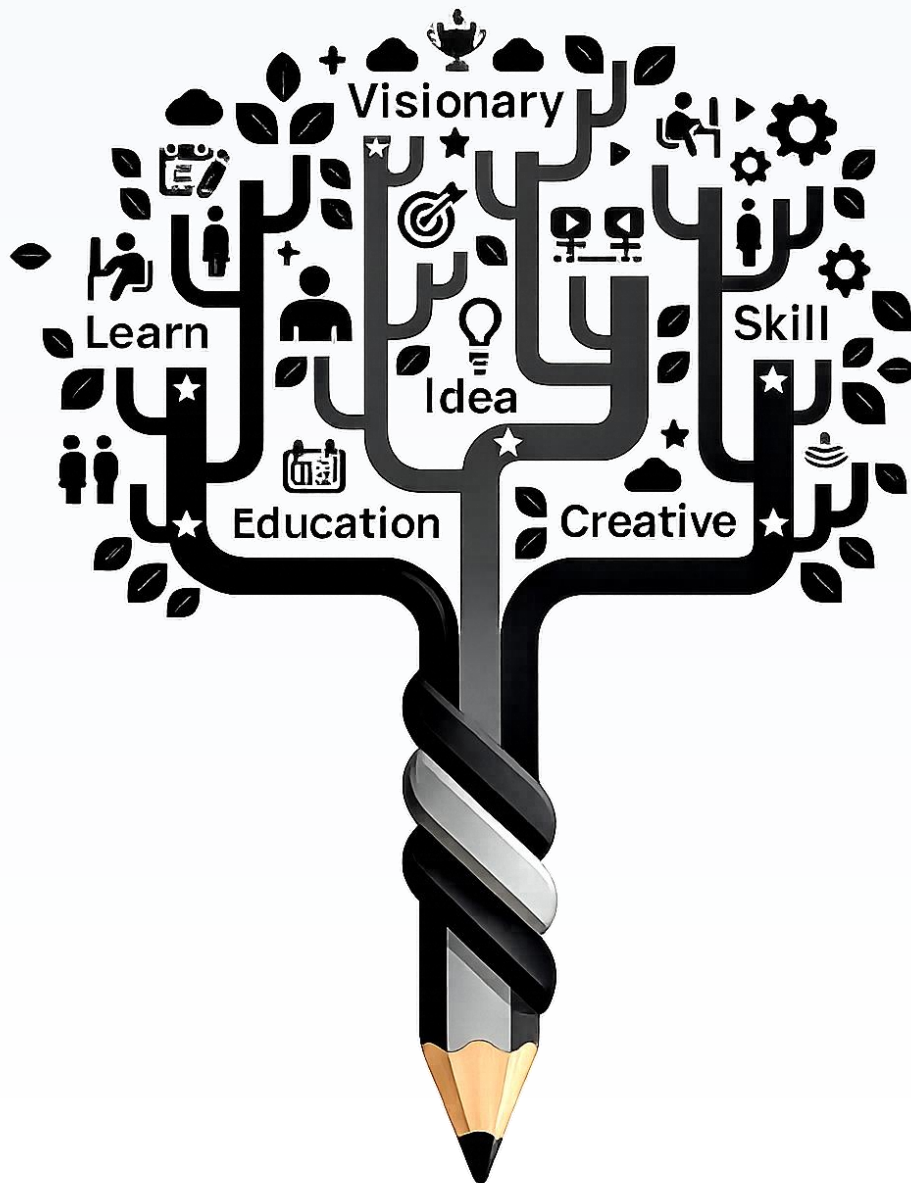


S D HERITAGE PRIDE SCHOOL COMPREHENSIVE ACADEMIC PLANNER

SESSION : 2026-27

CLASS : XII SCIENCE



JOURNEY TO EXCELLENCE

“Learning shapes essential life skills by nurturing curiosity, strengthening ambition and transforming effort into excellence empowering students to think critically, act responsibly and contribute confidently to an ever- evolving world.”

ACADEMIC ITINERARY

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THE CORE PURPOSE AND OBJECTIVE

The Academic Planner is thoughtfully designed in alignment with the **National Education Policy (NEP) 2020** and the **National Curriculum Framework (NCF)** to support meaningful, structured, and future-ready learning.

It serves as a comprehensive guide for academic planning, enabling students and teachers to organize learning goals, classroom activities, assessments, and reflections in a systematic manner. The planner promotes a shift from rote learning to competency-based and experiential learning, encouraging students to understand concepts deeply and apply knowledge in real-life contexts.

A strong emphasis is placed on **Subject Enrichment Activities (SEA)**, **Experiential Learning Acquisition (ELA)**, and **Art Integrated Learning (AIL)**, which are seamlessly integrated into the curriculum to foster hands-on learning, creativity, aesthetic sensibility, critical thinking, and problem-solving skills.

The planner supports flexible teaching-learning practices, digital integration, inclusive education, and holistic development. Through continuous feedback, reflection, and month-wise planning, it aims to nurture confident, responsible, and lifelong learners prepared for academic excellence and future challenges.

ENRICHMENT OPPORTUNITIES WITHIN THE CURRICULUM

Learning at our school is designed to extend beyond textbooks and classrooms, offering students enriching experiences that nurture curiosity, creativity, competence, and confidence. The curriculum integrates meaningful opportunities that promote active engagement, practical application, and holistic skill development in alignment with the vision of NEP 2020.

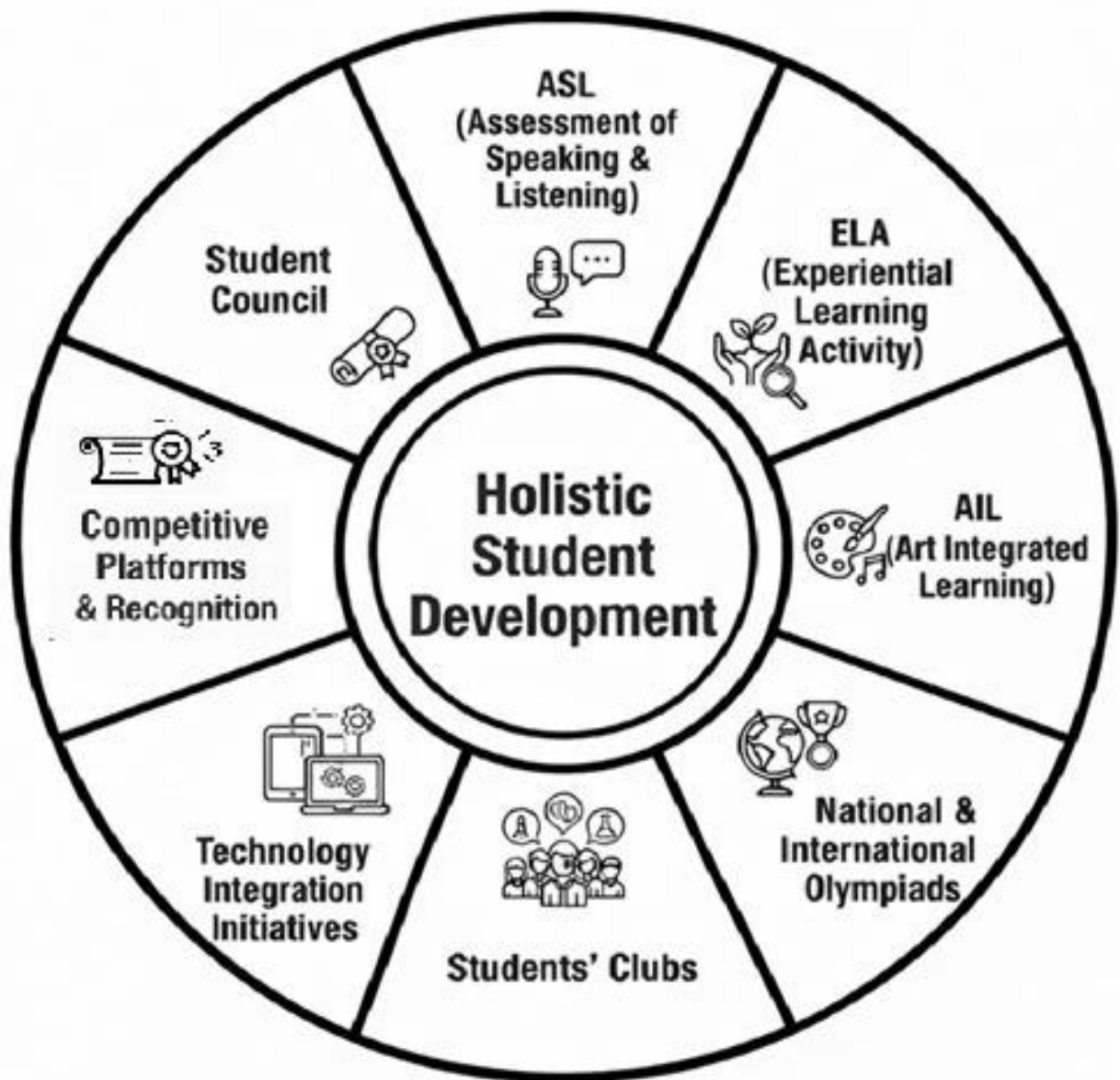
Students are provided with opportunities to develop academic understanding along with essential life skills through:

- **Project-Based and Inquiry-Based Learning:** Inquiry, collaboration, creativity, and presentation through real-world and interdisciplinary tasks.
- **Experiential and Hands-on Learning:** Hands-on activities, experiments, field visits, and practical exposure.
- **Art Integrated Learning (AIL):** Creative expression through visual and performing arts to strengthen concept clarity.
- **Technology and Digital Integration:** Use of digital tools and AI-enabled resources to build digital awareness and skills.
- **Communication and Language Skills:** Focus on speaking, listening, reading, writing, and vocabulary development.
- **Curricular and Co-curricular Engagement:** Building empathy, resilience, teamwork, leadership, and decision-making skills.
- **Environmental Awareness:** Promoting sustainability, conservation, and responsibility towards nature.
- **Co-curricular Engagement:** Participation in clubs, houses, competitions, sports, and community service.

These opportunities ensure holistic, learner-centric development and prepare students to become confident, adaptable, and responsible individuals.

Holistic Development Framework: Empowering Students Beyond Academics

At SDHPS, we are committed to maintaining high standards of excellence by nurturing every dimension of a child's development. Our student development initiatives are designed to complement academic learning while promoting confidence, competence, and character.



Holistic Habits for Learner Development

1



REGULARITY & PUNCTUALITY

Attend classes daily and arrive on time.

2

PREPAREDNESS FOR LEARNING

Bring necessary materials and be ready to engage.



3



PERSONAL HYGIENE & HEALTH AWARENESS

Practice cleanliness and prioritize well-being.

4

COMMUNICATION & SPEAKING SKILLS

Express thoughts clearly and listen actively.



5



HOMEWORK & SELF-STUDY DISCIPLINE

Complete assignments and review lessons consistently.

6

POSITIVE BEHAVIOUR & VALUES

Show respect, kindness, and responsibility.



7



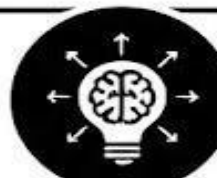
PERSONALITY & CONFIDENCE BUILDING

Believe in abilities and embrace challenges.

8

CONCEPT CLARITY, REFLECTION & FEEDBACK

Understand ideas, reflect on learning, and seek improvement.



CBSE Guidelines to prepare the project file

The Central Board of Secondary Education (CBSE) has established comprehensive guidelines to assist students in preparing effective project files. These guidelines aim to ensure that projects are well-structured, adhere to academic standards, and reflect a deep understanding of the subject matter.

Below is a structured approach to creating a project file in line with CBSE's recommendations:

1. Selection of Topic-

- **Relevance:** Choose a topic that aligns with the subject curriculum and holds personal interest.
- **Originality:** Ensure the topic is unique and has not been extensively covered.
- **Feasibility:** Assess the availability of resources and data for the chosen topic.

2. Project Structure: A well-organized project should include the following sections:

- **Title Page:** Includes the project title, student's name, class, roll number, school name, and academic year.
- **Acknowledgement:** Express gratitude to individuals who assisted in the project.
- **Certificate:** A statement from the guide/teacher certifying the authenticity of the work.
- **Table of Contents:** List of sections and their corresponding page numbers.
- **Introduction:** Provides background information and outlines the objectives of the project.
- **Methodology:** Details the methods and procedures used in the research or experiment.-
- **Observations and Findings:** Presents data collected, observations made, and findings of the study.
- **Analysis and Discussion:** Interprets the findings, discusses implications, and relates them to existing knowledge.
- **Conclusion:** Summarizes the key points and suggests possible future research or applications.

- **Bibliography/References:** Lists all the sources and references used in the project.
- **Appendices:** Includes supplementary material like raw data, questionnaires, or additional information.

3. Presentation-

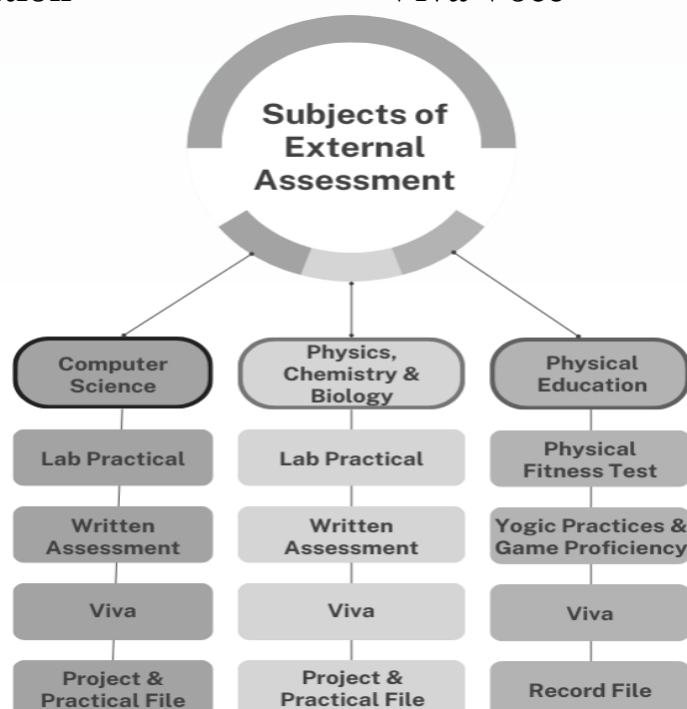
- **Length:** The project should typically be between 25 to 30 pages.
- **Format:** Handwritten projects are preferred unless specified otherwise.
- **Neatness:** Ensure clarity and legibility in writing; maintain consistent formatting throughout.
- **Illustrations:** Incorporate relevant charts, graphs, diagrams, and photographs to enhance understanding.

3. Content Quality-

- **Depth of Research:** Demonstrate thorough research and a comprehensive understanding of the topic.
- **Critical Analysis:** Showcase analytical thinking and the ability to interpret data effectively.
- **Originality:** Ensure the content is original and free from plagiarism.

5. Evaluation Criteria- Projects are typically assessed based on the following parameters:

- **Content Accuracy**
- **Presentation**
- **Comprehensiveness**
- **Viva Voce**



SCHOOL RECOMMENDED TEXTBOOKS – CLASS XII



English

Flamingo - Main Course (NCERT)
Vistas - Supp. Reader (NCERT)



Physics

S. L. Arora (Dhanpat Rai & Co.) & NCERT



Chemistry

Pradeep's New Course Chemistry (Pradeep Publications) & NCERT



Biology

Trueman's Elementary Biology [Vol. II] & NCERT



Mathematics

M.L. Aggarwal (Avichal Publishing) & NCERT



Computer Science

Computer Science with Python (Dhanpat Rai & Co.)



Physical Education

S.P. by Dr. Manu Sood

MONTH/ SUBJECT	ENGLISH LITERATURE (Code No. 301)
MARCH	<p>Prose: L-1. The Last Lesson Poetry: 1. My Mother at Sixty -Six Supp. Reader: L-1. Third Level Writing Section: Notice Writing, Letter to the Editor SEA/ ELA: Identify Snapshots Students will present a 60-second creative self-introduction using three elements: a metaphor for themselves, one personal value and one dream. AIL: Time Travel Poster / Vintage Railway Ticket Design Students will design a time travel poster or vintage railway ticket to Galesburg (1894), using drawings and details from the story, then add a short imaginative note explaining their escape to the past. Skills Developed: Confidence & self-expression, creativity and imagination, linguistic and creative skills</p>
APRIL	<p>Prose: L-2. Lost Spring , L-3. Deep Water Supp. Reader: L-2. Tiger King Writing Section: Article Writing , Job Application SEA: Jungle Times – Awareness Newsletter Students will design a one-page awareness newsletter highlighting tiger habitat loss, poaching threats, and wildlife protection laws. They will include facts, headlines, short articles, and visuals to promote responsibility towards tiger conservation. ELA: Childhood on Trial – Case Study File Students will investigate and create a mini case study file on child labour. They will explore its causes, vicious cycle, laws against it, and practical solutions, connecting their findings to the lives of children in Lost Spring. The file will include facts, a real-life style case, and student reflections on how society can break this cycle. Skills Developed: Empathy and social awareness, public speaking, confidence building, listening skills</p>
MAY	<p>Prose: L-4. The Rattrap , L-5. Indigo Poetry : 3. Keeping Quiet Writing Section: Invitation SEA/ ELA: The Moral Courtroom Students will conduct a courtroom trial of the peddler, debating his theft, motives and redemption. Roles include judge, lawyers, witnesses and jury.</p>

	<p>AIL: “Voices of the Blue Fields” Poster Project Students will design a freedom movement poster on the Indigo Revolt, illustrating farmers’ struggles, British oppression, and protest slogans, using visuals and captions to show resistance, courage, and the spirit of justice.</p> <p>Skills Developed: Moral reasoning, character analysis, reflective thinking, environmental responsibility.</p>
<p>JULY</p>	<p>Prose: L-6. Poets and Pancakes, Poetry: 4. A Thing of Beauty Supp. Reader: L-3. Journey to the End of the Earth Writing Section: Report Writing SEA/ ELA: Problem–Solution Podcast Students will research a global issue linked to the text (climate change, media ethics, consumerism) and record a 3minute podcast with introduction, argument, and solution.</p> <p>AIL: “Lights, Camera, Influence! – Media Power Panel” Students will participate in a simulated discussion panel, assuming roles such as journalist, film critic, actor, editor, or social observer. They will examine how media and cinema shape public opinion, construct celebrity images, and influence social attitudes, drawing parallels with Poets and Pancake.</p> <p>Skills Developed: Critical thinking and media analysis, creative expression, research and critical thinking</p>
<p>AUGUST</p>	<p>Supp. Reader: L-4. The Enemy, L-5. On the Face of it Poetry: 5. A Roadside Stand AIL: “Voices from the Roadside Stand” Students will design an attractive English signboard for the roadside stand, writing creative slogans to draw customers, reflecting villagers’ hopes, effort to sell produce, and the theme of rural struggle.</p> <p>Skills Developed: Expressive writing and slogan creation REVISION FOR FIRST TERM EXAMS</p>
<p>SEPTEMBER</p>	<p>Prose: L-7. The Interview, Writing Section: Article Writing SEA/ ELA: From Page to Stage-An Interview Reimagined Students will transform the textual interview into a layered stage performance, recreating the conversation between Mukund Padmanabhan and Umberto Eco. Emphasis will be on vocal nuance, pauses, gestures, and subtext to reveal implied meanings, intellectual depth, and unspoken attitudes beyond the written word.</p> <p>Skills Developed: Literary interpretative skills, speaking & listening.</p>

OCTOBER	<p>Prose: L-8.Going Places Poetry: 6. Aunt Jennifer's Tigers Supp. Reader: L-6. Memories of Childhood Writing Section: Report Writing, Invitation SEA/ ELA: Documentary Scriptwriting –Childhoods That Question Society</p> <p>Students in groups will craft a compelling documentary script interweaving the lived experiences of Zitkala-Sa and Bama. The script must integrate narration, voice-over excerpts, contextual research, and reflective commentary to examine how childhood becomes a site of resistance against social injustice and cultural erasure.</p> <p>AIL: Fantasy Diary Page Design (Sophie’s Diary) Students will design a creative diary page from Sophie’s perspective, adding drawings, thoughts, and dreams, reflecting her fantasies, ambitions, and contrast between imagination and reality from the lesson.</p> <p>Skills Developed: Research proficiency, thematic synthesis coherent argument building, literary interpretation and textual analysis</p>
NOVEMBER - FEBRUARY	DOUBT CLASSES, PRACTICE PAPERS & REVISION FOR PREBOARD & BOARD EXAMS
Discussion of Topics from Resource book will be taken parallel to the chapters every month..	

MONTH/ SUBJECT	PHYSICS (Code No. 042)
MARCH	<p>Ch-1 Electric Charges and Fields Ch-2 Electrostatic Potential and Capacitance SEA/ELA : Electric Field Mapping Students will create electric field patterns using iron filings or paper bits around charged objects to visualize field lines. AIL:- 3D Capacitor Models using Craft Material Students will build parallel plate capacitors using cardboard, foil, sponge (dielectric). Skills Developed- Problem solving and creativity</p>
APRIL	<p>Ch-3 Current Electricity, Ch-4 Moving charges and Magnetism Ch-5 Magnetism And Matter SEA/ELA: Wheatstone Bridge Model Making Students will create a cardboard or breadboard model of Wheatstone bridge. AIL:- Diagrammatic view Students will create a visual chart on comparing dia-, para- and ferromagnetic materials. Skills Developed- Data Collection and conceptual understanding</p>

<p>MAY</p>	<p>Ch-6 Electromagnetic Induction, Ch-7 Alternating Current SEA/ELA: AC Waveform Explorer Students will explain and compare current and voltage waveforms in pure resistor, inductor and capacitor circuits by plotting graphs and identifying phase differences AIL:-Thread Wave Art Students will use colored thread or wool pasted on chart paper to form a sine wave . Different colors can show different phases . Connection : Amplitude = height of wave , Time period = one full cycle , Phase difference = shifted wave. Skills Developed- Analytical thinking and interpretation of graphs</p>
<p>JULY</p>	<p>Ch-8 Electromagnetic Waves Ch-9 Ray Optics and Optical Instruments SEA/ELA :Total Internal Reflection Showcase Students will demonstrate total internal reflection using optical fibers, water jet experiment, or laser light to understand light propagation. AIL:- EM Spectrum Walk Students will represent different electromagnetic waves and arrange themselves in order of increasing frequency and decreasing wavelength. Each student explains the source, uses, and safety level of waves. Skills Developed- Creativity and Observation</p>
<p>AUGUST</p>	<p>Ch-10 Wave Optics Ch-11 Dual Nature of Radiation and Matter SEA/ELA : Patterns of Light Students will observe diffraction patterns produced by single slit and narrow obstacles using laser light to understand bending of light waves. AIL:- Interference Pattern by Tie-Dye Art Students will use fabric dye patterns to represent constructive & destructive interference. Skills Developed- Observation and Data Analysis REVISION FOR FIRST TERM EXAMS</p>

SEPTEMBER	<p>Ch-12 Atoms SEA/ELA: Atomic Model Timeline Students will prepare a timeline chart showing evolution from Thomson → Rutherford → Bohr models with key features. AIL:- Nuclear Energy: Boon or Bane? Students will participate in a structured debate discussing whether nuclear energy is a boon or a bane, presenting arguments based on concepts like radioactivity, half-life, and chain reactions. Skills Developed- Analytical thinking and Observation skills</p>
OCTOBER	<p>Ch-13 Nuclei Ch-14 Semiconductor Devices SEA/ELA : Binding Energy Curve Activity Students will plot binding energy per nucleon vs mass number using given data and identify most stable nuclei. AIL:- P-N Junction Street Art Diagram Students will create a graffiti-style labeled diagram showing holes and electrons crossing junction. Skills Developed- Observation skills and Binary thinking</p>
NOVEMBER - FEBRUARY	<p>Doubt class, Practice papers & revision for the Preboard & Board exams</p>
<p>Discussion of MCQ Assignments will be taken parallel to the chapters every month.</p>	

MONTH/ SUBJECT	PHYSICS LAB ACTIVIES
MARCH	<p>Experiment- To measure the resistance of given wire by measure the potential difference and current by the Ohm's law. Activity- To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using multimeter.</p>
APRIL	<p>Experiment-To measure the resistivity of given wire by the Metre Bridge. Activity-To assemble the components of a given electrical circuit.</p>
MAY	<p>Experiment-To determine the resistance of galvanometer by half deflection method Activity- To draw the diagram of given open circuit comprising at least a batter, rheostat, key , ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.</p>
JULY	<p>Experiment-To convert the given Galvanometer(of known resistance and figure of merit) into a voltmeter of desired range and to verify the same.</p> <p style="text-align: center;">OR</p> <p>To convert the given Galvanometer into ammeter of desired range and to verify the same.</p>

AUGUST	<p>Experiment- 1. To find the value of v for the different value of u by plotting graph between u and v for convex lens.</p> <p>2. To find the value of v for the different value of u by plotting graph between u and v for concave mirror.</p> <p>Activity- To observe the refraction and observe the lateral displacement through the glass slab.</p>
SEPTEMBER	<p>Experiment- To find the angle of minimum deviation of prism by plotting graph between angle of deviation and angle of incidence.</p> <p>Activity- To Study the effect of intensity of light by (LDR).</p>
OCTOBER	<p>Experiment- To draw the V- I characteristics of p-n diode for forward and reverse bias.</p> <p>Activity- To study the nature and size of the image formed by a (i) convex lens OR (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).</p>

MONTH/ SUBJECT	CHEMISTRY (Code No. 043)
MARCH	<p>Ch-1 Solutions, Ch-2 Electrochemistry SEA/ELA : “Potato Osmosis” Students will demonstrate and study the Osmosis in Potato Strips using solutions of different concentrations of sugar or salt and to observe the rise in solution level. AIL: “Raoult’s Rainbow” Students will create a color-gradient poster showing Raoult’s law, ideal vs non-ideal solutions, and colligative properties. Skills Developed: Experimental Learning and Conceptual Understanding.</p>
APRIL	<p>Ch-6 Haloalkanes and Haloarenes Ch-7 Alcohols, Phenols and Ethers(Half) SEA/ELA: “The Beilstein flame probe” Students will observe the colour of the flame on adding compounds containing halogens as it is used to detect the presence of halogens (chlorine, bromine, or iodine) in organic compounds. AIL: “Mechanism Motion Comic” Students will make a Comic Strip where SN1, SN2, E1, and E2 mechanisms are shown as action scenes with carbocations as characters. Skills Developed: Analytical Thinking & Logical Reasoning</p>

<p>MAY</p>	<p>Ch-7 Alcohols, Phenols and Ethers(Conti...), Ch-3 Chemical kinetics, SEA/ELA: "Colour change chronicles" Teacher will demonstrate the reaction of Ethanol with Potassium dichromate in which colour changes from orange to green. AIL: "Reaction Rate Flipbook" Students will create a flipbook showing how reaction rate changes with concentration, temperature, catalyst, and surface area. Skills Developed: Creative thinking & Analytical skills</p>
<p>JULY</p>	<p>Ch-8 Aldehyde, ketone and Carboxylic Acid SEA/ELA: "Kitchen Chemistry Explorer" Students will identify aldehydes, ketones, and carboxylic acids present in kitchen items like vinegar, curd, butter, fruits, and spices, and explain their role. AIL: "Carbonyl Clock" Students will make a clock where Each hour on the clock represents a reactions of Aldehyde and Ketones(Preparation including name reactions). Skills Developed: Experimental Learning & Critical Thinking,</p>
<p>AUGUST</p>	<p>Ch-9 Amines Ch-5 Coordination Compounds (Half) SEA/ELA: "The naming Labyrinth" A rapid-fire quiz will be conducted covering oxidation state, geometry, hybridization, and magnetic properties. Skills Developed: Decision-making & Conceptual Understanding REVISION FOR FIRST TERM EXAMS</p>
<p>SEPTEMBER</p>	<p>Ch-5 Coordination Compounds (Continue) AIL: "Chelate Charm Bracelet" Students will use beads and strings to represent chelating vs monodentate ligands, forming stable ring structures or geometries in jewelry form. Skills Developed: Spatial Learning, Creative Thinking & Artistic Expression</p>
<p>OCTOBER</p>	<p>Ch-10 Biomolecules, Ch-4 d & f block Elements SEA/ELA: "Nutrition Label Decoder" Students will analyze food labels to identify carbohydrates, proteins, fats, vitamins, and classify them into biomolecules. AIL: "Reaction Wheel of Oxidants" Students will make a rotating wheel showing substrate on one side (alcohol, aldehyde, alkene) and product on the other when treated with KMnO_4 or $\text{K}_2\text{Cr}_2\text{O}_7$. Skills Developed: Observation skills & Analytical thinking</p>
<p>NOVEMBER - FEBRUARY</p>	<p>DOUBT CLASSES, PRACTICE PAPERS & REVISION FOR PREBOARD & BOARD EXAMS</p>
<p>Discussion of MCQ Assignments will be taken parallel to the chapters every month.</p>	

MONTH/ SUBJECT	CHEMISTRY LAB ACTIVITIES
MARCH	Determination of conc/molarity of KMnO ₄ solution by titration against a standard solution of (i) Oxalic acid, (ii) Ferrous Ammonium Sulphate (Students will be required to prepare standard solutions by weighing themselves)
APRIL	. Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of R _f values. Separation of constituents present in red ink having a large difference in R _f values . • Unsaturation, alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (Primary) groups
MAY	Preparation of double salt of Ferrous Ammonium Sulphate or Potash Alum. Chemical Kinetics- To find the rate of reaction with change in concentration of Sodium thiosulphate and Hcl.
JULY	Determination of one cation and one anion in a given salt. Cation:- Pb ²⁺ , Cu ²⁺ , As ³⁺ , Al ³⁺ , Fe ³⁺ , Mn ²⁺ , Zn ²⁺ , Cu ²⁺ , Co ²⁺ , Ni ²⁺ , Ca ²⁺ , Sr ²⁺ , Ba ²⁺ , Mg ²⁺ , NH ₄ ⁺ Anions:- (CO ₃) ²⁻ , S ²⁻ , (SO ₃) ²⁻ , (SO ₄) ²⁻ , NO ₂ ⁻ , (SO ₄) ²⁻ , Cl ⁻ , Br ⁻ , I ⁻ , PO ₄ ³⁻ , (C ₂ O ₄) ²⁻ , CH ₃ COO ⁻ , NO ₃ ⁻ (Note: Insoluble salts excluded).
AUGUST	Determination of one cation and one anion in a given salt. (Remaining) Cation:- Pb ²⁺ , Cu ²⁺ , As ³⁺ , Al ³⁺ , Fe ³⁺ , Mn ²⁺ , Zn ²⁺ , Cu ²⁺ , Co ²⁺ , Ni ²⁺ , Ca ²⁺ , Sr ²⁺ , Ba ²⁺ , Mg ²⁺ , NH ₄ ⁺ Anions:- (CO ₃) ²⁻ , S ²⁻ , (SO ₃) ²⁻ , (SO ₄) ²⁻ , NO ₂ ⁻ , (SO ₄) ²⁻ , Cl ⁻ , Br ⁻ , I ⁻ , PO ₄ ³⁻ , (C ₂ O ₄) ²⁻ , CH ₃ COO ⁻ , NO ₃ ⁻ (Note: Insoluble salts excluded).
SEPTEMBER	Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given foodstuffs.

MONTH/ SUBJECT	BIOLOGY (Code No. 044)
MARCH	Ch-1 Sexual reproduction In Flowering Plants Ch-2 Human Reproduction SEA/ ELA : Rhythms of Reproduction Students will construct a circular working model representing the menstrual cycle, clearly indicating hormonal fluctuations and physiological changes across different phases. AIL: Students will make clay panels depicting stages of embryonic development arranged sequentially. Skills Developed: Chronological Thinking ,Sequential reasoning, Conceptual Visualization.

<p>APRIL</p>	<p>Ch-3 Reproductive Health, Ch-4 Principles of Inheritance and Variation SEA/ELA: Health Desk-Classroom Counseling Simulation” Students will act like Health advisors and clients with scenario cards(family planning, STI prevention etc.) & explain the biological concepts behind the same. AIL: Students will illustrate human portraits showing inherited traits with pedigree explanation. Skills Developed: Analytical Reasoning.</p>
<p>MAY</p>	<p>Ch-5 Molecular Basis of Inheritance, Ch-6 Evolution SEA/ ELA : Helix in Hand Students will construct 3-D models of DNA to illustrate its helical structure , nucleotide composition and base pairing. AIL: Students will make evolutionary trees using calligraphy styles showing divergence for species. Skills Developed: Logical Thinking & Scientific Reasoning.</p>
<p>JULY</p>	<p>Ch-7 Human Health and Diseases, Ch-8 Microbes In Human Welfare SEA /ELA: Pathogen Profile Card Student will prepare a profile card of a pathogen (HIV, Plasmodium, Salmonella, Influenza virus) covering structure, disease caused, transmission, symptoms, and prevention. AIL: Students will make Comic panels showing microbes in antibiotics, sewage treatment and food. Skills Developed: Scientific accuracy and analytical thinking.</p>
<p>AUGUST</p>	<p>Ch-9 Biotechnology: Principles and Processes, Ch-10 Biotechnology and its applications, Ch-12 Ecosystem SEA/ELA : “GM Decision Board: Boon or Boundary?” Students will analyze biotechnological applications using four-quadrant decision board on chart paper or worksheet and evaluate benefits, risks, ethical concerns and regulatory control, promoting responsible scientific thinking. AIL: Students will create digital infographics to visualize applications of biotechnology in medicine, agriculture and environmental management. Skills Developed: Decision making & Visual communication REVISION FOR FIRST TERM EXAMS</p>
<p>SEPTEMBER</p>	<p>Ch-11 Organisms and Populations SEA/ELA : “Energy Flow Audit” Students in groups will analyze energy flow (as per designated ecosystem to them) by identifying trophic levels, applying the 10% law and calculating ecological efficiency.</p>

	<p>AIL: Students will showcase different populations interactions artistically using landscape art.</p> <p>Skills Developed: Quantitative Reasoning & Collaborative learning.</p>
OCTOBER	<p>Ch-13 Biodiversity and its Conservation</p> <p>SEA/ELA: “Journeys on Wings”</p> <p>Students will draw migratory routes of the birds using political maps of INDIA and world.</p> <p>AIL: “Global Concern gallery Walk”</p> <p>Students will display posters on- Climate change, Deforestation, Eutrophication and biodiversity loss.</p> <p>Skills Developed: Scientific Observation & Interdisciplinary Learning</p>
NOVEMBER - FEBRUARY	<p>DOUBT CLASSES, PRACTICE PAPERS & REVISION FOR PREBOARD & BOARD EXAMS</p>
<p>Discussion of MCQ Assignments will be taken parallel to the chapters every month.</p>	

MONTH/ SUBJECT	BIOLOGY LAB ACTIVITIES
MARCH	<p>Experiment: 1. Preparation of a temporary mount to observe pollen germination.</p> <p>Spotting: 1. Flowers adapted to pollination by different agencies (wind, insects, birds).</p> <p>2. Pollen germination on stigma through a permanent slide or scanning electron micrograph.</p> <p>3. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice).</p> <p>4. Meiosis in onion bud cell or grasshopper testis through permanent slides.</p> <p>5. T.S. of blastula through permanent slides (Mammalian).</p> <p>6. Flowers Adapted to pollination by different agencies (wind, insects, birds).</p> <p>7. Controlled pollination - emasculation, tagging and bagging</p>
APRIL	<p>Spotting: 1. Mendelian inheritance using seeds of different color/sizes of any plant.</p> <p>2. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and color blindness.</p>

MAY	Spotting: Flash cards / models showing examples of homologous and analogous organs.
JULY	Spotting: Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause
AUGUST	Experiment: To isolate DNA from available plant material such as spinach, green pea seeds, papaya, banana etc.
SEPTEMBER	Experiment: 1. Study the plant population density and plant frequency by quadrat method. Spotting: Models specimens showing symbiotic association in lichens, root nodules of leguminous plants, and parasitic mode of nutrition shown by Cuscuta on host.

MONTH/ SUBJECT	MATHEMATICS (Code No. 041)
MARCH	<p>Ch-3 Matrices, Ch- 4 Determinants Ch-12 Linear Programming Problems SEA/ELA: Matrixing the Mystery Students will be given short story-based situations containing numerical data and will organize the information into a matrix. They will apply matrix operations to analyze the data and solve the given questions. Finally, they will interpret the results in the context of the case, connecting matrix to real-world situations.</p> <p>AIL: Inequality Canvas: Painting the Feasible Zone Students will draw coordinate axes on chart paper and shade the feasible regions of linear inequalities using different colours patterns (dots, lines and waves). The optimal point will stand out as a decorative highlight, turning optimization into visual art.</p> <p>Skills Developed: Logical Reasoning & Problem Solving skills</p>
APRIL	<p>Ch- 1 Relations and Functions, Ch- 5 Continuity and Differentiability SEA/ELA: Function Architects Students will design and visualize custom relation and functions, identifying domains, ranges and types while exploring their properties creatively.</p> <p>AIL : Calculus Couture: The Necklace of Continuity Students will design an artistic necklace using smooth, continuous curves to represent continuity of functions. Missing beads will represent discontinuity and sharp joints will show non differentiability linking calculus with decorative art.</p> <p>Skills Developed: Critical Thinking, Creative Thinking and Artistic Expression</p>

<p>MAY</p>	<p>Ch- 2 Inverse Trigonometric Functions, Ch- 6 Applications of Derivates</p> <p>SEA/ ELA: Unlocking Angles - The Inverse Trigo Trial Students will explore inverse trigonometric functions by visualizing principal value ranges and interpreting angles through reasoning in given graph</p> <p>AIL: Turning Tales – “Curves Tell Stories” Students will create a comic strip or storyboard that illustrates a character experiencing maxima (peaks) and minima (valleys) in a real-world scenario. Each frame highlights slope change, turning points and the connection of calculus to daily life.</p> <p>Skills Developed: Conceptual understanding & Problem solving</p>
<p>JULY</p>	<p>Ch-7 Integrals, Ch-8 Application of Integrals</p> <p>SEA/ELA: Integral Jackpot Students will prepare an Integration Challenge Card featuring different standard integration formulas. They will identify the structure of each integrand to determine which formula applies and justify their choice by clearly linking the integral to the correct formula.</p> <p>AIL :“Mandala of Integrals: Art in Area” Students will design a circular Mandala inspired by traditional art and divide it into sections using smooth mathematical curves. They will apply definite integrals to calculate the exact area of each region. The activity will integrate mathematics with Mandala art, combining symmetry, precision, and creativity.</p> <p>Skills Developed: Problem solving and Artistic Expression</p>
<p>AUGUST</p>	<p>Ch- 10 Vector Algebra</p> <p>SEA/ELA: Arrow Alchemy Students will transfer simple vectors into stunning arrows, logos and abstract pattern using apps like Desmos or GeoGebra.</p> <p>Skills Developed: Creative Thinking & Analytical Skills</p> <p>REVISION FOR FIRST TERM EXAMS</p>
<p>SEPTEMBER</p>	<p>Ch- 11 Three Dimension Geometry</p> <p>AIL: 3-D Axis Walk Students will construct a three-dimensional coordinate system using sticks, wires, threads or straws to represent the axes. They will plot given points to understand sign conventions, directed distances, and directed cosines. The hands-on model will help students visualize spatial positioning in three-dimensional space.</p> <p>Skills Developed: Practical application and Spatial Learning</p>

OCTOBER	<p>Ch- 9 Differential Equations, Ch- 13 Probability SEA/ELA: DE Method Olympics Teams will brainstorm to solve differential equations using their chosen methods, blending speed, strategy, and precision. Winners will be displayed on a dynamic ‘Method Leaderboard,’ with color-coded charts showing strengths, weaknesses, and the ultimate champion method—turning math into a live, visual spectacle. AIL: The Bayesian Bloom Students will create a large mural or poster that visually represents Bayes Theorem as a branching tree diagram, with event illustrations. They will visualize how prior probabilities update into posterior probabilities. Skills Developed: Critical Thinking and Problem Solving</p>
NOVEMBER - FEBRUARY	DOUBT CLASSES, PRACTICE PAPERS & REVISION FOR PREBOARD & BOARD EXAMS
Discussion of MCQ Assignments will be taken parallel to the chapters every month.	

MONTH/ SUBJECT	MATHEMATICS LAB ACTIVITIES
MARCH	To verify that the Relation R in the set L of all lines in plane defined by $R = \{(l, m): l \text{ is parallel to } m\}$ is an equivalence Relation.
APRIL	To Demonstrate a function which is (i) not one- one but is onto (ii) which is one-one but not onto.
MAY	To draw the graph of $\sin^{-1}x$ function using the graph of $\sin x$ and demonstrate the concept of Mirror Reflection
JULY	To find analytically the limit of function $f(x)$ at $x= c$ and also to check the Continuity of function at that point
AUGUST	To understand the concept of local maxima, local minima and point of inflection.
SEPTEMBER	1. To verify geometrically $c \vec{\times} (\vec{a} + \vec{b}) = c \vec{\times} \vec{a} + c \vec{\times} \vec{b}$ 2. To measure the shortest distance between two skew lines and verify it analytically
OCTOBER	To explain the conditional probability of an event A, when B has already occurred through an activity performed by throwing a pair of dice.

MONTH/ SUBJECT	COMPUTER SCIENCE PRACTICALS
MARCH	Teacher Salary Evaluation Program (User Input & Conditions) Create a program to input basic pay, allowances, and deductions, calculate net salary, and display salary grade using conditional statements.
APRIL	Using Math and Random Library Design a number guessing game and calculate staff room area/perimeter using functions from the math module.
MAY	Write and Read Teacher Details from a File Develop a program to store teacher details (ID, name, subject, salary) in a file, append new records, and search teacher information.
JULY	Basic Queries on a Teacher Table Perform SQL operations to insert, update, delete, and retrieve teacher records based on department, experience, or salary.
SEPTEMBER	Creating and Modifying a Shopping Mall Database Create a shopping mall database with tables for shops, items, and prices; apply constraints and generate category-wise or price-range reports.
OCTOBER	Connecting Python to MySQL & Fetching Data Build a menu-driven Python application to connect with MySQL and fetch, filter, and display records from the database.
MONTH/ SUBJECT	PHYSICAL EDUCATION (Code No. 048)
MARCH	Ch-1 Management of Sporting Event SEA/ ELA : Host the Championship Students will be provided a scenario such as planning an event budget (birthday, sports etc.) They will need to allocate funds for different expenses, prioritize spending (equipment, rent) and adjusting according on changing circumstances. AIL: Sports Command Board Students will design a live operations board like used in real tournaments. It will include match schedule, team points, official duty charts and emergency contacts. Skills Developed: Data Interpretation & Analytical skills.

<p>APRIL</p>	<p>Ch-2 Children and Women in Sports Ch-3 Yoga as preventive measure for lifestyle diseases SEA/ ELA: Posture Reset Students will observe common posture issue (rounded shoulder, stiff back) and suggest suitable yoga asanas for correction and prevention. AIL: Voices of Victory Students will draw illustrated speech bubbles or comic strips expressing the thoughts, challenges faced by women and motivations of children and women in sports. Skills Developed: Conceptual understanding & Analytical Skills</p>
<p>MAY</p>	<p>Ch-4 Physical Education and Sports for CWSN (Children with special Needs) Ch-5 Sports and Nutrition SEA/ ELA: The Slouch vs. Strong Showdown Students will enact daily life situations like (usage of mobile, carrying heavy bags) which will show wrong and correct posture and then they will be asked to correct each other's postures during classroom activity. AIL: Nutrition Label Decoder Students will draw or paste pictures on an A4 size sheet which will represent nutritious value of that particular foods and will explain their role in improving daily life style Skills Developed: Observation skills & Cognitive skill.</p>
<p>JULY</p>	<p>Ch-6 Test and Measurement in Sports SEA/ ELA: Multi-Directional Sprint Test Students will place cones in a zig-zag pattern at a distance of 5 meters each and complete their race in minimum time. AIL: Active Ageing Assessment Students will make a circular art wheel highlighting different tests for senior citizen using colours and icons to represent speed, agility, balance, and coordination. Skills Developed: Critical Thinking & Agility</p>

AUGUST	<p>Ch-7 Physiology and Injury in Sports SEA/ ELA: Injury Response Drill Students are given real-life sports injury scenarios (sprain, strain, fracture) and identify the type of injury, causes, symptoms, and basic prevention strategies. Skills Developed: Decision making & Sequential learning REVISION FOR FIRST TERM EXAMS</p>
SEPTEMBER	<p>Ch-8 Biomechanics and Sports SEA/ ELA: Load vs Recovery Monitoring Study Students will track their sleep, hydration, training intensity over 7 days and they will correlate fatigue with performance output. Skills Developed: Analytical Thinking & Sequential learning</p>
OCTOBER	<p>Ch-9 Psychology and Sports, Ch-10 Training in Sports SEA/ ELA: Fitness Station Design Activity Students will design a 5-station circuit on paper (push-ups, skipping, squats, plank, spot jogging) and write time per station and rest interval. AIL: Winning Thoughts Wall Students will design creative placards or quote cards with motivational messages that promote a positive mindset and sportsmanship. Skills Developed: Analytical Skills & Cognitive skill.</p>
NOVEMBER – FEBRUARY	DOUBT CLASSES, PRACTICE PAPERS & REVISION FOR PREBOARD & BOARD EXAMS
Discussion of MCQ Assignments will be taken parallel to the chapters every month.	

MONTH/ SUBJECT	GAMES AND OUTDOORS
MARCH	Volleyball
APRIL	Various Yoga asanas- Tadasana, Trikonasana, Makrasana etc...
MAY	Kho-Kho
JULY	Relay based- Shuttle Run, Obstacle Relay, Backward Relay
AUGUST	Badminton, Basketball
OCTOBER	Mirror Master, Cone collection game
NOVEMBER	SAI fitness Test- Push ups, Curl-up, Shuttle run, Sit and reach

ACADEMIC CALENDAR 2026-27

March 2026

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Important Days

04 : Holi
08 : International Women's Day
20 : Id-ul-Fitr
22 : World Water Day
26 : Ram Navami

April 2026

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Important Days

03 : Good Friday
07 : World Health Day
14 : Baisakhi / Dr. B.R. Ambedkar Jayanti
22 : Earth Day
29 : International Dance Day

May 2026

S	M	T	W	T	F	S
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10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Important Days

01 : International Labour Day
07 : World Athletics Day
10 : Mother's Day
31 : World No Tobacco Day

June 2026

S	M	T	W	T	F	S
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Important Days

05 : World Environment Day
07 : World Food Safety Day
21 : Father's Day
21 : Int. Day of Yoga / World Music Day

July 2026

S	M	T	W	T	F	S
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Important Days

01 : National Doctor's Day
03 : International Plastic Bag Free Day
28 : World Nature Conservation Day
29 : International Tiger Day

August 2026

S	M	T	W	T	F	S
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23	24	25	26	27	28	29
30	31					

Important Days

15 : Independence Day
19 : World Photography Day
28 : Raksha Bandhan / World Sanskrit Day
29 : National Sports Day

ACADEMIC CALENDAR 2026-27

September 2026

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Important Days

04 : Janmashtami
05 : Teacher's Day
08 : International Literacy Day
14 : Hindi Diwas

October 2026

S	M	T	W	T	F	S
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Important Days

02 : Gandhi Jayanti / Lal Zachary Shastri Jayanti
08 : Indian Air Force Day
11 : International Day of the Girl Child
20 : Dussehra
31 : National Unity Day

November 2026

S	M	T	W	T	F	S
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22	23	24	25	26	27	28
29	30					

Important Days

08 : Diwali
11 : National Education Day
14 : Children's Day
24 : Guru Nanak Jayanti
26 : Constitution Day

December 2026

S	M	T	W	T	F	S
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Important Days

02 : World Computer Literacy Day
04 : Indian Navy Day
14 : World Energy Conservation Day
22 : National Mathematics Day
25 : Christmas Day

January 2027

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17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Important Days

10 : World Hindi Day
12 : National Youth Day
15 : Indian Army Day
23 : Parakram Diwas
26 : Republic Day

February 2027

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Important Days

11 : Basant Panchami
21 : International Mother Language Day
28 : National Science Day

LIST OF HOLIDAYS FOR ACADEMIC SESSION 2026–27

14 APR 14	Vaisakhi / Ambedkar Jayanti Tuesday	27 MAY 27	ID-UL-Zuha (Bakrid) Wednesday
15 AUG 15	Independence Day Saturday	28 AUG 28	Raksha Bandhan Friday
04 SEP 04	Janmashtami Friday	02 OCT 02	Mahatma Gandhi Jayanti Friday
20 OCT 20	Dussehra Tuesday	29 OCT 29	Karwa Chauth Thursday
01 NOV 01	Haryana Day Sunday	24 NOV 24	Guru Nanak Jayanti Tuesday
25 DEC 25	Christmas Day Friday	26 JAN 26	Republic Day Tuesday
06 MAR 06	Maha Shivratri Saturday	10 MAR 10	ID-UL-Fitar Wednesday
22 MAR 22	Holi Monday		

SUMMER VACATION

01 June — 30 June
2026

DEEPAWALI BREAK

08 Nov — 11 Nov
2026

WINTER BREAK

01 Jan — 15 Jan 2027

A LEARNER'S PROMISE

**I will learn with curiosity,
act with integrity,
respect others,
take responsibility,
and strive to be my best every day.**

