



## CLASS 9 SCIENCE – LO's Aligned Monthly Split-up Syllabus (April 2026–March 2027) + Portion Boundaries + Exams + Weightage + Question Paper Design + Blueprint (For NON-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 Secondary Stage LO-2017)	Practicals / Activities (Minimum)	Assessment / Exams (प्रश्न पत्र एवं उत्तर कुंजिका निर्माण)
Apr2026 + May 2026 + Jun 2026		CHEM: Chapter 1 Matter in Our Surroundings (complete Chapter) BIO: Chapter 5 The Fundamental Unit of Life (complete Chapter) PHYS: Chapter 7 Motion (complete Chapter)	Chem: states of matter, characteristics, change of state, evaporation (complete Chapter) . Bio: cell discovery, cell theory, cell as structural and functional unit, basic cell organelles . and cell division; Chapter 5 complete. Phys: distance and displacement, speed and velocity, uniform and non-uniform motion, graphical representation. equations of motion, graphs, numerical applications; Chapter 7 complete Portion boundary: Chem Ch.1 + Bio Ch.5 + Phys Ch.7	SCI-1, SCI-2, SCI-3, SCI-4, SCI-5, SCI-6, SCI-7, SCI-8	Activities on states of matter; evaporation-cooling demonstration; Mixture classification activity; cell organelle identification chart; cell organelle labeling worksheet; distance–displacement and speed–velocity comparison worksheet. motion graph numericals;	April to June portion tested in Project RAIL on 06-07-2026 DIET Godda एवं DIET Gumla
Jul 2026	14	CHEM: Chapter 2 Is Matter Around Us Pure? (complete Chapter) + Chapter 3 Atoms and Molecules (complete Chapter) BIO: Chapter 6 Tissues (Start) PHYS: Chapter 8 Force and Laws of Motion	Chem: pure substances and mixtures, solutions, suspensions and colloids; separation techniques, physical and chemical changes, Chapter 2 complete; laws of chemical combination and atomic and molecular mass (start). Bio: plant tissues start. Phys: force and inertia intro; Newton's laws, action-reaction, momentum, conservation of momentum (continue). Portion boundary: Chem Ch.2 complete + Ch.3 Part-I Bio Ch.6 Part-I Phys Ch.8 Part-II.	SCI-1, SCI-2, SCI-3, SCI-4, SCI-5, SCI-6, SCI-7, SCI-8	Separation of mixtures practical; laws of chemical combination worksheet; plant tissue chart; Newton's laws everyday-life examples. Force and inertia examples.	July portion tested in Project RAIL on 03-08-2026 DIET Khunti एवं DIET Kodarma
Aug 2026	12	CHEM: Chapter 3 Atoms and Molecules (Finish) BIO: Chapter 6 Tissues (Finish) PHYS: Chapter 9 Gravitation (Start)	Chem: mole concept, formula writing, numericals, Chapter 3 complete. Bio: animal tissues and Chapter 6 complete. Phys: universal law of gravitation, free fall, mass and weight (start). Portion boundary: Chem Ch.3 complete Bio Ch.6 complete Phys Ch.9 Part-I.	SCI-1, SCI-2, SCI-3, SCI-5, SCI-6, SCI-7	Mole concept numericals; formula writing drill; tissue comparison chart; gravitation concept map.	Half Yearly Exam: 07-09-2026 to 12-09-2026 (covers Jun–Aug).
Sep 2026	23	CHEM: Chapter 4 Structure of the Atom (Start) BIO: Chapter 12 Improvement in Food Resources (Start) PHYS: Chapter 9 Gravitation (Finish)	Chem: charged particles, Thomson and Rutherford models, atomic number and mass number (start). Bio: crop variety improvement and crop production management (start). Phys: thrust, pressure, buoyancy, Archimedes' principle, relative density; Chapter 9 complete. Portion boundary: Chem Ch.4 Part-I Bio Ch.12 Part-I Phys Ch.9 complete.	SCI-2, SCI-3, SCI-4, SCI-5, SCI-6, SCI-7, SCI-9	Atomic model chart/model making; crop production management case study; buoyancy and Archimedes' principle activities.	September portion tested in Project RAIL on 06-10-2026 DIET Ramgarh एवं DIET Ranchi
Oct 2026	22	CHEM: Chapter 4 Structure of the Atom (Finish) BIO: Chapter 12 Improvement in Food Resources (Continue) PHYS: Chapter 10 Work and Energy (Start)	Chem: Bohr model, isotopes and isobars, valency, electron distribution, Chapter 4 complete. Bio: nutrient management and animal husbandry (continue). Phys: work, energy, kinetic energy, potential energy, law of conservation of energy (start). Portion boundary: Chem Ch.4 complete Bio Ch.12 Part-II Phys Ch.10 Part-I.	SCI-1, SCI-3, SCI-4, SCI-5, SCI-6, SCI-7, SCI-8	Electron distribution practice; food-resource comparison table; work-energy numericals and conservation-of-energy examples.	October portion tested in Project RAIL on 02-11-2026 DIET Sahibganj एवं DIET Saraikela Kharsawan.
Nov 2026	14	CHEM: Chemistry Revision / Application / Numericals BIO: Chapter 12 Improvement in Food Resources (Finish) PHYS: Chapter 10 Work and Energy (Finish) + Chapter 11 Sound (Start)	Chem: concept consolidation of Chapters 1 to 4. Bio: animal husbandry, poultry, fisheries and beekeeping; Chapter 12 complete. Phys: power; Chapter 10 complete; sound production, propagation and characteristics of sound (start). Portion boundary: Bio Ch.12 complete Phys Ch.10 complete + Ch.11 Part-I Chem revision block.	SCI-2, SCI-3, SCI-4, SCI-5, SCI-6, SCI-7, SCI-8, SCI-9	Chemistry revision worksheets; animal husbandry chart; work-power numericals; sound production demonstration.	November portion tested in Project RAIL on 07-12-2026. DIET Bokaro एवं DIET Chatra



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Dec 2026	21	CHEM: Full Chemistry Revision BIO: Full Biology Revision PHYS: Chapter 11 Sound (Finish) + Full Physics Revision	Chem: Chapters 1 to 4 revision. Bio: Chapters 5, 6 and 12 revision. Phys: reflection of sound, range of hearing, applications, Chapter 11 complete; full subject integration and revision. Portion boundary: Physics Ch.11 complete; entire syllabus substantially completed with subject-wise revision.	SCI-1 to SCI-11	Sound applications chart; integrated revision worksheets; chapter-wise mock drills; remedial correction sheets.	December portion tested in Project RAIL on 11-01-2027 DIET Dumka एवं DIET E-Singhbhum
Jan 2027	18	Full Revision + Sample Papers + Practical / Project Consolidation	Full-syllabus practice with mixed question papers, assert-reason, case-based questions, diagrams, graphs and numericals. Board-style discipline and annual examination readiness.	SCI-1 to SCI-11	Weekly timed papers; project / portfolio completion; oral viva-style questioning; targeted revision of weak areas.	Project RAIL (Full Syllabus) on 01-02-2027 DIET Godda एवं DIET Gumla
Feb 2027 (Revision Month)	19	Full Revision: Chapters 1–12 + Annual Exam Preparation	Entire syllabus consolidation: matter, cell, tissues, motion, force, gravitation, work and energy, sound, and food resources; focused revision through competency-based, short and long answer practice.	SCI-1 to SCI-11	Mock tests; remedial support; chapterwise rapid revision sheets; science fair / activity file / record final check.	Annual Examination: 01-03-2027 to 05-03-2027 AND 15-03-2027 to 20-03-2027 - full syllabus
<b>LO ID</b>	<b>LOs (*LO Mapping - IDs) (NCERT Secondary Stage LO-2017)</b>					
SCI-1	differentiates materials, objects, organisms, phenomena, and processes, based on properties or characteristics, such as, prokaryotes and eukaryotes, plant cell and animal cell, diffusion and osmosis, simple and complex tissues, distance and displacement, speed and velocity, balanced and unbalanced forces, elements, compound and mixture, solution, suspension and colloid, isobars and isotopes, etc.					
SCI-2	classifies materials, objects, organisms, phenomena, and processes, based on properties or characteristics, such as, classification of plants and animals under various hierarchical sub-groups, natural resources, classification of matter based on their states (solid/liquid/gas) and composition (element/compound/ mixture), etc.					
SCI-3	plans and conducts investigations or experiments to arrive at and verify the facts, principles, phenomena or to seek answers to queries on their own, such as, how does speed of an object change? How do objects float/sink when placed on the surface of a liquid? Is there any change in mass when chemical reaction takes place? What is the effect of heat on the state of substances? What is the effect of compression on different states of matter? Where are stomata present in different types of leaves? Where are growing tissues present in plants?					
SCI-4	relates processes and phenomena with causes and effects, such as, symptoms with diseases and causal agents, tissues with their functions, production with use of fertilisers, process of evaporation with cooling effect, various processes of separation with the physical and chemical properties of the substances, production of sound with vibrations of source, etc.					
SCI-5	explains processes and phenomena, such as, functions of different organelles, spread of diseases and their prevention, effect of force on the state of motion of objects, action and reaction, rotation and revolution of planets and satellites, conservation laws, principle of separation of different gases from air, melting, boiling, freezing, how bats use ultrasonic waves to catch prey, etc.					
SCI-6	calculates using the data given, such as, distance, velocity, speed, frequency, work done, number of moles in a given mass of substance, concentration of solution in terms of mass by mass percentage of substances, conversion of Celsius scale to Kelvin scale and vice versa, number of neutrons in an atom from atomic number and mass number, speed of sound, kinetic and potential energies of an object, boiling points of liquids to predict the order of their separation from the mixture, etc.					
SCI-7	draws labelled diagrams, flow charts, concept maps, graphs, such as, biogeochemical cycles, cell organelles and tissues, human ear, distance-time and speed-time graphs, distribution of electrons in different orbits in an atom, process of distillation and sublimation, etc.					
SCI-8	analyses and interprets graphs and figures such as, distance-time and velocity-time graphs, computing distance, speed, acceleration of objects in motion, properties of components of a mixture to identify the appropriate method of separation, crop yield after use of fertilisers, etc.					
SCI-9	designs models using eco-friendly resources, such as, 3D model of a cell, water purification system, stethoscope, etc.					
SCI-10	exhibits values of honesty, objectivity, rational thinking, freedom from myths, superstitious beliefs while taking decisions, respect for life, etc., such as, records and reports experimental data exactly, myth that sexually transmitted diseases are spread by casual physical contact, belief that vaccination is not important for prevention of diseases, etc.					
SCI-11	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, etc.					



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## QUESTION PAPER DESIGN / BLUEPRINT

### A. THEORY BLUEPRINT (SUGGESTED SCHOOL-READY)

S.No.	Unit / Section / Chapter Block	Marks	Prescribed Chapters / Scope
1	Chemistry Block	24	Chapter 1 Matter in Our Surroundings; Chapter 2 Is Matter Around Us Pure?; Chapter 3 Atoms and Molecules; Chapter 4 Structure of the Atom.
2	Biology Block	24	Chapter 5 The Fundamental Unit of Life; Chapter 6 Tissues; Chapter 12 Improvement in Food Resources (school annual scope as planned).
3	Physics Block	32	Chapter 7 Motion; Chapter 8 Force and Laws of Motion; Chapter 9 Gravitation; Chapter 10 Work and Energy; Chapter 11 Sound.
<b>TOTAL</b>		<b>80</b>	Suggested annual written paper.

### B. COMPETENCY-WISE QUESTION PAPER DESIGN

Competency	Weightage
Knowledge / Understanding	40%
Application / Observation	30%
Analysis / Reasoning / Experiment-linked Thinking	30%
<b>TOTAL</b>	<b>100%</b>

### C. QUESTION TYPOLOGY

Component	Details
Objective / VSA	Definitions, diagrams, facts, direct reasoning and MCQ-type items.
Short Answer	Concept explanation, numerical / scientific reasoning, activity-based responses.
Long Answer	Integrated explanation, diagram-based or application-based questions.
Internal Choice	As per school annual paper format.

### D. INTERNAL ASSESSMENT / SCHOOL-BASED COMPONENTS

S.No.	Component	Marks
1	Periodic Test	5
2	Multiple Assessment	5
3	Portfolio / Notebook	5
4	Practical / Activity / Subject Enrichment	5
<b>TOTAL</b>		<b>20</b>