Recognizes the mechanism of breathing 4. Realises the importance of respiration	3.4.0. Respiratory system and organs included in it. 3.4.2. Structure of respiratory pathway and lungs. 3.4.3. Alveoli structure 3.4.4. Mechanism of breathing - Inspiration and Expiration 3.4.5. Exchange of gases	1. Demonstrate the bell jar and balloons experiment. 2. Find out the breathing rate of human per minute. 3. Observe the movement of body during breathing. 4. Find out the breath holding time.	1. Entire human lung 2. Breathing mechanism 3. Exchange of gases in alveoli - diagram	1. What are the organs included in the respiratory system? 2. How do you relate respiratory system with circulatory system? 3. Find out the reasons for different rates of breathing during various activities?	

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3.5. Circulatory System - Human

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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 circulation. 2. Understands the functions of Blood. 3. Knows the Blood cells - count 4. Understands the role of heart. 5. Knows the functioning of heart.	3.5. Circulatory system 3.5.1. Blood - Structure and Function. 3.5.2. Heart - Structure and Function. 3.5.3. Arteries, Veins and Capillaries	1. Using Heart model. 2. Chart - to show structure of Heart	1. Diagram showing outer and inner structure of heart.	1. What are the cells found in the blood? 2. What is the total volume of blood present in man? 3. What are the differences between arteries and veins?	

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3.6. Nervous System.

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 co-ordination in an organism. 2. Understands electrical activity of the nerve 3. All organs are under the control of brain. 4. Preliminary idea of areas of Brain and their functions. 5. Realises spinal cord as the intermediary structure between brain and other organs.	3.6.0.Human Nervous System 3.6.1.Neuron - Structure and its functioning. 3.6.2.Central co-ordinating system. 3.6.3.Types of nervous systems - Central Peripheral and Autonomous systems 3.6.4.Central Nervous Systems - Brain and its function 3.6.5.Spinal cord and its role 3.6.6.Reflex action	1. Various regions could be explained. 2. A comparative study of the brain using appropriate charts / models	1. Outer structure of brain. 2. Sectional view of Brain 3. Sectional view of spinal cord.	1. How are sense organs related to the N.S.? 2. What is paralysis? 3. How many cranial and spinal nerves are there in man? 4. What are meninges? 5. Explain how nerve impulses are carried . 6. Explain reflex action. 7. Draw the human brain and explain its function	

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Chapter - III Structural Organisation

STANDARD VIII

3.7. Structural organisation - Skeletal system

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 internal supporting rature of S.S. 2. Recognises different types of skeletal systems 3. Understands the importance of S.S. in maintaining body shape and movement. 4. Differentiates pelvic girdle and pectoral girdle 5. Realises how important structures are protected by rib cage 6. Differentiates movable and immovable joints.	3.7.0.Skeletal system - Importance. 3.7.1.Types of Skeletal system - Axial and Appendicular skeletal systems 3.7.3.Axial skeletal system - skull, vertebral column 3.7.5.Appendicular - Skeletal System Pectoral girdle, Pelvic girdle, Fore Limbs, Hind Limbs, Rib cage, Joints. 3.7.4.Functions of Skeletal System.	1. Need for skeletal system in different animals to be explained 2. Total number of bones in a human skeletal system to be explained. 3. Charts showing - diff. types of joints. 4. Show the human skeletal system - Model.	1. Labelled sketch of entire human skeletal system and Rib cage.	1. How many bones are there in human beings? 2. Write the scientific names for the following - collar bone, back bone, hip bone, shoulder bone. 4. Explain the necessity for the skeletal system in us.	

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3.8. Human reproduction system

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 significance of sexual reproduction 2. Understands the concept of sperm and the ovum 3. Knows the number of sperms and ovum produced 4. Develops the right attitude for human sex and appreciates the Indian value system about sex. 5. Knows about sexually transmitted diseases and acts accordingly.	3.8. Human reproductive system - Unisexual nature Sexual Dimorphism 3.8.1.Male reproductive system - organs 3.8.2.Testis - Function - Spermatogenesis Accessory structures. 3.8.3.Female reproductive system - organs 1.Ovaries - function 2. Accessory structures	1. An understanding is made through observance of reproductive strategies in other animals.	1. A drawing of Human reproductive system - male and female labelling the parts	1. What is the significance of sexual reproduction? 2. Differentiate primary and secondary sexual characters	

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 cycling of nutrients 2. Understands the various cycles in nature	4.1. Bio - geo chemical cycle - Definition 4.1.2.Matter 4.1.3.Hydrological cycle 4.1.4.Carbon cycle 4.1.5.N₂ cycle 4.1.6.O₂ Cycle 4.1.7.Sulphur Cycle	1. Using charts and discussing in the class	1. Draw the cycles in nature and mention their salient features	1. Enumerate the Carbon cycle. 2. What is the role of bacteria in nitrogen cycle 3. Discuss the role of Photosynthesis in carbon cycle	

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Chapter - IV Our Environment

STANDARD VIII

4.2. Waste management

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 role of microbes in sewage disposal 2. Give reasons for using microbes and chemicals in waste management. 3. Develops proper values towards management of waste.	4.2. Waste management 4.2.1.Sewage management & disposal 4.2.2.Micro organisms involved 4.2.3.Steps in the treatment of sewage 4.2.4.Role of earthworm in decomposition 1. Vermitech 2. Biotech	1. Explanation of steps involved using chart 2. Finds out the benefits waste recycling	1. Sketches of sewage treatment 2. Visit to any one of the sewage treatment plants.	1. Mention the steps involved in sewage disposal 2. What role do the microbes play in sewage disposal 3. Explain the role of microbes in the conversion of waste into useful products.	

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Chapter - IV Our Environment

STANDARD VIII

4.3. Fresh water resources

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. Analyses the role of nature in providing water 2. Sees the relationship between life activities and production of waste.	4.3. Fresh water resources (Water harvesting) 4.3.1.Composition of water 4.3.2.Different types of water 4.3.3.Sources of water 4.3.4.Importance of water table	1. Principles involved in hydrological cycle 2. Water table as earth's reservoir 3. Water quality 4. Water pollution 5. The need for conservation of water 6. Rain water and its importance	1. Diagrammatic sketches on hydrological cycle 2. Water table 3. Composition of rain water	1. Discuss the role of fresh water for sustaining life and our planet. 2. What is the % of fresh water available for our use.	

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Chapter - IV Our Environment

STANDARD VIII

4.4. Vegetation types

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. Recognizes different types of vegetations 2. Interprets the climatic condition in relation to vegetation	4.4. Vegetation types 4.4.1.Types in relation to climate 4.4.2.Climatic regions of India 4.4.3.Forest 4.4.4.Grassland 4.4.5.Vegetation of seashore	1. Explanation of different types of vegetation 2. Preparation of vegetation Maps. 3. Explanation of climatic regions of India - using charts 4. Visit to the seashore, grassland vegetation	1. Sketches of climatic regions 2. Relevant pictures	1. In what ways the climate influences the type of vegetation? 2. Enumerate the important flora and fauna in each vegetation region 3. What are the salient features of grassland and forest vegetation? 4. As you climb up a mountain such as Kodaikanal or Ooty, what are the changes you observe in the types of vegetation	

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4.5. Global problems

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. Analyses the global scenario with ref to the ecology	4.5. Global problems with references to environment 4.5.1.Demography 4.5.2.Health hazards environment 4.5.3.Eutrophication, acid rain, pollution, toxicity 4.5.4.Nature conservation 4.5.5.Prevention of pollution	1. Prepares different types of charts depicting the global issues with reference to the ecological degradation for classroom discussion. 2. Prepares models on conservation in ecology for discussion with students.		1. What is the effect of the following on the global environment? a. Global warming b. Increase in global pollution level c. earthquakes d. Forest Fire	

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Chapter - V Application Biology

STANDARD VIII

5.1. Mushrooms cultivation

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. Classifies mushrooms into edible and poisonous ones. 2. Identifies edible mushrooms 3. Detects the uses of mushrooms.	5.1. Mushrooms cultivation 5.1.1. Edible and poisonous mushrooms 5.1.2. Preparation of spawns 5.2.3. Wet preparation and inoculation 5.2.4. Cultivation and harvesting 5.2.5. Antidiuretic properties, protein richness, fruit fibres 5.2.6. Types of food	1. Explanation of differences between edible and poisonous mushrooms through diagrams and actual observations 2. Listing down the steps in mushrooms cultivation	1. Lablled sketches 2. Anatomical section of gill	1. What is the nutritional value of mushrooms 2. How do you differentiate poisonous - and non-poisonous mushrooms ? 3. What is the scope of mushrooms cultivation in India?	

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Chapter - V Application Biology

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5.2. Sericulture

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 sericulture provides income 2. Knows the variety of silk moth cultured 3. Realises the uses of silk	5.2. Sericulture 5.2.1.Host plants - different types (Mulberry) - Life cycle of silkworm 5.2.2.Extraction of silk 5.2.3.Silk in textile industry 5.2.4.Diseases of silkworms	1. Understands the life cycle of silk worm - through chart 2. Egg cards of silk worm 3. Male and female silk worm - chart	1. Life cycle showing various stages 2. Pupal stage of silk worm. 3. Host plant (mulberry)	1. Describe the procedure adopted to get silk thread from cocoons 2. What are the uses of silk fibre?	

STANDARD VIII

5.3. Fisheries

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 blue revolution in sustaining protein food production 2. Learns traditional methods of fish culture 3. Knows fishing products, the value of fish liver oil	5.3. Fisheries 5.3.1.Capture fishery and Culture fishery 5.3.2.Methods of prawn culture 5.3.3.Oyster culture 5.3.4.Pearl oyster culture 5.3.5.Fish culture 5.3.6.Food value of Fishery products 5.3.7.Aquaculture as an industry	1. Illustration of fish prawn, oyster 2. Visiting the fish prawn, oyster culture fields.	1. Diagrams of cultivable fishes	1. Explain the food value of Fishes? 2. What are the problems in Fisheries industry? 3. How are they overcome? 4. How do you simulate artificial environment like a fish pond? 5. How are fish culture ponds constructed? 6. How can we maintain physiochemical factors? 7. What are the feeds to be given in the culture of fish? 8. How to cure diseases in Fisheries?	

STANDARD VIII

5.4. Poultry

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 egg is a complete food. 2. Differentiates layers and broilers	5.4. Poultry 5.4.1.Silver revolution 5.4.2.Breeds of fowl 5.4.3.Egg and its importance 5.4.4.Maintenance of a poultry farm at home 5.4.5.Poultry feed and its importance 5.4.6. Poultry diseases 5.4.6 Poultry industry in Tamil Nadu.	1. Designs a Poultry form	1. Implements in a poultry form - sketches	1. What are the different types of Poultry birds reared? 2. Describe the uses of different types of Poultry birds. 3. What are the common diseases for broilers and Leghorns? How are they protected?	

STANDARD VIII

5.4. Live Stock Management

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. Recognizes the importance of cattle forming in the economic development of a country 2. Classifies various types of milk products	5.5. Live stock 5.5.1.Cattle rearing 5.5.2.Indigenous and exotic varieties. 5.5.3.Various breeds of live stock 5.5.4.Nutritional value of milk 5.5.5.Dairy products 5.5.6.Pasteurisation	Appropriate Charts and pictures	1. Breeds of cattle 2. Animal shed 3. Milking and Methods of Milking	1. What are the methods used for rearing cattle? 2. How could we obtain better breed of cattle? 3. Indicate the food value of different milk products?	

STANDARD VIII

5.6. Tissue Culture

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 importance of tissue culture 2. Identifies the role of nutrients in tissue culture media 3. Categorises different gene cloning methods	5.6. Tissue culture 5.6.1.Importance 5.6.2.Methods 5.6.3.Application 5.6.4.Gene Cloning methods 5.6.5.Application of gene cloning	1. Visit to nearby tissue culture lab. 2. Gene cloning methods - Diagram	1. Sketches of tissue culture methods	1. What is the composition of tissue culture media? 2. What are the applications for gene cloning? 4. What role does the gene cloning play in medicine?	

STANDARD VIII

6.1. Dimensions of Health

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 importance of health. 2. Understands different dimensions of health. 3. Understands how different factors affect the health	6.1. Dimensions of health 6.1.1. Definition by WHO - Importance of health 6.1.2 Physical dimension 6.1.3. Mental dimension 6.1.4. Social dimensions 6.1.5. Factors affecting health (Biological, Nutritional, Environmental Hormonal) 6.1.6 Health, physical care, Exercise, Yoga, Reading habits, mental alertness	1. Group discussion regarding physical, mental and social dimensions 2. Pictures showing yoga, Physical exercise etc.	1. Practising Health related food habits exercise, etc. -Pictures	1. Explain how different factors affect the health of a person? 2. Explain how physical exercise, yoga and mental alertness are related to health.	

STANDARD VIII

6.2. Community Health

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
<p>Realizes the need for community health.</p> <p>Differentiate personal hygiene and community health.</p> <p>Realises one's role in community health.</p> <p>Differentiates food bevarages from other harmful drinks and drugs</p>	<p>6.2. Community health</p> <p>6.2.1. Importance of community health</p> <p>6.2.2. Protected water (Treatment)</p> <p>6..2.3. Disposal of Garbage</p> <p>6.3.4. Sanitation</p> <p>6.3.5. Preventive Laws</p> <p>Smoking,</p> <p>Tobacco products,</p> <p>Drugs,</p> <p>Narcotics,</p>	<p>Charts and Pictures</p>		<p>1. What is the need for boiling water?</p> <p>2. What are bio degradable and non degradable solid wastes?</p> <p>3. What is addiction?</p> <p>4. How do you consider smoking as a social hazard?</p> <p>5. What are carcinogenic agents?</p> <p>6. What is deaddiction?</p>	

STANDARD VIII

6.3 Communicable diseases

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. Understand the reason for disease 2. Recognises the defective metabolism 3. Understand the mode of transmission of disease 4. Understands the importance of disease free society.	6.3.1. Define the Disease 6.3.2 Modes of communication chain 6.3.3 Water & Food borne diseases 6.3.4 Airborne Diseases 6.3.5.1 Contact diseases 6.3.5.2 Scabeis, leprosy, Aids 6.3.6 Agencies involved in control of diseases 6.3.7 Effect on the Human society.	1.	1. Diagram showing the chain and communication 2. Pictures of the infected person	1. What is a communicable disease 2. What is a causative organism 3. What are the symptoms of the various diseases? 4. How will you control the disease?	

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 concept of disease 2. Realises the importance of vaccination. 3. Understands basic concepts of immunology.	6.4 Vaccination and immunisation 6.4.1 Antigen Antibody reactions 6.4.2 History of vaccination 6.4.3. Methods / Types of Vaccination 6.4.4 Immune system Natural immunity, Artificial immunity 6.4.5 Diseases and immunisation schedule of selective diseases	1. Charts to show diseases and vaccines 2. Immunisation schedule - Chart 3. Visits to Primary health centres to know about vaccination & innovations		1. What is Immunology? 2. What is natural Immunity? 3. What are antibodies? 4. What is the source for antibodies?	

STANDARD VIII

6.5. Medicinal Herbs

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. Realizes the medical practices 2. Knows the existence of ancient medical system 3. Able to indentify and name the medicinal plants.	6.5 Medicinal plants, Herbs and their uses. 6.5.1 Indian medical system - Siddha Medicine 6.5.2 Medicinal herbs of Tamilnadu. 6.5.3. Common medicinal plants and their uses.	1. Exhibiting various medicinal plants. 2. Project - Cultivating medicinal herbs in schools.	1. Pictures of known medicinal herbs.	1. What are the diseases that can be cured by common medicinal herbs ? Make a list	

STANDARD VIII

6.6 Globalised health Issues

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. An understanding of world as a global village. 2. Realises Green House effect 3. Reasons for Ozone layer depletion 4. Understands the requirement for fresh water 5. How does a disease spread on a global level?	6.6 Globalised Health Issues 6.6.1 Local environment changes Vs Global changes. 6.6.2 Global warning 6.6.3 Ozone layer depletion 6.6.4 Fresh water scarcity 6.6.5 Population increase 6.6.6. Diseases - AIDS and Tuberculosis	1. Models / Charts to show global warning, Ozone layer depletion.	1. Diagrams showing stratosphere etc.	1. What are the possible health hazards due to depletion of ozone layers? 2. What are the health hazards due to (a) Flood (b) Drought? 3. What are the issues regarding HIV and AIDS?	