



CLASS 11 BIOLOGY – LO's Aligned Monthly Split-up Syllabus (April 2026–March 2027) + Portion Boundaries + Exams + Weightage + Question Paper Design + Blueprint (For CM SoE & Non-CM SoE)

Developed by:- Jharkhand Council Of Educational Research & Training (Curriculum Division)

Month	Teaching Days (Available)	NCERT Chapter Titles	Sub-topics / Portion Boundary	LOs (*LO Mapping - IDs) (NCERT Higher Secondary Stage LO - Draft)	Practicals / Activities (Minimum)	Assessment / Exams (प्रश्न पत्र एवं उत्तर कुंजिका निर्माण)
Apr2026 + May 2026 + Jun 2026		BIO: Chapter 1 The Living World (Complete); Chapter 2 Biological Classification (Complete); Chapter 3 Plant Kingdom (Start/Continue)	Chapter 1: what is living; biodiversity; taxonomy and systematics; taxonomical categories; binomial nomenclature. Chapter 2: five kingdom classification; salient features and classification of Monera, Protista and Fungi into major groups; lichens, viruses and viroids. Chapter 3 (start): classification of plants into major groups; salient and distinguishing features of Algae, Bryophyta and Pteridophyta.	LO-BIO-01, LO-BIO-02, LO-BIO-04, LO-BIO-06, LO-BIO-07, LO-BIO-08, LO-BIO-11, LO-BIO-12, LO-BIO-16, LO-BIO-20, LO-BIO-21	Activity: collection/identification of locally available specimens or pictures for kingdom-wise classification. Practical: herbarium sheet (intro) and taxonomic hierarchy chart; observation of slides/models of different groups.	April to June portion tested in Project RAIL on 07-07-2026 DIET Hazaribag एवं DIET Jamtara
Jul 2026	14	BIO: Chapter 3 Plant Kingdom (Finish); Chapter 4 Animal Kingdom (Complete); Chapter 5 Morphology of Flowering Plants (Start)	Chapter 3: Gymnosperms and Angiosperms; life cycles and alternation of generations (as applicable). Chapter 4: basis of classification; salient features and classification of non-chordates up to phyla and chordates up to classes. Chapter 5 (start): morphology of root, stem and leaf.	LO-BIO-01, LO-BIO-02, LO-BIO-04, LO-BIO-06, LO-BIO-07, LO-BIO-08, LO-BIO-09, LO-BIO-11, LO-BIO-12, LO-BIO-16	Activity: prepare comparative classification flowchart for plant and animal groups. Practical: observation-based worksheet on animal diversity; root/stem/leaf modifications chart.	July portion tested in Project RAIL on 04-08-2026 DIET Latehar एवं DIET Lohardaga
Aug 2026	12	BIO: Chapter 5 Morphology of Flowering Plants (Finish); Chapter 6 Anatomy of Flowering Plants (Complete); Chapter 7 Structural Organisation in Animals (Start)	Chapter 5: inflorescence, flower, fruit and seed; floral formula, floral diagram; family Solanaceae. Chapter 6: anatomy and functions of tissue systems in dicots and monocots. Chapter 7 (start): morphology and anatomy of frog; digestive and circulatory systems (intro).	LO-BIO-01, LO-BIO-03, LO-BIO-04, LO-BIO-08, LO-BIO-09, LO-BIO-10, LO-BIO-11, LO-BIO-14, LO-BIO-15, LO-BIO-16	Practical: floral formula and floral diagram; transverse section of root/stem/leaf observation; dicot–monocot anatomy comparison chart.	Half Yearly Exam: 07-09-2026 to 12-09-2026 (covers Jun–Aug).
Sep 2026	23	BIO: Chapter 7 Structural Organisation in Animals (Finish); Chapter 8 Cell: The Unit of Life (Complete); Chapter 9 Biomolecules (Complete); Chapter 10 Cell Cycle and Cell Division (Complete); Chapter 11 Photosynthesis in Higher Plants (Complete)	Chapter 7: respiratory, nervous and reproductive systems of frog. Chapter 8: cell theory; prokaryotic and eukaryotic cells; plant and animal cell; organelles and their functions; endomembrane system; cilia, flagella, centrioles; nucleus. Chapter 9 : biomolecules; carbohydrates, proteins, lipids and nucleic acids, enzymes—types, properties and mechanism of action; structure and function of biomolecules. Chapter 10: cell cycle, mitosis, meiosis and significance. 11: photosynthesis as a means of autotrophic nutrition; pigments; light reaction; Calvin cycle; factors affecting photosynthesis.	LO-BIO-01, LO-BIO-03, LO-BIO-04, LO-BIO-05, LO-BIO-07, LO-BIO-08, LO-BIO-10, LO-BIO-11, LO-BIO-12, LO-BIO-14, LO-BIO-16, LO-BIO-17	Practical: temporary mount / model-based identification of cell structures; frog system diagrams; biomolecule identification table (intro). Practical: food tests for carbohydrates/proteins/fats; study of mitosis/meiosis slides; chromatography of pigments / demonstration; graph interpretation for enzyme activity or	September portion tested in Project RAIL on 06-10-2026 DIET Ramgarh एवं DIET Ranchi
Oct 2026	22	BIO: Chapter 12 Respiration in Plants (Complete); Chapter 13 Plant Growth and Development (Complete); Chapter 14 Breathing and Exchange of Gases (Complete); Chapter 15 Body Fluids and Circulation (Start)	Chapter 12: pathways of respiration; fermentation; aerobic respiration; respiratory quotient. Chapter 13: growth; phases; growth regulators; development. Chapter 14: human respiratory system; mechanism of breathing; exchange and transport of gases; regulation of respiration. Chapter 15 (start): composition of blood and blood groups; coagulation (intro).	LO-BIO-03, LO-BIO-04, LO-BIO-05, LO-BIO-08, LO-BIO-10, LO-BIO-11, LO-BIO-12, LO-BIO-13, LO-BIO-14, LO-BIO-15, LO-BIO-16, LO-BIO-17	Activity: breathing rate observation and report; chart on plant growth regulators and uses. Practical: respiration/transpiration demonstrations where feasible.	October portion tested in Project RAIL on 03-11-2026 DIET Simdega एवं DIET W-Singhbhum.
Nov 2026	14	Chapter 15 Body Fluids and Circulation (Finish); Chapter 16 Excretory Products and their Elimination (Complete); Chapter 17 Locomotion and Movement (Complete);	Chapter 15: human circulatory system; cardiac cycle; ECG; double circulation; lymph. Chapter 16: excretory system; urine formation; regulation; micturition; kidney disorders. Chapter 17: movement and muscular system; sliding filament theory.	LO-BIO-03, LO-BIO-04, LO-BIO-05, LO-BIO-07, LO-BIO-08, LO-BIO-12, LO-BIO-13, LO-BIO-14, LO-BIO-16, LO-BIO-17, LO-BIO-18, LO-BIO-21	Practical: osmosis/plasmolysis / transpiration / food test records finalisation; human physiology charts; viva and practical file correction.	November portion tested in Project RAIL on 08-12-2026 DIET Deoghar एवं DIET Dhanbad
Dec 2026	21	BIO: Chapter 18 Neural Control and Coordination (Complete); Chapter 19 Chemical Coordination and Integration (Complete)	Chapter 18: neuron; central and peripheral nervous system; reflex action; sense organs. Chapter 19: endocrine glands; hormones and mechanisms of hormonal action. Portion boundary: Full syllabus completed (Ch. 1–19) by Dec 2026.	LO-BIO-03, LO-BIO-04, LO-BIO-05, LO-BIO-07, LO-BIO-12, LO-BIO-13, LO-BIO-14, LO-BIO-15, LO-BIO-16, LO-BIO-17, LO-BIO-18, LO-BIO-21, LO-BIO-22	Practical consolidation: slide/diagram drill, record completion, investigatory project finalisation, mixed worksheet + sample paper discussion.	December portion tested in Project RAIL on 12-01-2027 DIET Garhwa एवं DIET Giridih



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Jan 2027	18	Full Biology Revision + NCERT-based Diagrams + Practical File + Investigatory Project	Full syllabus wrap-up: Chapters 1–19; concept consolidation; high-weightage diagrams, graph interpretation and case-based questions; practical record and investigatory project completion.	LO-BIO-01, LO-BIO-22	Revision practicals + viva practice; sample papers; diagram drill sessions; remedial groups for weak areas.	Project RAIL (Full Syllabus) on 02-02-2027 DIET Hazaribag एवं DIET Jamtara
Feb 2027 (Revision Month)	19	Full Revision: Chapters 1–19 (NCERT) + Diagrams + Practical File + Investigatory Project	Syllabus consolidation: concept maps; plant and animal diversity; morphology, anatomy, cell, biomolecules, plant physiology and human physiology; practical file and investigatory project final check.	LO-BIO-01, LO-BIO-22	Revision practicals + viva practice; sample papers; diagram drill sessions; remedial groups for weak areas.	Annual Examination: 01-03-2027 to 05-03-2027 AND 15-03-2027 to 20-03-2027 - full syllabus
Mar 2027	20	Board Examination (continued, if applicable) / Post-exam Academic Support	Board examination continuation / light post-exam academic engagement, bridge work, reading / enrichment / record completion as applicable.		Bridge activities / portfolio / reading enrichment / feedback.	Post-exam school support (as applicable)
LO ID	LOs (*LO Mapping - IDs) (NCERT Higher Secondary Stage LO - Draft)					
LO-BIO-01	differentiates organisms, phenomena and processes based on certain characteristics and salient features, such as, prokaryotes and eukaryotes, plant cell and animal cell, diffusion and osmosis, meristematic tissues and permanent tissues; squamous epithelium and cuboidal epithelium, diploblastic and triploblastic organisation; metacentric, submetacentric, acrocentric and telocentric chromosomes; etc.					
LO-BIO-02	classifies 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.					
LO-BIO-03	relates processes and phenomena with causes and effects, such as, characteristics of living with cell as basic unit of life, transpiration pull with absorption of water by roots of plants; tissues with their functions, deficiency symptoms of essential elements, pumping of heart with circulation of blood, hormones with various physiological functions, digestive enzymes electrocardiograph (ECG) and heart diseases; smoking and lung diseases; etc.					
LO-BIO-04	applies scientific terminology for organisms, processes, and phenomena based on internationally accepted conventions, such as, systematic technical description of flowers, taxonomic study of plants and animals; Binomial nomenclature of organisms; coelom, bisymmetric body etc; bisexual and unisexual organisms, actinomorphic and zygomorphic flowers, aestivations, placentations, physiological processes, cardiac cycle; organ structures; SA node; AV node; etc.					
LO-BIO-05	explains efficiently systems, relationships, processes and phenomena such as; organ systems in frog, cockroach and earthworms, structures and function of cell organelles, photosynthesis, respiration, mechanism of contraction of skeletal muscles, etc.					
LO-BIO-06	describes contribution of scientists/researchers all over the world in systematic evolution of concepts, scientific discoveries and inventions in the field of biology based on historical scientific events/ timelines etc; such as; Anton Von Leeuwenhoek described a live cell and later, Robert Brown discovered the nucleus; in classification systems of living organisms, Aristotle was the earliest and then Linnaeus proposed two kingdom classification and later R. H. Whittaker proposed five kingdom classification, etc.					
LO-BIO-07	makes linkages at the interface of Biology with other disciplines by relating various interdisciplinary concepts such as; mathematical models on arithmetic and geometric growth rates in plants/organisms, absorption and transfer of light energy in photosynthesis; secondary metabolites, structure of protein, structure of DNA, etc.					
LO-BIO-08	draws labelled diagrams, flow charts, concept maps, graphs and floral diagrams, such as, floral diagrams of given flowers, parts of flowers, modified roots external features of earthworm, cockroach and frog, Z-scheme of light reaction, calvin cycle, etc.					
LO-BIO-09	writes floral formulae in technical language based on floral diagrams of different flowers such as flowers of pea, makoi and onion etc					
LO-BIO-10	prepares slides for study the structural intricacies of life forms and structural organisations, such as, transverse sections of root, stem and leaves, mitosis and meiosis; pollen germination, etc.					
LO-BIO-11	handles laboratory tools, and apparatuses, instruments and devices properly for performing activities/ experiments/ investigations such as; uses foldscope/microscope for observing internal structure of transverse section of root, stem and leaves, intricacies of chloroplasts, stomata, etc.; digital balance/scale for weighing chemicals; pipette for drawing liquid, etc.					
LO-BIO-12	plans and conducts investigations and experiments to arrive at and verify the facts, principles, phenomena, or to seek answers to queries on their own, such as, what is the pattern and structure of organisms in nature?, Does Pisum sativum carry bisexual and zygomorphic flowers, how do plants grow in length?, Do plants breath?, What does (mainly which gas) our breath contains?, What happens to cooked rice when we chew and when we do not chew? etc.					
LO-BIO-13	analyses and interprets graphs and figures such as, Enzyme activity-temperature, pH and substrate concentration graphs, growth versus time graphs, oxygen dissociation curve etc.					
LO-BIO-14	uses scientific conventions, symbols, and equations to represent various quantities, elements, and units, such as, SI units, symbols of elements, formulae of simple compounds, pathways of aerobic and anaerobic respiration, organic compounds in living organisms, etc.					
LO-BIO-15	draws conclusion on the basis of data collected in activities / experiments and investigatory projects conducted by them, such as, roots, stem and leaves modify to perform various functions, deficiency of nutrients affect physiological processes in plants, deficiency of protein in diet causes protein-energy malnutrition (PEM), etc.					
LO-BIO-16	communicates the findings and conclusions effectively, such as, those derived from experiments, activities, and projects both in oral and written form using appropriate figures, tables, graphs, and digital forms, takes part in the discussions, argumentations etc.					



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LO-BIO-17	applies scientific concepts of Biology in daily life and solving problems, such as; by mowing the grass of a lawn assuming that due to lateral meristem grass will regrow, determine the age of a fallen tree by counting concentric rings present on the transverse cut of tree trunk, drinking less/more water changes the concentration and volume of urine, etc.
LO-BIO-18	appreciates technological applications and processes in Biology towards the improvement in the quality of life and sustainable development, such as, Hydroponic plant production, uses of algae as commercially like Algin (brown algae), Carrageen (red algae), Agar; Chlorella uses as food supplement in space; dialysis for kidney failure patients; uses of artificial arms and limbs, etc.
LO-BIO-19	exhibits creativity in designing models using eco-friendly resources / preparing charts / paintings / sketching/ etc. on different topics; such as; structure of cockroach, etc.
LO-BIO-20	exhibits ethics and values of honesty, objectivity, rational thinking and freedom from myth and superstitious beliefs while taking decisions, such as, reports and records experimental data accurately, reveals respect for life by using weed plant for investigatory studies/ activities, etc.,
LO-BIO-21	makes efforts to conserve environment realizing the inter- dependency and inter-relationship in the biotic and abiotic factors of environment, such as, by appreciating use of weed plants in the study, using eco-friendly waste material, etc.
LO-BIO-22	applies learning to hypothetical situations, such as, possibility of life on other planets, etc.

QUESTION PAPER DESIGN / BLUEPRINT

A. THEORY BLUEPRINT

S.No.	Unit / Section Block	Marks	Prescribed Scope / Paper Component
1	Unit I	15	Diversity of Living Organisms
2	Unit II	10	Structural Organization in Plants and Animals
3	Unit III	15	Cell: Structure and Function
4	Unit IV	12	Plant Physiology
5	Unit V	18	Human Physiology
	TOTAL	70	Theory Paper

B. TYPOLOGY OF QUESTIONS

S.No.	Category / Question Type	Marks	Weightage / Nature
1	Demonstrate Knowledge & Understanding	35	50%
2	Application of Knowledge / Concepts	21	30%
3	Analyse / Evaluate / Create	14	20%
	TOTAL	70	100%

C. INTERNAL / PRACTICAL / PROJECT

S.No.	Component	Marks	Remarks
1	One Major Experiment	5	
2	One Minor Experiment	4	
3	Slide Preparation	5	
4	Spotting	7	
5	Practical Record + Viva Voce	4	
6	Project Record + Viva Voce	5	
	TOTAL	30	Practical