ACADEMIC PLANNER 2026-2027
S.D PUBLIC SCHOOL, PITAM PURA, DELHI CLASS-X (SCIENCE)

★ SECTION - A : BIOLOGY ★

MONTHS & DAYS	CONTENTS	C.W / H.W / ASSIGNMENT	ACTIVITY / INTERDISCIPLINARY ASPECT	LEARNING OUTCOMES
April 1-15 (11 days)	Chapter 5 : Life Processes Nutrition, Autotrophic Nutrition in plants and Heterotrophic Nutrition in human beings	Assignment containing NCERT and extra questions	Chemistry - Biochemical reactions & enzymes Physics - Osmosis & diffusion	1. Analyses similarities and differences in the life processes involved in nutrition 2. Transport (water in plants; circulation in animals) 3. Exchange of materials (respiration and excretion)
April 16-30 (13 days)	Chapter 5 Contd. : Life Processes Types of respiration, respiratory system, transportation - structure of heart, blood vessels, lymph. Transportation in plants, excretion in human beings and plants	Assignment containing NCERT and extra questions	1. To prepare a temporary mount of a leaf peel to show stomata 2. To show experimentally that CO_2 is given out during respiration	1. Explains processes and phenomena 2. Draws labelled diagrams, flow charts, concept maps 3. Understands nutrition, respiration, excretion and transportation 4. Prepares slides and makes observations in the
MAY 1-15 (6 days)	Chapter 7 : Control and Coordination Nervous system, reflex action, human brain, sense organs ,Coordination in plants, immediate response to stimulus, movement due to growth	Assignment containing NCERT and extra questions TBQs and assignment	Activity discussion and demonstration on phototropism and geotropism Physics - Electrical impulses in nerves	1. Understands importance of nervous system 2. Reflex action and response 3. Draws labelled diagrams of brain and neuron 4. Draws well labelled diagrams 5. Understands plant coordination
✷ SUMMER VACATIONS ✷				
July 1-15 (12 days)	Chapter 6 : Control and Coordination Contd. Movements due to growth, tropic movements, chemical coordination in plants, hormones	TBQs and assignment	To show experimentally that CO_2 is given out during respiration	1. Draws labelled diagrams, flow charts, concept maps - neuron & human brain 2. Understands hormonal coordination
July 16-31 (14 days)	Chapter 6 Contd. - Hormones in animals Chapter 8 : How Do Organisms Reproduce Introduction, asexual reproduction	TBQs and assignment	To study: a) Binary fission in amoeba b) Budding in yeast and Hydra with prepared slides	1. Is able to make practical observation of responses shown by plants 2. Understands types of reproduction
U.T. 1 (21 July – 25 July) CH-5 Life Processes				
Aug 1-15 (11 days)	Chapter 8 : How Do Organisms Reproduce Contd. Variation and its importance, asexual reproduction modes: budding, fragmentation, regeneration, vegetative propagation	TBQs and assignment	To study: a) Binary fission in amoeba b) Budding in yeast and Hydra with prepared slides	1. Understands process of asexual reproduction and sexual reproduction in higher plants

Aug **16-31** **(11 days)**	**Chapter 8 Contd.** **Reproductive health, need and methods of family planning, STDs, AIDS**	**TBQs and assignment**	**To study: a) Binary fission in amoeba** **b) Budding in yeast and Hydra with prepared slides**	**1. Understands importance of reproductive health, need and methods of family planning**
Sep **1-15** **(11 days)**	**REVISION**		**REVISION & NOTEBOOK ASSESSMENT - I**	
Sep **16-30** **(13 days)**	**HALF YEARLY EXAMS** **(14 Sept – 28 Sept)** **Syllabus: Chapter 5 - Life Processes, Chapter 6 - Control & Coordination, Chapter 7 - How Do Organisms**			
Oct **1-15** **(11 days)**	**Chapter 9 : Heredity & Evolution** **Heredity, Mendel's contribution, trait expression, Rules of Inheritance**	**TBQ and assignment**	**Identification of different parts of an embryo of a dicot seed (pea, gram or any other seed)**	**1. Is able to understand Mendel's contribution** **2. Genetics of trait expression**
Oct **16-31** **(9 days)**	**Chapter 9 Contd. : Heredity & Evolution** **Laws of inheritance and Sex determination** **Chapter 15 : Our Environment** **Addition of waste, ecosystem, its components, food chain**	**TBQs and assignment**	**Mathematics - Punnet square Mendelian ratios** **Geography - Ecosystems and sustainable development**	**1. Understands Mendel's laws of inheritance** **2. Understands sex determination** **3. Understands eco-system components and functions**
Nov **1-15** **(9 days)**	**REVISION**			
Nov **16-30** **(12 days)**	**REVISION**			
Dec **1-15** **(12 days)**	**PRE-BOARD EXAMINATION (7 DEC-21 DEC)** **Syllabus: Complete Syllabus**			
Dec **16-31** **(13 days)**	**REVISION FOR BOARD EXAMS**			
Jan **1-15** **(5 days)**	**WINTER BREAK**			

Jan 16-31 (12 days)	REVISION FOR BOARD EXAMS			
Feb 1-15 (12 days)	Revision BOARD EXAMINATIONS			

★ SECTION - B : CHEMISTRY ★				
MONTHS & DAYS	**CONTENTS**	**C.W / H.W / ASSIGNMENT**	**ACTIVITY / INTERDISCIPLINARY ASPECT**	**LEARNING OUTCOMES**
April (1-15) 11 days	Chapter 1 : Chemical Reactions & Equations Balancing a chemical equation, Types of chemical reactions - Combination, Decomposition, Displacement reaction	Intext Questions, Back Exercise and assignment	Maths - Solving an equation to find the variables ACTIVITY - To perform & observe reactions & classify them into: (a) Combination (b) Decomposition (c) Displacement (d) Double displacement reaction	1. Express a chemical reaction through a balanced chemical equation 2. Develop ability to analyze and differentiate between various types of chemical reactions 3. Provide examples for different types of chemical reactions
April 16-30 (13 days)	Chapter 1 Contd. : Chemical Reactions Double displacement, precipitation, Oxidation & Reduction (redox) Application of oxidation in daily life: corrosion and rancidity	Intext Questions, Back Exercise and assignment	Connection with Environmental Science - Combustion reactions contribute to air pollution and global warming	4. Explain redox reactions, identify oxidising and reducing agents 5. Cite examples of oxidation in day to day life 6. Explain corrosion and rancidity and suggest ways to prevent them
MAY 1-15 (11 days)	Chapter 2 : Acid, Bases and Salts Definitions of acids and bases, examples & uses, physical properties, indicators, strength of acids & bases Chemical properties: a) Reaction of acids & bases with metals, metal carbonates, metal bi-carbonates b) Reaction of metallic oxide with acids & non-metallic oxide with bases c) Reaction of acids and bases with each other	Intext Questions, Back Exercise and assignment	To study the properties of acids & bases by reaction with: (1) Litmus solution (2) Zn metal (3) Solid sodium carbonate Connection with Mathematics - The pH scale is based on numbers (0–14)	1. Compare chemical properties of acids and bases, write equations 2. Analyze and compare pH of given solutions Identify strong and weak acids and bases Apply concepts of neutralization in everyday life
✷ SUMMER VACATIONS ✷				
JULY 1-15 (12 days)	Chapter 2 Contd. : pH and its importance Chemicals from common salts - sodium hydroxide, bleaching powder, baking soda, washing soda, POP (Plaster of Paris)	Intext Questions, Back Exercise and assignment	Related to biology - pH plays an important role in working of our body To find the pH of solutions using pH paper: Dil. HCl, Dil. NaOH, Dil. Ethanoic acid, Lemon juice, Water, Dil. Sodium bicarbonate	Describe preparation of different salts Suggest their uses in day to day life

JULY **16-31** **(14 days)**	**Chapter 3 : Metals and Non-Metals** **Physical Properties of metals and non-metals** **Chemical properties: Reaction of metals with air, water and acids**	**Intext Questions, Back Exercise and assignment**	**To observe the action of Zn, Fe, Cu, Al on following salts:** **$ZnSO_4$, $FeSO_4$, $CuSO_4$, $Al_2(SO_4)_3$** **And arrange the metals in order of decreasing reactivity**	**1. Electronic configuration of Metals and Nonmetals** **2. Differentiate Physical and chemical properties of metals and non-metals**
U.T. 1 (20 July – 25 July) | SYLLABUS : Chapter 1				
AUGUST **1-15** **(11 days)**	**Chapter 3 Contd. : Metals and Non-Metals** **Reaction with metal salt solution, Reactivity series**	**Intext Questions, Back Exercise and assignment**		**Describe formation of ionic compounds** **Explain the properties shown by ionic compounds**
AUGUST **16-31** **(11 days)**	**Chapter 3 Contd. : Metals and Non-Metals** **Reaction between metals & non metals, Ionic bond and Ionic compounds, Properties of Ionic compounds, Corrosion of metals & Its prevention, Metallurgy and its processes**	**Intext Questions, Back Exercise and assignment**	**Connection with Geography - Minerals and ores are found in the Earth's crust** **Mining and extraction impact the environment (deforestation, pollution)**	**Define: Metallurgy, Ores, Minerals, Reactivity series, Malleability, Ductility** **Compare metallurgical processes for sulphide, carbonates ores and halides** **Differentiate between roasting and calcination**
SEPTEMBER **1-15** **(11 days)**	**REVISION**			
SEPTEMBER **16-30** **(13 days)**	**HALF YEARLY EXAMS** **(14 Sept – 28 Sept)** **Syllabus: Chapter 1, 2, 3**			
OCTOBER **1-15** **(11 days)**	**Chapter 4 : Carbon and its Compounds**	**Intext Questions, Back Exercise and assignment**	**To study the following properties of acetic acid:** **a) Odour b) Solubility in water** **c) Effect on litmus d) Reaction with sodium bicarbonate**	**Critically analyse and draw electron dot structures of some simple carbon compounds**
OCTOBER **16-31** **(9 days)**	**Chapter 4 Contd. : Carbon and its Compounds** **Nomenclature of carbon compounds**	**Extra Questions**	**Connection with Social Science - Alcohols and organic compounds used in medicines and industries**	**Name the various carbon compounds**
NOVEMBER **1-15** **(9 days)**	**Chapter 4 Contd. : Carbon and its Compounds** **Chemical properties of carbon compounds, soaps and detergents**	**Intext Questions, Back Exercise and assignment**	**To study the comparative cleaning capacity of a sample of soap in soft and hard water**	**Compare chemical properties of ethanol and ethanoic acid, write equations for chemical reactions**

NOVEMBER 16-30 (12 days)	REVISION			
DECEMBER 1-15 (12 days)	PRE-BOARD EXAMINATION (7 DEC-21 DEC) Syllabus: Complete Syllabus			
DECEMBER 1-15 (5 days)	REVISION FOR BOARD EXAMS			
JANUARY 16-31 (12 Days)	REVISION FOR BOARD EXAMS			
FEBRUARY 1-15 (12 Days)	REVISION FOR BOARD EXAMS			

★ SECTION - C : PHYSICS ★

MONTHS & DAYS	CONTENTS	C.W / H.W / ASSIGNMENT	ACTIVITY / INTERDISCIPLINARY ASPECT	LEARNING OUTCOMES
April 1-15 (11 days)	Chapter 10 : Light – Reflection & Refraction Reflection of light, spherical mirrors	Assignment containing NCERT and extra questions	Activity - To determine the focal length of Concave mirror and Convex lens by obtaining the image of distant object Interdisciplinary: Mathematics, Biology (vision & light), Geography, Art (Colour Theory), Computer Science (Optics in Technology)	1. Study the characteristics of image formation in plane mirrors 2. Study the laws of reflection 3. Differentiate between real and virtual images 4. Compare the types of spherical mirrors 5. Draw ray diagrams for image formation by
April 16-30 (13 days)	Chapter 10 Contd. : Light – Reflection & Refraction Mirror formula, image formation, Refraction	Intext Questions	To determine the focal length of Concave mirror and Convex lens by obtaining the image of distant object	7. Study the laws of refraction 8. Observe the effect of refraction in daily life 9. Compare the types of spherical lens 10. Draw ray diagrams for image formation by Spherical lens 11. Solve numericals using lens formula
MAY 1-15 (6 days)	Chapter 10 Contd. : Light – Reflection & Refraction Image formation by lenses,Lens formula, power of lens	Assignment containing NCERT and extra questions, TBQs and assignment	To trace the path of ray of light passing through a rectangular glass slab	
✷ SUMMER VACATIONS ✷				

July 1-15 (12 days)	Chapter 11 : Human Eye and Colourful World Functioning of lens in human eye, Defects of vision and their correction	Assignment containing NCERT and extra questions	Interdisciplinary: Physics, Biology, Engineering & Technology, Environmental Science, Chemistry, Health Sciences, Astronomy	1. Discover that white light is a mixture of colours and appreciate the dispersion of light 2. Understand defects of vision and their correctionUnderstand the structure and working of the human eye and functions of its main parts. 3.Explain power of accommodation and common defects of vision with their correction using lenses. 4.Draw and interpret ray diagrams related to vision defects and their correction.
July 16-31 (14 days)	Chapter 11 Contd. : Human Eye and Colourful World Refraction in prism, Dispersion of light, scattering of light	Assignment containing NCERT and extra questions	To trace the path of ray of light passing through a glass prism	
U.T. 1 (21 July – 26 July) | SYLLABUS : Chapter 10 – Light: Reflection and Refraction				
Aug 1-15 (11 days)	Chapter 12 : Electricity Electric current, potential difference, resistance, resistivity	Assignment containing NCERT and extra questions	Physics - Core concepts of current, voltage, and resistance in circuits Chemistry - Electrochemistry	Understand the concept of electric current, potential difference, and electric circuit with their SI units. Apply Ohm's Law to explain the relationship between current, voltage, and resistance. Calculate equivalent resistance in series and parallel combinations of resistors. Explain heating effect of electric current and its practical applications. Solve numerical problems related to electric power, electrical energy, and consumption of electricity. Interpret circuit diagrams and apply concepts for safe and efficient use of electricity in daily life.
Aug 16-31 (11 days)	Chapter 12 Contd. : Electricity Circuit diagram, Ohm's Law	Assignment containing NCERT and extra questions	To verify Ohm's Law	

Sep 1-15 (11 days)	REVISION			
Sep 16-30 (13 days)	HALF YEARLY EXAMS (15 Sept – 26 Sept) Syllabus: Chapter 10 - Light: Reflection and Refraction, Chapter 11 - Human Eye and Colourful World			
Oct 1-15 (11 days)	Chapter 12 Contd. : Electricity Arrangement of resistance in series & in parallel	Intext Questions	1. To determine the equivalent resistance of two resistances connected in series 2. To determine the equivalent resistance of two resistances connected in parallel	
Oct 16-31 (9 days)	Chapter 12 Contd. : Electricity Heating effects of electric current, electric power	TBQs and assignment		
Nov 1-15 (9 days)	Chapter 13 : Magnetic Effects of Electric Current Magnetic field & magnetic field lines, magnetic field due to current carrying conductor	Intext Questions	Physics and Engineering - Understanding the working of electric motors and generators	Understand the magnetic field produced by electric current and represent it using field lines. Explain the magnetic field around a straight conductor, circular loop, and solenoid. Apply Fleming's Left-Hand Rule to determine the direction of force on a current-carrying conductor. Describe the working principle and construction of an electric motor. Explain electromagnetic induction and apply
Nov 16-30 (12 days)	Chapter 13 Contd. : Magnetic Effects of Electric Current Magnetic field due to a current carrying coil or solenoid, Force on current carrying conductor, Fleming's Left Hand Rule, Electric motor, Electromagnetic induction	TBQs and assignment		
Dec 1-15 (12 days)	PRE-BOARD EXAMINATION (7 DEC-21 DEC) Syllabus: Complete Syllabus			
Dec 16-31 (13 days)	REVISION FOR BOARD EXAMS			

Jan **1-15** **(5 days)**	**WINTER BREAK**			
Jan **16-31** **(12 days)**	**REVISION FOR BOARD EXAMS**			
Feb **1-15** **(12 days)**	**REVISION FOR BOARD EXAMS**			
Feb **16-28** **(12 days)**	**BOARD EXAMINATIONS**			