TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

Class XII
PARENT SYLLABUS 2026 -2027
SCIENCE
TERM1

Month	English	Physics	Math	Chemistry	Biology	Economics	Computer Science	Psychology	P.Ed.
March **Topic** **Subtopic** **Learning Outcome** **Activitiy1** **Activity2** **Life Skill** **Value** **Gender** **Health and Wellness**	**Topic: Notice Writing** **Sub-topics:** · **Format:** name of the issuing organisation, the word **NOTICE,** Date, Heading, Writer's name and designation · **Content:** what, where, when, how · **Expression:** overall organisation, relevance of the content, grammatical accuracy and fluency **Learning Outcome** 1.identify and apply the correct format of a notice	**Topic : Electric Charges and Fields** **Subtopics:** * Electric Charges, Conservation of charge. *Coulomb's law-force between two-point charges .*Superposition principle. * Electric field, electric field due to a point charge. * Electric field lines, electric dipole, electric field lines. *Electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. *Electric Flux.	**Topic: Matrices** **Sub Topics:** 1. Matrix-Introduction & Types of matrices 2. Operations on matrices 3. Transpose of a matrix 4. Symmetric and Skew symmetric matrices **Learning Outcomes:** *identify a element of a matrix, *apply the basic operations of +, - *define various types of matrices and solve the problem of equality of matrices Activity- To verify that the	**Topic: Solutions** **Sub-Topics:** Types of solution, expression of concentration of solutions of solids in liquids and related numerical Solubility of solids in liquids Applications of Henry's law Solid solutions (Raoult's law) , Deviations from Raoult's law-Ideal, non-ideal solutions (+ve,-ve deviations), Azeotropes Colligative properties-relative lowering of Vapour pressure,	**Topic:** Human Reproduction **Subtopics:** -The male and female reproductive system - Gametogenesis -Menstrual cycle - Fertilization and Implantation - Pregnancy and embryonic development - Parturition and Lactation **Learning Outcomes:** Each student will be able to--name the different parts	**Development Experiences of India (1947-1991)** *India on the eve of independence*Five year planning *Indian agriculture, industrial growth, foreign trade *New Economic Reforms- 1991 Subtopics: -Need for economic reforms -Liberalisation-Privatisation-Globalisation **Learning Outcomes:** The learners will be able to:	Unit3-MYSQL Understanding of database creation and table structure (using CREATE DATABASE, CREATE TABLE). Ability to perform CRUD operations (Create, Read, Update, Delete) using SQL commands like INSERT, SELECT, UPDATE, and DELETE. Skills in	**Topic: Meeting Life Challenges** **Subtopics:** Effects of stress on psychological functioning and health. General Adaptation Syndrome Coping with stress Stress Management Techniques Promoting positive health and well being	**Topic** **Management of Sporting Events** **Subtopic** Functions of Sports Events Management (Planning, Organizing, Staffing, Directing & Controlling) Various Committees & their Responsibilities (Pre, During & Post-event) Fixtures and its Procedures (Knock-Out, League, Combination tournaments)

	2. differentiate between formal and informal writing styles 3.recall essential elements required in an effective notice 4. write a structured and well-formatted notice 5. edit and proofread a notice to enhance clarity and correctness **Activity 1** Completing a letter through a relay writing activity **Activity 2** Art Integrated Activity: Creating templates for notice writing on Pinterest **Life Skills** Effective written communication **Topic: Letter to the Editor** **Sub topics:** · Format (Sender's address, Date, Editor's address, Subject, Salutation, Body, Complimentary close) · Purpose and Tone	**Learning Outcomes:** *List the three properties of charge. *Correlate conservation of charges to pair production. *Apply the formula for quantization of charge, Coulomb's Law to solve related numerical problems. *Compare and contrast (a) charge and mass (b) gravitational force and electrostatic force between two electrons, by drawing Venn diagrams. *List the properties of electric field lines. *Draw graphs to show variation of electric field intensity with distance for a point charge and a dipole. *Infer the relation between torque acting on a dipole to its equilibrium. *Deduce condition for stable and unstable equilibrium of dipole in terms of its potential energy. *Infer the angle between area vector and electric field for	determinant of the product of two matrices is equal to the product of their determinants. Value Developed: Gender Sensitivity Topic:Determinants Sub Topics: 1. Determinant-Introduction 2. Area of triangle 3. Adjoint and inverse of a matrix 4. Applications of Determinants and matrices **Learning Outcomes:** *define inverse of a matrix. *Perceive the concept of Determinants, minors, cofactors, adjoint and inverse. * find the area of triangle * solve the system of equations using matrices Activity: To find the inverse of a non-singular matrix and verify that A (A inverse)= I Value:Teamwork, confidence, and logical thinking **Topic:Inverse**	elevation of BP, depression of freezing point, osmotic pressure Determination of molecular mass of solute using colligative properties. Numerical related to above concepts. Concept of Abnormal molecular mass, Vant Hoff factor & related numerical. **Learning Outcomes**: Describe the formation of different types of solutions. Express concentration of different solutions in terms of normality, molarity, molality, mole fraction. Explain the factors (nature, temperature & pressure) effecting solubility of solids and gases in liquids. State and explain Raoult's law. Explain the term colligative	of human male and female reproductive systems -explain the function of each part of human male and female reproductive system -draw labelled diagrams of human male and female reproductive systems -compare the gamete formation in males and females -distinguish between spermiogenesis and spermiation (1 point) -illustrate spermatogenesis and oogenesis with diagrams -explain reproductive cycle in human female -differentiate between major structural changes in the	1. State the goals of India's Five Year Plans 2. Comprehend the development policies in different sectors such as agriculture, industry and foreign trade from 1950-1990 3.Highlight and discuss the merits and limitations of a regulated economy. 4.State the reasons behind the reform policies introduced in India in 1991 5. Comprehend the process of globalisation and its application in Indian economy 6.Critically analyse the impact of reform process in various sectors **MONEY AND BANKING** Subtopics: *Barter exchange and its	querying and filtering data effectively using WHERE, ORDER BY, GROUP BY, and HAVING. Improved query efficiency through the use of aggregate functions. Understanding of database design principles through the use of constraints (e.g., PRIMARY KEY, FOREIGN KEY). Learning Outcomes: Each child will be able to: ➢ Identify the differences between Natural Join and equi-join, having and where, having	**Learning Outcomes:** Students will be able to: Describe the effects of stress on psychological functioning Explain the GAS model State the different coping techniques Explain stress management techniques Describe life skills that help people to stay healthy Explain factors that promote positive health and well-being **Activity 1:** Turning Failure into Strength" Students	Intramurals and Extramurals - Meaning, Objectives & Significance Community Sports Program (Sports Day, Health Run, Run for Fun, Run for a Cause & Run for Unity) **Learning Outcome** Each student will be able to: Explain types of tournaments and draw Fixtures – Knock-Out (Bye & Seeding) & League (Staircase & Cyclic) Know the different types of committees for organizing tournaments (pre; during & post) Differentiate between Intramural & Extramural Describe different types of Sports Programmes

	· Types: Complaint, Suggestion, Public Awareness, Appreciation · Formal language and coherence · Common errors **Learning Outcome** 1. **Identify** correct format components in a worksheet. 2. **Differentiate** between formal and informal tone 3. **Draft** a 120–150 word letter on a given social issue 4. **Use** at least 5 formal vocabulary expressions appropriately in writing 5. **Edit and peer-review** a letter identifying minimum four errors **Activity1** Identify errors in a poorly written letter **Activity 2** **Relay editing through a worksheet** **Life Skills** Critical thinking, Problem solving, Effective	different Gaussian surfaces to find electric flux. **Activity 1:** Comparative study of charge and mass using Venn Diagram. **Activity 2:** Comparative study of the electric field due to a point charge and an electric dipole using graphical methods. **Health and wellness**: Practicing Positive Thinking	**Trigonometric Function** **Sub-Topic** *Domain/Range *Principal Value Branches **Learning Outcomes:** *evaluate the domain / range of inverse trigo functions *perceive the concept of principle branches, sketch the graphs of inverse trigo functions- Sin inverse x, sin inverse 2x. Activity: To explore the principal value of using a unit circle. **Health and Wellness**	properties, derive their expressions and correlate these with molar masses of the solutes. Define the terms: vapor pressure, boiling point, freezing point, osmosis, osmotic pressure and reverse osmosis. Explain abnormal colligative properties exhibited by some solutes in solutions. Solve numerical problems related to molarity, molality, mole fraction. Draw graphical representations related to Raoult's Law and colligative properties. Solve numerical problems related to Raoult's law, colligative properties and determination of molecular mass of the solute, Abnormal molecular mass and Vant Hoff	human ovary during follicular and luteal phase of menstrual cycle (2 points) -describe the fertilization and placentation in humans -enumerate the steps of development of embryo -explain the process of parturition and lactation **Topic:** Sexual Reproduction in Flowering Plants **Subtopics:** - Flower-A fascinating organ of angiosperms - Pre-fertilization: structures and events -Post-fertilization: structures and events - Apomixis and Polyembryony **Learning Outcomes:** Each student will be able to--describe the	limitations, *Meaning of 'money' ,'money supply' *Types of money. *Credit creation. *Functions of Central Bank **Learning Outcomes:** The learners will be able to: 1.Define and understand the concept of money 2.Classify various components of Money Supply-M1 3.Understand and analyse the working of money(deposit) multiplier and its role in creating money supply 4.Discuss the functions of Central Bank	and group by, order by and group by ➢Compose SQL queries for joins, group by, having and order by ➢ Differentiate between Cartesian product and joins ➢Identify and write aggregate functions for group by ➢ Differentiate between Cartesian product and joins Activity Make Tables and execute Queries Values Elderly Care	share one challenge they overcame and identify: Hardiness (Commitment, Control, Challenge) **Activity 2:** Relaxation-Based Activities Deep Breathing Exercises Progressive Muscle Relaxation Meditation **Value:** Sound mind and body.	

	communication **Topic: My Mother at Sixty-six** **Sub topics** • Theme of ageing • Fear of loss • Mother-daughter bond • Imagery and symbolism • Contrast (young trees vs old mother) • Poetic devices **Learning Outcome** 1. Interpret the theme of ageing and insecurity. 2. Describe the imagery and pick out the poetic devices. 3. Relate the poem to personal experiences. 4. Identify tone and mood. 4. Develop empathy toward elderly family members **Activity 1** Role-play: Conversation between the poet and mother **Activity 2** Art Integrated Activity: Poster on, Care for the Elderly **Values** Emotional resilience Respect for elders **Topic**			factor. Compare molarity with molality in terms of temperature dependence. Compare Henry's and Raoult's law. Compare and contrast ideal and non-ideal solutions (+ve and -ve deviations) based on intermolecular forces and behavior. **Activity 1** **Egg osmosis experiment** **Activity 2** **Simulation activity on reverse osmosis** **Health and wellness:** Health, Diet and nutrition	reproductive parts of flower -explain development of male gametophyte and female gametophyte - differentiate between microsporogenesis and megasporogenesis (2 points) -distinguish between autogamy, geitonogamy and xenogamy (1 point) -mention three types of pollination based on the agents needed for pollination -compare the features of wind pollinated and insect pollinated flowers. -describe double fertilization -state three outbreeding devices that flowering plants have				

	The Last Lesson **Sub-topics:** • Historical background (Franco-Prussian War) • Character sketch – Franz and M. Hamel • Theme of linguistic imperialism • Irony and symbolism • Significance of last lesson • Relevance in contemporary India **Learning Outcome** 1. Summarise the lesson in **150 words** 2. Analyse Franz's transformation citing **at least 3 textual evidences.** 3. Evaluate the theme of linguistic identity in a **200-word analytical paragraph.** **4.** Identify **4 literary devices** with examples from text. 5. Compare the text with another Flamingo chapter in a structured response **Activity 1** Role Play: M.Hamel's final speech **Activity 2** Art integrated				developed -explain artificial hybridization -distinguish between albuminous and non-albuminous seeds (1 point) -explain apomixis and polyembryony **Activity1** Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides **Activity2** Observation of pollen tube growth (temporary mount or prepared slide study) **Gender Sensitivity:** Gender Equality				

	Activity: creating a diary entry as Franz (before and after class) **Topic: The Third Level** **Sub-topics:** • Concept of Time Travel • Escapism vs Reality • Role of Sam (psychiatrist) • Symbolism of Galesburg • Irony & Narrative Technique **Learning Outcome** 1. **Identify and explain** at least **two themes** of the story with textual evidence 2. **Differentiate** between fantasy and reality 3. **Evaluate** Charley's psychological state of mind 4. **Evaluate** escapism as a coping mechanism in a class debate **Activity1** Role Play: Interview between Charley and Sam **Activity 2** Debate: Escapism is a necessary coping mechanism in								

	modern life **Health and Wellness:** Mental health awareness								
April **Topic** **Subtopic** **Learning Outcome** **Activitiy1** **Activity2** **Life Skill** **Value** **Gender** **Health and Wellness**	**Topic: The Tiger King** **Sub-topics:** • Character sketch of the Maharaja • Theme of fate vs free will • Satire on autocracy • Irony and humour • Symbolism of the tiger • Narrative style **Learning Outcome** 1. **Identify and explain** elements of satire and irony 2. **Draft** the character sketch of the Maharaja 3. **Evaluate** the theme of fate vs free will through a class debate 4. **Create** a newspaper report/diary entry reflecting satire **Activity 1** Debate: Fate determines destiny more than human action **Activity 2** Creating a newspaper	**Topic : Electric Charges and Field:** **Subtopics:** *Gauss's Theorem, Applications of Gauss's Theorem (field due to infinitely long straight charged wire and plane sheet of charge) **Topic: Electric Potential and Capacitance :** **Subtopics:** *Electric potential, potential difference, electric potential due to a point charge. *Electric potential due to a dipole and system of charges. *Equipotential surfaces. *Electrical potential energy of a system of two-point charges and of electric dipole in an electrostatic field. *Conductors and insulators. *Dielectrics, Electric polarization of dielectrics. *Capacitors and Capacitance.	Continuity and Differentiability Sub Topic: *Chain Rule, product Rule and Quotient Rule – Recapitulation *Implicit and Inverse trigonometric function Derivatives *Logarithmic Differentiation *Higher order derivatives. *continuity and differentiability **Learning Outcomes:** Recall chain, quotient, and product rules. Find derivatives of implicit and inverse trigonometric functions, List properties of logarithms. Understand logarithmic differentiation and parametric functions Differentiate parametric forms	April **Topic:** **Haloalkanes and Haloarenes** **Sub-Topics:** Classification, Nomenclature and isomerism Methods of preparation Physical and chemical properties S_N2, S_N1 mechanisms E2 and E1 mechanisms Stereochemical aspects of S_N mechanism (Chirality check activity) Chemical Properties of Haloarenes Synthesis, logical reasoning, application, analysis, comparison, identification and conversion-based problem questions Polyhalogenated compounds	**Topic:** Principles of Inheritance and Variation **Subtopics:** -Mendel's Laws of Inheritance - Inheritance of One Gene -Test Cross - Incomplete Dominance - Codominance - Inheritance of Two Genes - Chromosomal theory of inheritance - Linkage and Recombination -Sex Determination - Mutation - Pedigree Analysis - Genetic disorders **Learning Outcomes** Each student will be able to -state the Mendel's laws of inheritance	**GOVERNMENT BUDGET** Subtopics: *Meaning and objectives of government budget *Components of government budget. *Differentiation between various components of budget.· *Types of budget and deficits. *Implication of Revenue Deficit, Fiscal Deficit and Primary Deficit. **Learning Outcomes:** The learners would be able to: 1.Define and discuss the objectives of Government Budget 2.Familiarise with the components and structure of Government Budget	Class XI revision tour (3 days) Syntaxes- loops, if…else Revision Class XI- Functions Lists, Tuples, Dictionaries , Strings- functions and applications - File handling: Text Files-(6 days) open and close a file, read, write, and append to a file, standard input, output, and error streams, relative and absolute paths. open() with open() close() read() readlines()	**Topics: Self and Personality** **Subtopics:** Concept of self Cognitive and behavioral aspects of self Culture and self Concept of personality Major approaches to the study of personality **Learning Outcomes:** Describe the concept of self Describe important concepts like self-esteem, self-concept,	**Topic** **Children & Women in Sports** **Subtopic** Exercise Guidelines of WHO for Different Age Groups Common Postural Deformities (Knock Knee, Bow Legs, Flat Foot, etc.) Women Participation in Sports - Physical, Psychological & Social Benefits Special Considerations (Menarche & Menstrual Dysfunction) Female Athletes Triad (Osteoporosis, Amenorrhea, Eating Disorders) **Learning Outcome**

	report/diary entry, reflecting satire **Health and Wellness:** Emotional regulation, Ego management **Topic: Deep Water** **Sub-topics:** • Childhood fear and trauma • Psychological impact of fear • Determination and perseverance • Role of instructor • Symbolism of water • Theme of courage vs fear **Learning Outcome** **1. Summarise** the lesson 2. **Bring out** the theme of fear and courage 3. **Evaluate** Douglas's methods to overcome fear 4. **Compare** fear in *Deep Water* with another Flamingo text in a class discussion **Activity 1** Art Integrated activity: creating a conversation between Douglas and the instructor **Activity 2** Class Discussion:	**Learning Outcomes:** *Differentiate between electric potential and potential difference. *Compare the potential due to a dipole with the field due to a dipole using a graphical method. *Draw equipotential surfaces due to different charge configurations. *List the points of difference between polar and non-polar dielectric. *Deduce mathematical equation for capacitance of a parallel plate capacitor. *Apply formulae and concepts to solve related questions from sample papers, NCERT and board papers. *Draw Venn diagram to enumerate the points of difference between capacitance of a capacitor with dielectric between its plate and that with a conducting slab. *Compare the energy stored in a capacitor	and higher-order derivatives. Recall limits and define continuous functions. Apply continuity to check if a function is continuous Value differentiation in real life. Cultivate interest in advanced calculus. Activity: To relate common logarithm to natural logarithm. Life skill: Decision Making Topic: Application of Derivatives (18 days – 30 periods)- 10 days of April and 8 days of May Increasing - Decreasing functions and Rate of measure will be done in April (10 days – 16 periods) Maxima Minima will be done in May (8 days) Sub Topic: *Increasing Decreasing Function (5 Days- 8 periods - April)	**Learning Outcomes:** Define and classify halogenated compounds. Name haloalkanes and haloarenes according to the IUPAC system of nomenclature from their given structures. Write equations for the preparation of haloalkanes and haloarenes. Use stereochemistry as a tool for understanding the reaction mechanism. Write equations for the chemical properties of haloalkanes and haloarenes. Explain and write name reactions- Sandmeyer's, Wurtz-Fittig, Fittig reaction. Write equations for the chemical properties of haloalkanes- nucleophilic & electrophilic	-give reason as to why Mendel chose pea plant for his experiments -draw the monohybrid cross and calculate the phenotypic ratio 3:1 -explain and design a test cross -interpret the genotype and phenotype by analysing the monohybrid cross -compare dominance, co-dominance and incomplete dominance giving one example of each -differentiate between monohybrid and dihybrid cross (2 points) -interpret the genotype and phenotype by analysing the dihybrid cross -draw the dihybrid cross	3. Distinguish between Revenue receipts and capital receipts 4.Differentiate between Revenue Expenditure and Capital Expenditure 5. Highlight the impact of Revenue Deficit, Fiscal Deficit and primary deficit on the economy **HUMAN CAPITAL FORMATION** *Meaning of human capital; human capital formation. *Meaning of education and its objectives, *Need for government intervention in health and education sector. *Growth of education sector in India **Learning Outcomes:** 1.Recognise the need for educational infrastructure for	readline() Binary Files- (10 days) Basic operations on a binary file: Open (filename – absolute or relative path, mode) / Close a binary file, Pickle Module – methods load and dump; Read, Write/Create, Search, Append and Update operations in a binary file. **Learning Outcomes:** Each child will – =>be able to find syntax errors in if…else code/ loops =>be able to state output of Programming codes =>be able to solve computing	and self-efficacy Differentiate between the Indian and western view of self Explain Type approaches, Trait approaches, Five-factor model of personality, Behavior approach, Cultural ,Humanistic approach **Activity 1:** Short role-play or scenario: "Conflict with a friend" or "Handling exam stress" Students identify skills used from Daniel Goleman's Emotional Intelligence: Self-Awareness Self-	Explain exercise guidelines for different stages of growth and development. Describe different postural deformities and their cause and remedy. Recognize the role and importance of sports participation of women in India. Understand special considerations related to menarche and menstrual dysfunction. Define female athletes' triad and explain its components. **Topic** **Yoga as a Preventive Measure for Lifestyle Diseases** **Subtopic** Obesity (Tadasana, Katichakrasan

	Facing fear is the only way to overcome it **Gender Sensitivity:** Challenging stereotypes about fear and masculinity **Topic: Article Writing** **Sub topics:** • Format and structure (Title, Byline, Introduction, Body, Conclusion) • Types: discursive, argumentative, problem-solution • Tone and audience awareness • Use of data and examples • Articles on contemporary issues **Learning Outcome** 1. **Identify and list** components of an article 2. **Differentiate** between discursive and argumentative articles 3. **Compose** a 150–200 word article using correct format and cohesive devices 4. **Incorporate** at least three persuasive techniques 5. **Peer-evaluate** an	in series combination with that in parallel combination. **Activity 1:** **Lab Activity :** * To determine resistivity of two / three wires by plotting a graph for potential difference versus current. **Activity 2:** **Lab Activity :** * To find resistance of a given wire / standard resistor using a metre bridge. **Topic: Current Electricity:** **Subtopics:** *Electric current, flow of electric charges in a metallic conductor. *Drift velocity, mobility. *Relation between drift velocity and electric current. *Ohm's law, electrical resistance, V-I characteristics (linear and non-linear) *Electrical resistivity and conductivity *Electrical energy and power. *Emf and potential difference and internal resistance of cell.	*Rate of change (4 days- 6 periods- April) Mixed problems on rate and increasing decreasing- 1 day – 2 periods *Maxima and minima Introduction (first 8 days of May- 12 Periods) Local Maxima Minima, Absolute Maxima Minima, First Derivative Test Second Derivative Test **Learning Outcomes:** *identify the function to be (Observational skill) *finding the intervals in which the function is increasing or decreasing *Find the rate of change of quantities - (values and attitude) *calculate the point of max/min in a given Interval- (Decision making) *apply the first derivative test to	substitution reactions. Solve interconversions, reasoning and application-based questions related to haloalkanes and haloarenes. Appreciate the applications of organo-metallic compounds. Know and explain about uses of commercially important compounds poly-halogen compounds. Highlight the environmental effects of poly-halogen compounds. Draw the isomers for a given molecular formulae and write IUPAC names. Apply Luca's test to differentiate between different types of alcohols. Solve interconversions and equation-based questions on aliphatic and aromatic	and calculate the phenotypic ratio 9:3:3:1 -explain chromosomal theory of inheritance -justify that linkage and crossing over are alternatives of each other. -describe the sex determination in human beings -mention sex determination in birds -compare the mechanism of sex determination in different organisms -illustrate genetic disorders with pedigree charts -compare Mendelian and chromosomal disorders -explain any two Mendelian disorders with their crosses. -describe any two chromosomal	growth of a nation 2.Justify investment in health infrastructure for the development of the nation 3.Evaluate the efficacy of on-the-job- training provided by employers towards human capital development 4.Argue for or against Brain Drain 5.Summarise the factors that determine human capital 6.Evaluate the relation between growth in human capital formation and economic growth 7.Evaluate educational achievements in India 8.Justify why 'Education for all' is still a distant dream 9.Argue for gender equity in education	problems based on Lists, Tuples and dictionaries =>be able to define functions =>create functions using Python Code, pass arguments and return values. =>be able to apply existing mathematical functions/ String functions in Python Programs. Each child will – =>Recognize why files are needed and the purpose of storing data in a file to be used by a program =>Identify the different types of files limited to text, csv and binary files.	Regulation Empathy Social Skills **Activity 2:** Give students a list of personality traits (e.g., creative, shy, disciplined, anxious). Ask them to sort into stable vs temporary traits. Discuss why stable traits define personality. Self-Concept & Self-Esteem Exercise **Values:** Integrity **Gender Sensitivity:** Women contribution in formulation of personality theories.	a, Pavanmuktasana, Matsayasana, Halasana, Pachimottansana, Ardha – Matsyendrasana, Dhanurasana, Ushtrasana, Suryabedhan pranayama) Diabetes (Katichakrasana, Pavanmuktasana ,Bhujangasana, Shalabhasana, Dhanurasana, Supta-vajarasana, Paschimottanasana, Ardha-Mastendrasana, Mandukasana, Gomukasana, Yogmudra, Ushtrasana, Kapalabhati) Asthma (Tadasana, Urdhwahastottansana, UttanMandukasana, Bhujangasana, Dhanurasana, Ushtrasana, Vakrasana, Kapalbhati, Gomukhasana

	article using a rubric and provide two constructive feedback points **Activity 1** **Guided Practice:** Structure breakdown activity through a worksheet **Activity 2** Art integrated activity: Designing an engaging heading using Canva **Life Skills:** Critical Thinking, Effective Communication **Topic: *Keeping Quiet*** **Sub-topics:** • Theme of silence and introspection • Symbolism (fishermen, salt, earth) • Contrast: stillness vs inactivity • Message of universal brotherhood • Poetic devices • Contemporary relevance **Learning Outcome** 1. **Identify and explain** at least 4 poetic devices with textual evidence 2. **Evaluate** the central theme linking it to one other	*Cells in series and parallel. *Kirchhoff's laws and simple applications, Wheatstone bridge. **Learning Outcomes:** *Explain why electrons drift through a conductor when p.d is applied. *Deduce the equation for drift velocity of electrons. *Relate drift velocity to electric current mathematically. * Draw VI graphs for Ohmic and non Ohmic conductors. *Explain the effect of temperature on the resistance and resistivity of a conductor. *Graphically show the variation of resistance and resistivity with temperature for conductors, insulators, and semiconductors. *Differentiate between resistivity and conductivity of a conductor. *Express electrical energy and power mathematically.	find all points of local maxima/minima of a function *apply the second derivative test to examine local maxima or local minima *differentiate btw absolute max/min and local max/min *apply the concept of max/min to solve word problems- Activity: To understand increasing/decreasing functions via their derivative. Life Skills Time Management & Efficiency (Rate of Change in Work Productivity)	halogenated compounds. Distinguish between the following mechanisms-S_N2, S_N1 and E2, E1. Interpret the relative reactivity of haloalkanes towards Sn2 and Sn1 mechanisms. Correlate the structures of haloalkanes and haloarenes with various types of reactions (relative reactivity of haloalkanes towards nucleophilic substitution reactions). Predict the structure of the products in the chemical reactions of halogenated compounds. **Topic:Alcohols, Phenols & Ethers** **Sub-Topics:** Classification, IUPAC nomenclature and Isomerism, Structure of functional group	disorders -distinguish between Klinefelter syndrome and Turner syndrome.(2 points) - differentiate between Down syndrome and Turner Syndrome (2 points) **Activity1** Study of Mendelian inheritance using seeds of different colour/sizes of any plant. **Activity2** Study of prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness **Health and**		Identify when to use files to solve a problems =>be able to read/write text files =>be able to read files letter by letter/ word by word/ sentence by sentence Learning Outcomes: *Each child will be able to–* =>Create Binary Files =>apply tell() and seek() for random file pointer movement =>Insert and display records =>Search Records =>Modify records =>Delete Records · Values (Smart Working with		Matsyaasana, Anuloma-Viloma) Hypertension (Tadasana, Katichakransan, Uttanpadasana, Ardha Halasana, Sarala Matyasana, Gomukhasana, UttanMandukasana, Vakrasana, Bhujangasana, Makarasana, Shavasana, Nadishodhanapranayam, Sitlipranayam) Back Pain/Arthritis (Tadasan, Urdhawahastootansana, Ardh-Chakrasana, Ushtrasana, Vakrasana, Sarala Maysyendrsana, Bhujandgasana, Gomukhasana, Bhadrasana, Makarasana, NadiShodhana pranayama) Procedure, Benefits & Contraindications for preventive asanas **Learning**

	Flamingo text 3. **Differentiate** between 'stillness' and 'inactivity' through a Venn diagram 4. **Design a poster**/journal on mindfulness and global peace using ideas from the poem. **Activity 1** A guided two minute mindfulness exercise **Activity 2** **Art integrated activity:** Designing a poster/reflection journal**:** One Day of Digital Detox Reflection Journal **Values:** Peace, Introspection, Global Harmony, Non-violence	*Write expression for the emf and the effective internal resistance in case of combination of cells. *Distinguish between emf and potential difference of a cell. *State Kirchhoff's rules. *Apply formulae to solve related numerical questions, to obtain the balance condition of Wheatstone bridge. **Activity 1:** *Mystery resistance: using multimeter and colour coding determine values of carbon resistors. **Activity 2:** **Lab Activity** * To find the frequency of AC mains with a sonometer. **Life Skill:** Critical Thinking, Problem Solving		Methods of preparation of Alcohols including mechanisms Hydration and Hydroboration Methods of preparation of Alcohols and Phenols including mechanisms Name reaction (Riemer Tiemann & Kolbe reaction) Acidity of aliphatic alcohols & phenol **Learning Outcomes:** Name alcohols, phenols and ethers according to IUPAC nomenclature. Write equations for the preparation of preparation of alcohols from (i) alkenes (ii) aldehydes, ketones and carboxylic acids. Write equations for the preparation of phenols from (i) haloarenes (ii) benzene sulphonic acids (iii) diazonium salts and (iv)	**Wellness:** Prevention and management of genetic disorders		Ethics): Ethical use of technology, honesty in digital tasks. Activity Coding		**Outcome** Know Lifestyle Diseases Describe the procedure, benefits & contraindications of the asanas Develop awareness about healthy lifestyle through yoga. **Topic** **Physical Education & Sports for CWSN (Children with Special Needs - Divyang)** **Subtopic** Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics) Concept of Classification and Divisioning in Sports Concept of Inclusion in sports, its need, and Implementation Advantages of

				cumene. Draw the isomers for a given molecular formulae. Solve equation-based questions and interconversions on the preparation of aliphatic and aromatic alcohols. Correlate physical properties and acidity of alcohols, phenols and ethers with their structures. **Activity 1:** **Art Integration Activity (Poster/ Comic strip)** **Topic: - Comparison of the reactivity of different types of alkyl halides towards S_N2 and S_N1 mechanism.** **Activity 2: Lab Activity** **Qualitative analysi (Salt Analysis)** To determine an anion and a cation present in the given salt samples. **Group 3 and 4 aluminium and**					Physical Activities for children with special needs Strategies to make Physical Activities assessable for children with special needs **Learning Outcome** Differentiate between Special Olympics; Paralympics, and Deaflympics Understand the concept and importance of inclusion in sport. Describe the advantages of physical activities for children with special needs. Suggest strategies to make physical activities accessible for CWSN.

				Zinc salts: Al^{3+}, Zn^{2+}- Cl^{-}, SO_4^{2-} and NO_3^{-} **Group 5 salts:** Ba^{2+}, Sr^{2+}, Ca^{2+} salts -Cl^{-}, SO_4^{2-} and NO_3^{-} **Life Skills:** Problem solving and Critical Thinking					
May **Topic** **Subtopic** **Learning Outcome** **Activitiy1** **Activity2** **Life Skill** **Value** **Gender** **Health and Wellness**	**Topic: Lost Spring by: Anees Jung** **Part I:** Stories of Stolen Childhood (Saheb – Ragpicker) **Part II:** I Want a Drive (Mukesh – Bangle Maker) **Sub-Topics:** • Poverty and child labour • Traditions vs aspirations • Exploitation and social injustice • Dreams vs reality • Impact of environment on growth **Learning Outcome** 1. **Identify and explain** at least three **causes of child labour** 2. **Compare** Saheb and Mukesh listing five **similarities and** five **differences**	**Topic: Moving Charges and Magnetism** **Subtopics:** *Concept of magnetic field, Oersted's experiment. *Biot - Savart law and its applications . *Ampere's law and its applications to infinitely long straight wire . *Straight and toroidal solenoids (only qualitative treatment). *Force on a moving charge in a uniform magnetic field. *Force on a current carrying conductor in a uniform magnetic field, between two parallel current-carrying conductors. *Torque experienced	Topic:Application of Derivatives Sub topic: Maxima Minima using first and second derivative test Learning Outcomes: *apply the first and second derivative test to examine local maxima or local minima *differentiate btw absolute max/min and local max/min *apply the concept of max/min to solve word problems- Activities for Conceptual Understanding 1) To understand the concepts of max and min values of a function in a closed interval 2) To understand	May **Topic: Alcohols, Phenols & Ethers contd..** **Sub-Topics:** Physical and Chemical Properties and uses of ethanol and phenol (Electrophilic aromatic substitution reaction) Mechanisms Distinguish test for the different types of alcohols (1^0, 2^0, 3^0) Luca's and other tests Diethyl ether: Mechanisms related to the preparation (Williamson's synthesis) and chemical properties of	**Topic:** Molecular Basis of Inheritance **Subtopics:** - Structure of polynucleotide chain -Packaging of DNA helix -The Search for Genetic Material -The Genetic material is DNA -Replication - Transcription - Genetic code - Translation - Regulation of Gene Expression - Human Genome Project -DNA fingerprinting	**NATIONAL INCOME AND RELATED AGGREGATES** *Introduction, meaning of circular flow, stock and flow variables, domestic territory, normal resident, factor and transfer income, final and intermediate goods, gross and net investment, depreciation, NIT and NFIA. *Basic aggregates. *Methods to calculate National Income. **Learning Outcomes:** The students will be able to:	Project work Discussion Unit III: Database - Management:- (17 days) Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(), fetchall(), rowcount, creating database connectivity application	**Topics: Variations in Psychological Attributes** **Subtopic:** Individual Differences in Human Functioning Assessment of Psychological Attributes Intelligence Theories of intelligence Individual Differences in Intelligence Intelligence: Interplay of Nature and	**Topic** **Sports & Nutrition** **Subtopic** Concept of Balanced Diet & Nutrition Macro & Micro Nutrients: Food sources & functions Nutritive & Non-Nutritive Components of Diet Eating for Weight Control – A Healthy Weight, The Pitfalls of Dieting, Food Intolerance & Food Myths Importance of Diet in Sports- Pre, During and Post competition Requirements

	3. **Describe** the theme of 'lost childhood' in a structured paragraph 4. **Evaluate** government and societal roles in eradicating child labour 5. **Create** a speech/article suggesting solutions **Activity 1** Debate/Speech: Poverty the Only Cause of Child Labour **Activity 2** Art integrated activity: Writing a letter to a child welfare NGO, drawing their attention to the plight of children trapped in child labour **Health and Wellness:** Awareness about occupational hazards **Topic: A Thing of Beauty** **Subtopics:** · Theme of beauty and immortality · Romanticism · Imagery and poetic devices · Symbolism	by a current loop in a uniform magnetic field. *Moving coil galvanometer, its current sensitivity and conversion to ammeter and voltmeter. *Conceptual and numerical questions. ***CBSE Project** **Learning Outcomes:** *Compare magnetic field with that of electric field. *Explain the difference in the force experienced by a moving charge in a magnetic field only with that moving in an electric field. *Apply Biot Savart law to determine magnetic field intensity due to different current configurations. *Deduce expression for magnetic field intensity due to a current carrying loop, infinite straight wire. *Interpret from Ampere's circuital law that the surface integral of B over closed surface is zero.	the concepts of local maxima, local minima and point of inflection Life Skills Time Management & Efficiency (Rate of Change in Work Productivity) Topic: Integration Sub Topic:Introduction- *Difference between integration and differentiation *Integration using Power Rule *Integration by substitution *Integration of Trigonometric function Students to watch the video to know how to apply substitution method to integrate Learning Outcomes: *define the concept of anti derivative *learn the integral of basic functions by the method of inspection *integrate by substitution *apply the method of substitution to	ethers. Chemical properties of Aliphatic (Reaction with HI) and Aromatic ethers (Anisole) Synthesis, logical reasoning, application, analysis, comparison, identification and conversion-based questions. **Learning Outcomes:** Explain the name reactions and their mechanism (Reimer Tieman reaction, Williamsons Synthesis, Kolbe reaction). Distinguish between different types of alcohols based on Luca's and other tests and also write the equations involved. Solve equation-based questions and interconversions on the preparation of aliphatic and aromatic ethers.	**Learning Outcomes** Each student will be able to- -explain the salient features of DNA double helix structure -compare the packaging of DNA helix in prokaryotes and eukaryotes. -justify giving reason that RNA is the first genetic material -list at least three properties that make DNA a suitable genetic material. -compare the features of DNA and RNA -describe Hershey-Chase experiment as well as Meselson and Stahl's Experiment -explain the mechanism of replication of DNA and its importance	1.Derive the expressions for various aggregates related to GDP 2. Understand and analyse the concepts of real GDP, nominal GDP, NFIA, depreciation, Final and intermediate goods, Factor and transfer income, Stock and flow variables, circular flow of income 3. Solve numericals based on various methods of of estimating National Income 4. Critically analyse GDP as the index of welfare	Learning Outcomes: *Each child will be able to–* =>Create MYSQL database, tables and execute MYSQL queries through Python using mysql.connector Activity Project synopsis Activity *Project code for connectivity-café management system* *Sample Project XII* *Sample Project Synopsis* · Health & Wellness: Mindfulness practices,	Nurture Variations in Intelligence Types of Intelligence Tests Culture & Intelligence Emotional Intelligence Special abilities Creativity **Learning Outcomes:** Students will be able to: Explain psychological attributes on which people differ from each other Describe the different methods used to assess psychological attributes Differentiate between the	**Learning Outcome** Explain the concept of balanced diet and nutrition. Identify macro and micro nutrients with their food sources and functions. Differentiate between nutritive and non-nutritive components of diet. Understand healthy weight control and avoid food myths and faulty dieting. Describe the importance of diet before, during and after sports competition. **Topic** **Test & Measurement in Sports** **Subtopic** Fitness Test – SAI Khelo India Fitness Test in School: *Age group 5–8*

	· Relevance in modern life **Learning Outcome** 1. **Explain** the central theme with textual references 2. **Identify and analyse** at least five poetic devices from the poem. 3. **Compare** Romantic ideals with modern materialism in a classroom discussion. 4. **Create** a reflective paragraph linking nature and mental wellness. **Activity 1** Group Activity: Identify poetic devices in assigned lines. **Activity 2** Art Integrated activity: Creating a poster on, Nature: The Eternal Source of Joy **Health and Wellness:** Nature therapy, Positivity **Topic: Long Writing Skill: Job Application** **Sub Topic** • Format of job application letter • Structure (sender's address, date,	*Compare and contrast the magnetic field due to a solenoid and toroid. *Compare the torque experienced by an electric dipole in an electric field with that experienced by a current loop in a uniform magnetic field. * Compare and contrast the conversion of galvanometer into ammeter and voltmeter. **Activity 1:** **Lab Activity:** *To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using a multimeter. **Activity 2:** **Lab Activity:** *To study the variation in potential drop with length of a wire for a steady current. **Topic: Magnetism and Matter :** **Subtopics:** *Bar magnet, solenoid. *Magnetic field	*solve problems of integration by using trigonometric identities. Activity: To verify that among all rectangles with the same perimeter, the square has the largest area. Value: Responsibility: focuses combating deforestation and promoting sustainable land use.	Solve equation-based questions on the chemical properties of aliphatic and aromatic ethers (Anisole) and related interconversions. **Topic: Biomolecules** **Sub-Topics:** Carbohydrates - Classification D&L configuration, Epimers, Chemical properties of Glucose Cyclic structure of monosaccharides - Fischer and Haworth Projection, Anomers, Mutarotation, glycosidic bond - oligosaccharides and polysaccharides Proteins- Amino acids, classification, characteristics, types and structure of proteins, Peptide bond, Denaturation Nucleic acids-	-differentiate between leading and lagging strands (2 points) -draw a labelled schematic sketch of replication fork of DNA -describe the initiation, elongation and termination process of transcription in bacteria - mention two salient features of genetic code. - interpret a codon chart to determine the amino acid sequence from a given mRNA sequence. -list essential role of ribosome during translation -describe the role of lactose in lac operon - justify why the Lac operon is described as a system of		healthy lifestyle for immunity.	theories of intelligence proposed by various psychologists Discuss variations of intelligence, explain assessment of intelligence Differentiate between intellectual deficiency and intellectual giftedness Explain emotional intelligence Differentiate between intelligence and aptitude Explain the relationship between intelligence and creativity **Activity 1:** Students identify famous personalities	*years / Class I–III:* BMI, Flamingo Balance Test, Plate Tapping Test *Age group 9–18 years / Class IV–XII:* BMI, 50 m Speed Test, 600 m Run/Walk, Sit and Reach Flexibility Test, Strength Tests (Partial Abdominal Curl Up, Push-Ups for boys, Modified Push-Ups for girls) Measurement of Cardio-Vascular Fitness – Harvard Step Test. Duration of exercise (seconds) × 100 / 5.5 × Pulse count (1–1.5 min after exercise) Computing Basal Metabolic Rate (BMR) Rikli & Jones – Senior Citizen Fitness Test: Chair Stand Test (lower body strength), Arm Curl Test (upper body strength),

	subject, salutation, body, complimentary close) • Curriculum Vitae vs Resume • Content enrichment • Common errors **Learning Outcome** 1. Identify correct format components in a worksheet 2. Draft a job application as per CBSE rubric. 3. Create a structured Curriculum Vitae, including **at least** six **relevant headings** 4. Edit and improve peer drafts by identifying minimum three **language errors** 5. Demonstrate understanding of gender-neutral and inclusive language in professional writing **Activity1** Format sequencing activity (jumbled letter parts). **Activity 2** Draft a letter from given job advertisement and peer editing using checklist **Values:** Professional	intensity due to a magnetic dipole (bar magnet) *Torque on a magnetic dipole (bar magnet) in a uniform magnetic field. *Magnetic properties of materials- dia, para and ferro - magnetic substances with examples. **Learning Outcomes:** *Infer the equation for the magnetic field intensity of a bar magnet by comparing it with that of an electric dipole. *Deduce the equation for torque on magnetic dipole in uniform magnetic field by comparing with electric dipole. *Apply formulae and concepts to solve related questions from sample papers, NCERT and board question papers. *Compare and contrast the magnetic field lines due to a solenoid and a bar magnet. *Compare and contrast the behavior of an electric dipole		DNA, RNA, nucleoside, nucleotide, phosphodiester bond Vitamins- significance, types and deficiency diseases **Learning Outcomes:** Define and classify carbohydrates and monosaccharides . Explain the chemical reactions of glucose for the structure determination of glucose. Explain D & L configuration in monosaccharides . Explain the cyclic structure of glucose and fructose. Explain the terms anomers, epimers and mutarotation. Explain the terms- amino acids, peptide bond, Proteins, zwitter	negative regulation - state as to why Human Genome project is called a mega project -mention at least three goals of the Human Genome Project. - explain the principle of DNA fingerprinting developed by Alec Jeffreys. -list the steps of DNA fingerprinting. **Activity1** Preparation of a temporary mount of onion root tip to study mitosis **Activity2** Study of meiosis in onion bud cell or grasshopper testis through permanent slides			who demonstrate giftedness (IQ >130, creativity, rapid learning). **Activity 2:** IQ Calculation Activity Students are given formula: IQ = (Mental Age / Chronological Age) × 100 Students calculate IQ. **Value:** Empathy	Chair Sit & Reach Test (lower body flexibility), Back Scratch Test (upper body flexibility), Eight Foot Up & Go Test (agility), Six Minute Walk Test (aerobic endurance) Johnson–Metheny Test of Motor Educability: Front Roll, Roll, Jumping Half-Turn, Jumping Full-Turn **Learning Outcome** Understand the concept and importance of test and measurement in sports. Calculate cardiovascular fitness using Harvard Step Test formula. Compute Basal Metabolic Rate (BMR). Identify tests for senior citizens and their objectives.

	ethics, effective writing skills **Topic** **Invitations And Replies** **Sub-topics:** • Formal Invitations (Card/Letter Format) • Informal Invitations (Card/Letter Format) • Formal and Informal Replies (Acceptance & Refusal) • Format, Content, Expression **Learning Outcome** 1. Identify and differentiate between formal and informal invitations 2. Draft a formal and informal invitation 3. Draft appropriate formal and informal replies (acceptance/refusal) 4. Demonstrate use of inclusive and gender-sensitive language in written tasks. **Activity 1** Role-play: Inviting a guest for a seminar (formal) and birthday party (informal). **Activity 2** Creating a digital invitation for a	and a magnetic dipole in external fields. **Activity 1:** Comparison of bar magnet with a solenoid and an electric dipole using Venn diagram. **Activity 2:** Comparison of dia, para and ferro magnetic materials using Venn diagram.		ion and denaturation. Explain the $1^0,2^0,3^0,4^0$ structures of proteins. Explain the term - Nucleic acids: their composition, nucleoside, nucleotide and phosphodiester bond. Explain different types of bonds in biomolecules (glycosidic bond, peptide bond and phosphodiester bond). Explain the function of vitamins, their deficiency diseases & function of hormones. Describe the role of biomolecules in biosystem Draw the Haworth and Fischer projections of glucose, fructose and disaccharides. Compare between normal and denatured protein, fibrous	**Life Skills:** Critical Thinking Decision Making Problem solving				Explain motor educability and its assessment. **Topic** **Physiology & Injuries in Sport** **Subtopic** Physiological factors determining components of physical fitness (Strength, Speed, Endurance, Flexibility, Coordination) Effect of exercise on the Muscular System Effect of exercise on the Cardio-Respiratory System Physiological changes due to aging Sports Injuries – Classification Soft Tissue Injuries: Abrasion, Contusion, Laceration, Incision, Sprain, Strain Bone & Joint Injuries:

	gender sensitivity awareness workshop with formal reply samples **Gender Sensitivity:** Inclusive language, Equal representation in social and formal contexts **Topic: The Rattrap** **Subtopics:** • The rattrap metaphor • Poverty and moral conflict • Crofter episode • Ironmaster and Edla • Redemption and transformation • Symbolism and theme **Learning Outcome** 1. **Identify and explain** the rattrap metaphor with textual evidence 2. **Examine** the character of the peddler and Edla in a 150-word response. 3. **Compare** the theme of redemption with another Flamingo text 4. **Evaluate** how compassion leads to transformation, in a group discussion 5. **Create** a diary			and globular proteins, primary, secondary, tertiary and quarternary proteins. Compare and contrast RNA & DNA based on structure and function. **Activity 1: Lab Activity** To determine an anion and a cation present in the given salt sample. **Group 6** **Magnesium salts/ Unknown sample practice:** Mg^{2+} - Cl^- and SO_4^{2-} **Activity 2:** Determine the molarity and strength of the given $KMnO_4$ solution by titrating against M/40 Mohr's Salt solution. You are required to prepare 25 ml of M/40 Mohr Salt solution. **Values:** Fostering Respect For Differences Responsibility and awareness					Dislocation, Fractures (Green Stick, Comminuted, Transverse, Oblique, Impacted) **Learning Outcome** Understand physiological factors affecting physical fitness. Explain the effects of exercise on muscular and cardio-respiratory systems. Identify physiological changes due to aging. Classify different types of sports injuries. Describe common soft tissue and bone injuries. Develop awareness & understanding about injury prevention and care (First Aid).

	entry/article/speech demonstrating thematic understanding **Activity 1** Debate: Crime is a Result of Circumstances, Not Character **Activity 2** Hot seat- Interviewing Edla Willmanson **Values:** Compassion, Redemption, Human Dignity								
July **Topic** **Subtopic** **Learning Outcome** **Activitiy1** **Activity2** **Life Skill** **Value** **Gender** **Health and Wellness**	**Topic: Journey to the End of the Earth** **Sub-Topics:** · Antarctica – geological history · Gondwana and continental drift · Climate change and global warming · Human impact on environment · Role of women explorers · Author's perspective and narrative style **Learning Outcome** 1. Identify and explain at least five geological features	**Topic: Electromagnetic Induction:** **Subtopics:** *Electromagnetic induction; Faraday's laws. *Induced EMF and current. *Lenz's Law, Self, and mutual induction. *Conceptual and numerical questions. **Learning Outcomes:** *Explain the consequences of Faraday's experiments. *State Faraday's laws and Lenz's Law in EMI.	Topic - Integrals - (continued) Sub-Topic- *Integration by substitution. *By parts *By partial fractions *Special integrals *Definite integrals *Properties of definite integrals *Evaluation of definite integrals **Learning Outcome** *Understand integration as the reverse of differentiation *Apply methods of integration: substitution, by parts, and partial	**Topic: Electrochemistry** **Sub-Topics:** Redox reactions, Electrochemical & electrolytic cells Electrode potential and its measurement, EMF of a cell, standard electrode potential, Electrochemical series and its applications. Nernst equation & its application to chemical cells, Relation between Gibb's energy change & emf of	**Topic:** Evolution **Subtopics:** - Origin of Life - Evolution of Life Forms- A Theory -What are the Evidences for Evolution? - Adaptative Radiation - Biological Evolution - Mechanism of Evolution - Hardy-Weinberg Principle -A Brief Account	**Rural Development** **Subtopics:** 1. Meaning & Importance of Rural Development 2. Key Issues (Agricultural Diversification, Credit & Marketing, Infrastructure) 3. Role of	MySQL-PYTHON Connectivity/ file Projet PROJECT WORK (11 days) CSVFiles- (10 days) CSV file: import csv module, open / close csv file, write into a csv file using writer(),writerow(), writerows() and read from a csv file using reader()	**Topic: Psychological Disorders** **Subtopic:** Concepts of Abnormality & psychological disorders Classification of psychological disorder Factors underlying abnormal behavior Major psychological disorders- Mood	**Topic Biomechanics and Sports** **Subtopic** Newton's Laws of Motion & their application in Sports Types of Levers and their application in Sport Equilibrium – Dynamic & Static and Centre of Gravity and its application in Sports Friction & Sports Projectile in Sports

	of Antarctica 2. Discuss how climate change affects Antarctica 3. Interpret the author's tone and purpose 4. Compare Antarctica's past and present conditions 5. Design a sustainability pledge listing 5 actionable eco-friendly practices **Activity 1** Creating a Venn Diagram to compare the past and present Antarctica **Activity 2** Art integrated activity: Creating an awareness campaign poster titled, Act Before It Melts **Health and Wellness:** Climate awareness Sustainable living habits **Topic**: **Aunt Jennifer's Tigers** **Sub-topics:** • Theme of patriarchy • Symbolism (tigers, ring, needle) • Feminist perspective	*Apply Lenz's law/ Fleming's right-hand rule to infer the direction of induced current to different circuit configurations. *Derive mathematically the expressions of self-inductance of a long solenoid, mutual inductance of two coaxial solenoids. *Differentiate between self, mutual induction and self/mutual inductance. **Activity 1:** **Lab Activity:** *To determine resistance of a galvanometer by half-deflection method and to find its figure of merit. **Activity 2:** **Lab Activity:** *To find the focal length of a convex lens by plotting graphs between u and v or between 1/u and 1/v. **Topic: Alternating Current** **Subtopics:** *Alternating currents, peak, and RMS value	fractions *Solve definite integrals and apply their properties *Interpret integrals in real-world contexts such as economics, physics, and engineering *Develop patience and perseverance in solving complex problems *Appreciate the logical structure and beauty of mathematics *draw and interpret graphs accurately Activity - To evaluate a definite integral as a limit of a sum and verify by direct integration Value- Union is strength.Evaluation of any integral and discuss the importance of integration (unity) in life. Topic:Application of Integration Sub topic: *Application in finding area under simple curves Area btw various	a cell and Numerical. Conductance in electrolytic solutions, specific & molar conductivity, Variation of conductivity with dilution & related numerical, Kohlrausch law and its applications- Numerical Concept of electrolysis, Faraday's laws of electrolysis & related numerical Cells and batteries, Mechanism of corrosion **Learning Outcomes:** Explain the term redox reactions and give examples. Describe the construction and working of an electrochemical cell (Daniel cell) and write the cell reactions and representation. Define and explain measurement of	of Evolution -Origin and Evolution of Man **Learning Outcomes** Each student will be able to- -explain any two theories for origin of life -describe Miller's experiment for evolution -mention any two theories of evolution and their evidences -compare divergent and convergent evolution -explain adaptive radiation and biological evolution - compare mutation theory of Hugo de Vries and Darwin's theory of natural selection -state Hardy-Weinberg principle - giving three reasons as to how Hardy-	Government & Sustainable Development **Learning Outcomes** ● analyze major challenges in rural areas and their impact on economic development. ● evaluate government initiatives and suggest practical solutions for rural upliftment. ● develop life skills like critical	Learning Outcomes: *Each child will be able to-* Create interface of Python with an SQL database Connect SQL with Python Create Database connectivity or CSV /Binary file applications *Each child will be able to create and store data in CSV files and create a CSV file based application* Activity *Project code for connectivity-stationery shop management system*	disorders, schizophrenic disorders, behavioral & developmental disorders, substance-use disorders. **Learning Outcomes:** Students will be able: Explain the basic issues in abnormal behavior and the criteria used to identify such behaviors State the factors which cause abnormal behavior Explain different models of abnormal behavior Describe the symptoms of various disorders and	**Learning Outcome** Understand Newton's Laws of Motion and apply them to sports activities. Identify different types of levers and their role in sports movements. Explain equilibrium and centre of gravity in relation to sports performance. Describe the role of friction in different sports. Analyze projectile motion in sports events. **Topic** **Psychology and Sports** **Subtopic** Personality; its definition & types (Jung Classification & Big Five Theory) Motivation, its type & techniques.

	• Poetic devices • Tone and imagery • Contrast: Fear vs Freedom • Poet's background **Learning Outcome** **1.** Identify at least five poetic devices with textual evidence 2. Describe symbolism in 150 words with three textual references 3. Compare themes with Lost Spring, in a structured paragraph 4. Present a two-minute opinion on gender roles using evidence from the poem **Activity 1** Decoding symbols-identifying symbols in the poem and decoding their meanings **Activity 2** Debate: Patriarchy suppresses individuality more than it provides security **Values:** Women Empowerment, Equality and Respect **Topic: Indigo by Louis Fischer** **Sub-topics:**	of alternating current/voltage. Reactance (inductive and capacitive), Phasor diagrams, and impedance (LCR series circuit (phasors only). *Resonance, power in AC circuits. *Power factor, wattless current. *AC generator . *Transformer. **Learning Outcomes:** *Differentiate between average and root mean square values of ac current and voltage. *Mathematically derive the equation for mean value and rms value of a c voltage /current. *Distinguish between resistance, reactance, and impedance in an ac circuit. *Represent the phase relation between current and voltage through phasor diagrams. *Explain behavior of resistor, capacitor, and inductor to a.c graphically.	curves *Shading the common region *Finding the area using integral **Learning Outcome** *draw the curve *find the point of intersection *identify the area to be calculated *calculate the area bounded by the curves such as lines, ellipse, parabola, circle. *apply derivative tests to solve real-world rate problems and optimization questions with accuracy. *develop confidence, logical reasoning, and appreciation for how math supports real-life decision-making and planning. Activity: To identify local maxima, local minima, and points of inflection graphically. Life skills- *Fostering accuracy and systematic thinking	electrode potential of an electrode. Define emf, standard electrode potential and electrochemical series. Define Ohm's law. Define and derive units for resistance, resistivity, conductance, conductivity, molar Define and relate molar & specific conductance in electrolytic solutions. Explain the variation of molar conductivity with dilution. State and explain Kohlrausch law and concept of electrolysis. Explain the construction and working of the 1^0 cells, 2^0 cells and fuel cells. Discuss the mechanism of corrosion writing the chemical equations	Weinberg equilibrium can be affected. -explain the origin and evolution of man **Topic:** Human Health and Disease **Subtopics:** -Common Diseases in Humans -Immunity -AIDS -Cancer -Drugs and alcohol abuse **Learning Outcomes** Each student will be able to--mention the symptoms, preventive measures and cure of two common diseases - explain the life cycle of malarial parasite in human body -list	thinking, problem-solving, empathy, and collaboration. **Activity:** Group Discussion on "How can we improve rural development in India sustainably?" **Topic: Environment and Sustainable Development** **Subtopics:** Environment: Functions & Importance Sustainable Development & Its Need Environmental Issues (Pollution, Global Warming, Resource Depletion) **Learning Outcomes** explain the concept of sustainable development and environmental functions.	*Sample Project XII* Gender Sensitivity: Females as hackers	differentiate among them. **Activity 1:** Give students short case descriptions, e.g.: "Ravi feels extremely anxious before leaving home, avoids crowds, and experiences panic attacks." Students identify: Disorder (Agoraphobia / Anxiety Disorder) Symptoms Possible causes (biological, psychological, environmental) Treatment / Therapy **Activity 2:** Split class into two teams: Nature / Biological Factors	Exercise Adherence: Reasons, Benefits & Strategies for Enhancing it Meaning, Concept & Types of Aggressions in Sports Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self Talk, Goal Setting **Learning Outcome** To make students understand Personality & its classifications. To make students understand motivation and its techniques. To make students about Exercise Adherence and Strategies for enhancing Adherence to Exercise.

	• Champaran episode • Sharecroppers and exploitation • Gandhi's leadership • Civil Disobedience • Role of lawyers • Social reforms (education, hygiene) • Significance of self-reliance **Learning Outcome** 1. Identify and explain the significance of the Champaran Movement 2. Enumerate Gandhi's leadership qualities citing at least three textual references 3. Evaluate the role of civil disobedience through an analytical response 4. Compare themes of courage and resistance through a class discussion. 5. Create a speech/article on social justice **Activity 1** Debate: Gandhiji's leadership empowered the poor more than it challenged the British	*Correlate resonance in LCR circuit and its application in tuning. *Graphically represent the dependence of current on frequency for series LCR circuits. *Deduce the phase relation between current and voltage in a LCR circuit and represent the same using a phasor diagram. *State the principle of working of a c generator, transformer. *Interpret the causes of power loss in transformers. *List the ways of reducing the power loss in the transformer. *Apply formulae to solve related numerical problems. **Activity 1:** **Lab Activity:** *To find the focal length of a concave lens, using a convex lens. **Activity 2:** **Lab Activity:***To draw the I-V characteristic curve	through applied calculus *Learning from errors and building confidence in solving real-world problems	involved at the respective electrodes. Derive Nernst equation and relation between Gibb's energy change & emf of a cell. Solve numerical related to standard electrode potential, electrochemical series, Nernst equation, relation between ΔG and emf. Solve numerical related to Specific, molar conductivity, Kohlrausch and Faraday's laws. Differentiate between electrolytic and electrochemical cells. Predict the product of electrolysis. **Topic: Chemical Kinetics** **Sub-Topics:** Rate of a reaction (instantaneous & average) Factors affecting rate of reaction	the four types of barriers in innate immunity -differentiate between innate and acquired immunity as well as active and passive immunity -compare the role of B and T lymphocytes - list three ways of transmission of HIV infection -mention the events which occur in human body to cause immunodeficiency, when HIV gains entry into the body - describe the causes of cancer and its treatment - name any three drug types and explain their effects **Topic:** Microbes in Human Welfare **Subtopics:** - Microbes in Household	analyze environmental challenges and their economic impact. develop life skills like critical thinking, responsibility, collaboration, and environmental awareness. **Activity: Carbon Footprint Audit"** Students would calculate their daily activities (transport, electricity use, food habits) using a simple carbon footprint chart. They record data and identify major sources of emissions. Students experiment by suggesting small lifestyle changes (e.g., reducing electricity use, using public transport) and estimate reduced emissions. **Topic: Employment: Casualisation, Informalisation & Jobless**		Nurture / Environmental & Psychological Factors Discuss causes of Depression, Schizophrenia, Anxiety Disorders. Conclude with interactionist perspective. **Value:** Empathy **LS**: Pro-social behavior. **Gender sensitivity:** Discrimination practices among gender roles	To make them aware of Aggression in sports and types. To make students understand Psychological Attributes in Sports

	Activity 2 Writing a newspaper report on the court trial **Values:** Truth and Non-violence, Social Justice **Topic: Report Writing** **Sub-topics:** • Format (Heading, Byline, Date, Place) • Types of reports • Language and Tone • Use of passive voice • Chronological order • Draft a 120–150 word report with correct format • Edit peer reports reducing errors **Learning Outcome** 1. Identify format components 2. Differentiate between news and report writing 3. Draft a 120–150 word report with correct format scoring 4. Use at least five factual expressions and two passive constructions correctly 5. Edit peer reports	for a p-n junction diode in forward and reverse bias.		(conc, temp, catalyst) and their graphical representation. Order and molecularity, rate law, specific rate constant. Integrated rate equations & half-life (zero and first order reactions). Pseudo molecular reactions. Collision theory (elementary idea only), Activation energy, Arrhenius equation Mathematical expression. Numerical on the above topics **Learning Outcomes:** Express rate in terms of reactants and products & Rate law. Explain the dependence of rate on factors like concentration, temperature, volume and catalyst. Discuss the mechanism of complex reactions. Define the terms-	products - Microbes in Industrial Products -Microbes in Sewage Treatment Plant - Production of Biogas - Microbes as Biocontrol Agents - Microbes as Biofertilisers **Learning Outcomes** Each student will be able to--explain the role of microbes in household and industrial products - identify the microorganism involved in curd formation (e.g., Lactobacillus) -explain the role of yeast such as Saccharomyces cerevisiae in bread and alcohol production - classify microbial	**Growth** **Subtopics:** 1. Casualisation of Workforce 2. Informalisation of Employment 3. Jobless Growth: Meaning & Implications **Learning Outcomes** Students will be able to: *Explain concepts of casualisation, informalisation, and jobless growth with real-life examples. *Analyze the impact of these trends on workers' security and economic development. *Develop life skills like critical thinking, empathy, decision-making, and social			

	reducing errors **Activity 1** Peer editing: Rearranging and editing a jumbled report **Activity 2** Role Play: Report Writing: eyewitness participant and a reporter **Gender Sensitivity:** Avoiding bias in reporting Inclusive language **Topic: Poets and Pancakes** **Sub-topics:** • Gemini Studios, work culture • Role of make-up department • Subbu's character sketch • Office boy episode • Visit of Stephen Spender • Theme of hierarchy and invisibility • Humour and satire • Gender portrayal in film industry **Learning Outcome** 1. Identify key characters and events 2. Explain themes of hierarchy and invisibility 3. Describe satire			Half-life period & solve numerical related to first order kinetic equation and half-life. Explain the postulates of collision theory. Derive integrated rate equations for zero & first order reaction & solve numerical related to them. Analyses the graphs for determination of the rate constant. Derive Arrhenius equation and solve related numerical. Distinguish between average and instantaneous rate. Distinguish between elementary and complex reactions. Differentiate between order and molecularity of a reaction. **Activity 1:** Determine the percentage purity of the given sample of $KMnO_4$ 0.8grams of	products into antibiotics, enzymes, organic acids, and beverages with examples. - describe the importance of microbes in sewage treatment and in production of biogas -outline the stages of sewage treatment (primary and secondary) - explain the structure and working of a biogas plant with a labelled diagram. - mention the usefulness of microbes as biocontrol agents and as biofertilizers **Activity1** Identification of flash cards / models showing examples of homologous and analogous organs.	awareness. **Activity: Employment Survey Activity** Students will conduct a small survey in their neighborhood (helpers, shop workers, delivery agents, etc.). They will classify workers into formal/informal and casual/regular categories. Students will compile data in a simple table and identify patterns (wages, job security, benefits).			

	and humour using textual references in group discussion 4. Evaluate workplace culture of Gemini Studios comparing it with modern corporate setups 5. Create a reflective paragraph on gender sensitivity in media **Activity 1** Creating a three minute podcast summary episode capturing the everyday life at the Gemini Studios **Activity 2** Art integrated project: Comparing Gemini Studios with one present day Bollywood studio **Values:** Respect for diversity Workplace dignity			which has been dissolved per litre of the solution. You are required to prepare 25ml of M/40 Mohr salt solution. **Activity 2:** PhET Simulations on Daniel cell, SRP, EMF and Electrochemical series **Value:** Fostering Respect for Differences, Conflict Resolution	**Activity2** Identification of common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. **Health and Wellness:** Evolutionary basis of immunity				
August **Topic** **Subtopic** **Learning Outcome** **Activitiy1** **Activity2**	**The Enemy – Pearl S. Buck** **Sub-Topics:** **• Background: World War II** **• Character Sketch: Dr. Sadao and Hana** **• Conflict: duty vs humanity** **• Theme: patriotism vs moral**	**Topic: Electromagnetic Waves :** **Subtopics:** *Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only) *Electromagnetic spectrum (radio waves, microwaves,	Topic- Differential Equations Sub- topic: *Order/Degree *General/Particular solution of a differential equation *Solution of a differential equation by 1)Method of	**Topic: Aldehydes, Ketones and Carboxylic Acids** **Sub-Topics:** IUPAC nomenclature and isomerism Methods of preparation (acetaldehyde	**Topic:** Biotechnology: Principles and Processes **Subtopics:** - Principles of Biotechnology -Tools of Recombinant DNA technology - Processes of	**Determination of Income and Employment** **Subtopics:** *Aggregate Demand & Aggregate Supply *Consumption Function & Investment *Equilibrium	Data Structure: Stack, operations on stack (push & pop), implementation of stack using list. Applications Functions-push, pop,	**Topic: Therapeutic Approaches** **Subtopics:** Nature and process of psychotherapy Therapeutic relationship	**Topic** **Training in Sports** **Subtopic** Concept of Talent Identification and Talent Development in Sports Introduction to

Life Skill Value Gender Health and Wellness	**responsibility** **• Role of women (Hana)** **• Ethical dilemmas** **• Symbolism and ending analysis** **Learning Outcome** **1. Identify at least three themes and textual references** **2. Enumerate Dr. Sadao's moral dilemma in 150-word response** **3. Compare the theme of humanism with another lesson in a structured paragraph** **4. Evaluate ethical conflicts through a debate activity using logical reasoning.** **5. Create a diary entry/article reflecting Hana's perspective** **Activity 1** **Presenting a monologue from Hana's perspective** **Activity 2** **Debate: Acts of kindness towards the enemy are acts of betrayal to one's nation** **Values:** **Humanity above**	infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses. **Learning Outcomes:** * List at least five characteristics of electromagnetic waves. * Identify the electromagnetic spectrum in terms of the wavelength/frequency. * Write at least one use of the components of the electromagnetic spectrum. * Explain transverse nature of em waves(qualitatively). * Differentiate between conduction current and displacement current. **Activity 1:Lab Activity:** *To study the effect of intensity of light (by varying distance of the source) on an LDR. **Activity 2:**	separating variables 2) Homogenous Differential equation *Solutions of Linear differential equations. Learning Outcomes: *find the order and degree *solve the differential equation using the method of separating variables *define a homogenous differential equation *identify a linear differential equation *solve a linear differential equation Activity: To verify that the differential equation represents a family of curves and to find the particular solution for a given initial condition. Health and Wellness Topic: Linear Programming Problem	and acetone) Name reactions (Stephen & Rosenmund reduction) Physical and Chemical properties - Mechanism of nucleophilic addition, addition elimination, reactivity of alpha hydrogen-Aldol condensation Name reactions (Clemmensons reduc, Canninzaro reaction Tests for the functional group-Tollen's & Fehling (oxidation) and iodoform) **Carboxylic acids:** Nomenclature, isomerism, acidic nature & its comparison Method of preparation (acetic acid & benzoic acid) **Physical and chemical properties**, mechanisms involved. Name	Recombinant DNA technology **Learning Outcomes** Each student will be able to--explain biotechnology - mention two core techniques that enabled the birth of biotechnology -state three basic steps in genetically modifying an organism -list three key tools of recombinant DNA technology - explain the naming and mechanism of action of restriction enzymes - compare the role of exonuclease and endonuclease -name two cloning vectors that are used in experiment with E. coli	Level of Income (Multiplier Concept) **Learning Outcomes:** *Explain aggregate demand, aggregate supply, and equilibrium income. *Analyze the role of consumption, investment, and multiplier in income determination. *Develop life skills like analytical thinking, decision-making, and problem-solving. **Activity: Income Determination Simulation** Students will be provided with hypothetical data for consumption (C) and income (Y). Students calculate savings and construct a simple consumption schedule. Using	peek, display (11 days) Unit II: Computer Networks ● Evolution of Networking: ARPANET, Internet, Interspace Different ways of sending data across the network with reference to switching techniques (Circuit and Packet switching). ● Data Communication terminologies: Concept of Channel, Bandwidth (Hz, KHz, MHz) and Data transfer rate (bps, Kbps, Mbps, Gbps, Tbps). ● Transmission media: Twisted pair cable, coaxial cable, optical fiber, infrared,	Behaviour Therapy Cognitive Therapy Humanistic-existential Therapy Alternative Therapies Rehabilitation of the Mentally Ill **Learning Outcome:** Students will be able to: Explain the basic nature and process of psychotherapy Describe the goals of psychotherapy Explain therapies like cognitive therapy, humanistic-existential therapy,	Sports Training Cycle – Micro, Meso, Macro Cycle. Types & Methods to Develop – Strength, Endurance, and Speed. Types & Methods to Develop – Flexibility and Coordinative Ability. Circuit Training - Introduction & its importance **Learning Outcome** Making the students understand the concept of talent identification and methods in sports Making the students Understand sports training and the different cycle in sports training. Making the students Understand

	nationalism, Moral courage **Topic:** **On the Face of It** **Sub-topics:** **• Theme of loneliness and isolation** **• Physical disability and social stigma** **• Role of friendship** **• Symbolism of garden** **• Generational gap** **• Inner vs outer beauty** **• Optimism vs bitterness** **Learning Outcome** **1. Identify and explain at least three themes of the play.** **2. Compare Derry and Mr. Lamb's perspectives** **3. Interpret symbolism used, with two** textual references 4. Evaluate the role of society in shaping identity 5. Create a reflective diary entry demonstrating empathy and emotional growth **Activity 1** **Group discussion:**	**Lab Activity:** *To identify a diode, an LED, a resistor, and a capacitor from a mixed collection of such items. **Value: Scientific attitude** **Topic: Wave Optics** **Subtopics:** *Reflection and refraction of light using Huygen's Principle. *Diffraction due to a single slit, width of central maxima (qualitative treatment only) **Learning Outcomes:** *Draw the reflected and refracted wavefronts using Huygens Principle. *Compare the interference pattern observed in YDSE and single slit diffraction. *Sketch graph between intensity and fringe width for diffraction and interference of light in YDSE. **Topic:Dual Nature of Radiation and Matter** **Subtopics:** *Photoelectric effect,	Sub-Topic- *constraints, Objective fun ,optimization, Different types of L.P.P *Graphical method of solution of problems Learning Outcomes:-*define an L.P.P, objective function,constraints , feasible region, feasible solution *find the feasible region. *solve an L.P.P using Corner point method Activity: To solve a Linear Programming Problem graphically and verify that the optimal value of the objective function occurs at a corner point of the feasible region. Topic: Probability Sub-Topic Introduction-Definition,Sample space,Random experiment *Types of events *Conditional probability *Independent	reaction (HVZ, Kolbe, Boradine Hunsdiecker), **Uses and tests** for the functional group Structural elucidation questions **Learning Outcomes:** Name aldehydes, ketones and carboxylic acids according to IUPAC nomenclature. Write equations for the preparation of preparation of ethanal, acetone & ethanoic acid. Explain the equations for name reactions (Stephen, Rosenmund, Clemmenson reduction, Canninzaro, Aldol condensation, HVZ & Boradine Hunsdiecker reaction). Explain the test for carboxylic group (sodium bicarbonate test, Esterification) and write the equations	-mention two uses of cloning vector in biotechnology -state the methods employed to make bacterial cell competent to take up DNA -list the processes of rDNA technology - describe a technique to obtain multiple copies of a gene in vitro -mention the role of bioreactors **Topic:** Biotechnology and its Applications **Subtopics:** -Biotechnological Applications in Agriculture -Biotechnological Applications in Medicine - Transgenic animals - Ethical issues **Learning Outcomes:** Each student will be able to--describe any	charts/graph paper, they plot AD and AS to identify the equilibrium level of income. Y=C+I; Y = C + I; Y=C+I Students will observe how changes in investment shift aggregate demand and affect equilibrium income.	radio link, microwave link and satellite link. ● Network devices: Modem, RJ45 connector, Ethernet Card, Router, Switch, Gateway, WiFi card. ● Network Topologies and types: Bus, Star, Tree, PAN, LAN, WAN, MAN. ● Network Protocol: TCP/IP, File Transfer Protocol (FTP), PPP, HTTP, SMTP, POP3, Remote Login (Telnet) and Internet, Wireless / Mobile Communication protocol such as GSM, GPRS and WLL. Learning Outcomes:	biomedical therapy and alternative therapies Discuss how people with mental disorders can be rehabilitated **Activity 1:** Divide students into therapist and client pairs. Assign a simple scenario: Anxiety before exams Fear of speaking in public Therapist applies a technique from: Behaviour Therapy: systematic desensitization Cognitive Behaviour Therapy: cognitive restructuring Humanistic	different types & methods of strengths, endurance, and speed. Making the students Understand different types & methods of flexibility and coordinative ability. Making the students understand Circuit training and its importance

	Society more disabled than Derry **Activity 2** **Debate: Isolation a choice not a condition imposed by society** **Gender Sensitivity: Challenging stereotypes, Respect for difference** **Topic: The Interview** **Sub topics** **Part 1:** **• History of interviews** **• Merits and demerits** **• Interview as a communication tool** **Part 2:** **• Interview with Umberto Eco** **• Eco's views on writing** **• Academic vs popular writing** **• Time management** **Learning Outcome** 1. Identify and explain at least five arguments for/against interviews 2. Enumerate Umberto Eco's views on interviews 3. Evaluate the	Hertz & Lenard's experimental set up and observations. *Einstein photoelectric equation, particle nature of light *De Broglie's wave equation and hypothesis. **Learning Outcomes:** *List the various methods of electron emission and define them. *Explain the various observations made by Hertz and Lenard experiments. *Graphically represent the conclusions from experimental set up on photoelectric effect. *State Einstein's laws of photoelectric emission. . *Conclude that wave nature cannot explain photo electric effect. *Correlate with radiation's dual nature and infer that Matter possesses dual nature. **Activity 1:** Draw	events *Bayes Theorem Learning Outcome: : *define probability, random exp, event, sample space *recall the fundamental principle of addition and multiplication *Construct diagrams like trees and Venn diagrams neatly *list the various types of events *differentiate btw independent and mutually exclusive events *perceive the concept of reverse probability *learn the Baye's theorem Activity: To compute conditional probability of an event given using examples like throwing a pair of dice Values * Logic and Decision Making * Objectivity, fair judgment, clarity in analysis Life Skills	involved. Draw the isomers for a given molecular formulae. Discuss and apply the mechanism for Aldol condensation and reactions involving Grignard reagent. Solve interconversions and structural elucidation questions related to aldehydes, ketones & carboxylic acids. Compare the reactivity of aldehydes and ketones towards nucleophilic addition reactions. Distinguish between aldehydes and ketones (DNP, Tollen's, Fehling and Iodoform test) giving the equations involved. Compare the acidity of different types of acids. **Topic: Amines** **Sub-Topics:** Introduction,	two biotechnological applications in agriculture -list any four applications of genetically modified plants -name the cry genes that control cotton bollworm and corn borer -explain the process involved in the production of nematode resistant tobacco plants -compare the insulin produced by Eli Lilly and the one produced by human body -describe the gene therapy procedure for ADA deficient patient -list four ways in which transgenic animals can be beneficial to humans - explain biopiracy and ethical issues **Activity1** Identification		*Each child will be able to* : =>Write codes for stacks - Push, pop, peek, display Activity CBSE Project · Life Skills: Collaborative problem-solving in teams.	Therapy: client-centered supportive discussion **Health and Wellness**: Managing emotions **Value:** Cohesiveness **LS:** Social facilitation **Gender sensitivity:** Gender and Competition	

	ethics of interviews through a debate and present three logical arguments 4. Create a mock interview demonstrating sensitivity and structure 5. Differentiate **between objective reporting and intrusive questioning using examples** **Activity 1** **Class Discussion: Interviews are an invasion of privacy** **Activity 2** Creating a mock interview with five exchanges, demonstrating sensitivity and structure **Health and Wellness:** **Psychological impact of intrusive media**	various graphs related to Photoelectric effect. **Activity 2:** Research on the various applications of Photocell. **Topic: Ray Optics** **Subtopics:** *Mirror formula. *Refraction of light. **Learning Outcomes:** *List the factors on which lateral displacement depends. *List various formulae for refractive index. *Apply a mirror formula to solve related numerical questions. *Draw a ray diagram to show refraction of light through a compound plate. *Apply formulae to solve related numerical questions. **Activity 1:** .*Using Phet simulation, tabulate the change in position, nature, and size of image as object position for a mirror changes, for	*Risk evaluation, predictive thinking, analyzing uncertain situations	Nomenclature and Isomerism. Methods of preparation (Ethanamine and Aniline) Hoffmann Ammonolysis. Physical and Chemical properties of aliphatic and aromatic amines (Hoffmann Bromamide) Hinsberg test for 1^0,2^0 & 3^0 amines. **Diazonium salts:** Benzene Diazonium Chloride-Preparation, Chemical reactions and Importance in synthetic organic chemistry. Related reasoning, application-based questions and inter-conversions. **Learning Outcomes:** Classify amines as primary, secondary and tertiary. Name aliphatic	of models/ specimens showing symbiotic association in lichens, root nodules of leguminous plants, and parasitic mode of nutrition shown by Cuscuta on host. **Activity2** Isolation of DNA from available plant material such as spinach, green pea seeds, papaya, banana etc. **Gender sensitivity:** Recognize contributions of women in biotechnolog y research				

		both mirrors. **Activity 2:** Design small activities to demonstrate refraction of light in daily life. **Gender Sensitivity**: Gender Identity		and aromatic Amines according to common and IUPAC nomenclature. Explain the reactions for the chemical properties of amines. Explain name reaction (Hoffmann Ammonolysis & Hoffmann Bromamide reaction). Draw the isomers for a given molecular formulae. Write the chemical equations for various methods of preparation of Ethylamine, Aniline and Diazonium salts. Solve interconversions, reasoning and application-based questions related to amines. Distinguish between 1^0, 2^0 & 3^0 amines (Hinsberg test). Discuss the importance of Diazonium salts in					

				the synthesis of a series of aromatic compounds. **Activity 1:** Determination of the functional group in the given sample of organic compound. (-COOH, -OH, -CHO. -CO- groups) **Activity 2:** To separate the coloured components, present in the given mixture of ink by ascending paper chromatography and also calculate R_f values. **Life Skills:** Creative Thinking and Problem solving				
September **Topic** **Subtopic** **Learning Outcome** **Activitiy1**	**Topic: Assessment of Listening and Speaking Skills (ALS)** **Listening:** **• Note-making** **• Identifying tone and purpose** **• Inference and evaluation**	**Topic: Ray Optics** **Subtopics:** *Total internal reflection and optical fibers. *Refraction at spherical surfaces. *Lenses, thin lens formula, lens maker's formula.	Revision for Mid term Examination Chap 2- Inverse Trigonometric Functions Chap-3 Matrices Chap-4 - Determinants Chap5-Continuity and Differentiation Chap6-App of	**Topic:** **d and f-Block Elements** **Sub-Topics:** Introduction-d & f block elements, position in periodic table, electronic config, occurrence	**Topic:** Organisms and Populations **Subtopics:** -Population Attributes -Population Growth **Learning Outcomes:** Each student	REVISION FOR THE MID-TERM EXAMINATION	Revision Compilation of record files *Each child will be able* to clarify doubts and solve CBSE papers · Values: Digital	**Revision & Mid Term Examination**	**Revision for the Mid Term Examinations**

Activity2 **Life Skill** **Value** **Gender** **Health and Wellness**	**Speaking:** **• Formal presentation** **• Group discussion** **• Expressing opinion** **• Extempore** **Learning Outcome** **• Identify main ideas and supporting details from an audio clip/transcript** **• Infer speaker's tone, bias and purpose** **• Deliver a two minute structured speech with clear introduction, arguments and conclusion using appropriate vocabulary.** **• Participate in GD demonstrating turn-taking and respectful disagreement** **Life Skills:** **Active listening, Critical thinking, Confidence in public speaking** **Topic:** Revision, Mid-Term **Sub topics** **Reading Skills:** **A. Case-Based Passages**	**Learning Outcomes:** *Explain the phenomenon of TIR. *Differentiate between reflection and TIR. *Apply conditions for TIR to draw the path of light through totally reflecting prisms. *Apply formulae to solve related numerical questions. *Draw ray diagrams to show refraction at a spherical surface. **Activity 1:** Demonstration of TIR . **Activity 2:** Comparative study of Reflection and Total Internal Reflection. **Value:** Curiosity and Optimism	Derivatives Chap7-Integrals Chap8-App of Integrals Chap 9-Differential Equations **Learning Outcomes:** recall, revise, state and apply the properties, theorems and formulae from the mentioned topics and clarify their doubts, if any. Activity:· Students will solve questions given for practice- both written and oral, Google Forms and get their doubts clarified Discussion on Important points and common errors	Characteristics of transition metals. General trends in properties of the first-row transition metals-metallic charac, ionization enthalpy, oxidation state **Learning Outcomes:** Explain the periodic trends in d block elements. Write electronic configuration & predict the common characteristics of the d and f block elements. Justify the position of d & f block elements in the periodic table. Relate the general characteristics and properties of d and f block elements with their electronic configuration. **Revision for Mid term exam** **Activity :** Chameleon colour changing experiment **Health and**	will be able to -state three attributes of population - construct age pyramids showing expanding, stable and declining human population -describe the population growth and its factors -explain Verhulst-Pearl Logistic Growth of a population **Activity1** Study the plant population density by quadrat method. **Activity2** Study the plant population frequency by quadrat method **Values:** Respect for life, Coexistence, Empathy, Responsibility		responsibility, respecting intellectual property rights.		

	• **Discursive/ Factual passages** • **Data-based interpretation** **B. Writing Skills** • **Notice** • **Invitation/Reply** • **Letter to Editor** • **Article** • **Report** **C. Literature (Flamingo and Vistas)** • **Extract-based questions** • **Character analysis** • **Theme-based questions** • **Cross-textual comparison** **Learning Outcome** **1. Identify and analyse key ideas in unseen case-based passages** **2.** Interpret data and infer meaning **in HOTS questions correctly** **3. Draft two short and one long writing task as per format within stipulated word limit** **4. Write 150–200 word analytical answers** **5. Demonstrate improved time**			**wellness:** Seasonal Diet					

	management, completing a section within allocated exam time **Activity 1** **Group work: Fixing formats, trim or expand word limit, improve analysis, reading out the final answers** **Activity 2** **Peer checking using a checklist: key idea correctly identified, at least one valid inference, answer within word limit** **Health and Wellness: Mental health awareness and coping strategies among adolescents**								
	Topic: Assessment of Listening and Speaking Skills (ALS) **Listening:** **• Note-making** **• Identifying tone and purpose** **• Inference and evaluation** **Speaking:** **• Formal**						Computer Science		

	presentation **• Group discussion** **• Expressing opinion** **• Extempore** **Learning Outcome** **• Identify main ideas and supporting details from an audio clip/transcript** **• Infer speaker's tone, bias and purpose** **• Deliver a two minute structured speech with clear introduction, arguments and conclusion using appropriate vocabulary.** **• Participate in GD demonstrating turn-taking and respectful disagreement** **Life Skills:** **Active listening, Critical thinking, Confidence in public speaking** **Topic:** Revision, Mid-Term **Sub topics** **Reading Skills:** **A. Case-Based Passages** **• Discursive/ Factual passages**								

	• Data-based interpretation B. Writing Skills • Notice • Invitation/Reply • Letter to Editor • Article • Report C. Literature (Flamingo and Vistas) • Extract-based questions • Character analysis • Theme-based questions • Cross-textual comparison Learning Outcome 1. Identify and analyse key ideas in unseen case-based passages 2. Interpret data and infer meaning in HOTS questions correctly 3. Draft two short and one long writing task as per format within stipulated word limit 4. Write 150–200 word analytical answers 5. Demonstrate improved time management, completing a								

	section within allocated exam time **Activity 1** **Group work: Fixing formats, trim or expand word limit, improve analysis, reading out the final answers** **Activity 2** **Peer checking using a checklist: key idea correctly identified, at least one valid inference, answer within word limit** **Health and Wellness: Mental health awareness and coping strategies among adolescents**								