TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

Class XI
PARENT SYLLABUS 2026 -2027
SCIENCE
TERM1

Month	English	Physics	Math	Biology	Chemistry	Computer science	Economics	Psy.	P.Ed.
April/May **Topic** **Subtopic** **Learning Outcome** **Activitiy1** **Activity2** **Life Skill** **Value** **Gender** **Health and Wellness**	**Topic** The Portrait of a Lady **Sub-topics:** Introduction to the author and background of the story • Character sketch – Grandmother and Narrator • Changing relationship between the narrator and the grandmother • Theme of ageing, love, and detachment •Symbolism (sparrows, silence, music, white attire) • Relevance in	**Topic: Units and Measurements** **Subtopics:** ***Need for measurement:** **Units of measurement.** ***SI units, fundamental and derived units.** ***Dimensions of physical quantities, dimensional analysis, and its applications.** ***Dimensional analysis and its applications.** **Learning**	**Topic:** Sets **Subtopics:** *Set *represent a set in roaster and set-builder form. * various types of sets. * equal sets. * subset. * universal set. * operations on sets i.e. Union, intersection, complement, difference *Venn diagrams. **Learning Outcomes:** **Each student will be able to:**	**Topic:** Morphology of Flowering Plants **Subtopics** -The Root and the Stem -The Leaf -The Inflorescence and The Flower -The Fruit and The Seed -Description of Solanaceae **Learning Outcomes:** Each student will be able to: -name two types of root systems and give example of each	Topic: Some Basic Concepts of Chemistry Sub-Topics: Importance of chemistry Nature, Properties and classification of matter Precision, accuracy, significant figures Atomic and molecular masses Laws of Chemical Combination-related numerical Mole Concept-	**Unit I: Computer Systems and Organization** ● Basic Computer Organization : Introduction to computer system, hardware, software, input device, output device, CPU, memory (primary, cache and secondary), units of memory (Bit,	**INTRODUCTION** **COLLECTION OF DATA** **ORGANISATION OF DATA** **Learning Outcome:** Each student would be able to: *Understand the meaning of economics in singular and plural sense *Critically analyse the uses and limitations of statistics in Economics *Identify primary	**Topic:** Introduction to psychology **Sub Topic:** Definition of psychology. - Nature of psychology Evolution of psychology - Developmental history of psychology - Common notion about psychology - Branches of psychology -Psychology and other disciplines - Application of psychology in	**Topic** Changing Trends and Careers in Physical Education **Subtopic** 1. Concept, Aims & Objectives of Physical Education 2. Development of Physical Education in India – Post Independence 3. Changing Trends in Sports-playing

	contemporary society **Learning Outcome** Analyse the grandmother's character citing at least 3 textual evidences. Trace the changes in the narrator's relationship with his grandmother in a structured paragraph. Identify 4 literary devices with examples from the text. Evaluate the theme of aging and emotional bonds in a 200-word analytical paragraph **Activity 1** Role Play: Enact a conversation between the narrator and the grandmother at different stages of life **Activity 2**	**Outcomes:** ***List the advantages of SI system of units over other systems.** ***Differentiate between dimensional variables and dimensionless variables.** ***Equate dimensional formulae to their respective physical quantity.** ***Apply the method of dimensional analysis to check correctness of given equations.** ***Apply the method of dimensional analysis to generate equation for a physical quantity.** ***Analyze the limitations of Dimensional Analysis.** **Activity 1:** **Students will draw a Venn diagram to**	*define the term set orally . *represent a set in roaster and set-builder form. *list the various types of sets. *define equal sets. *define a subset. *define a universal set. *explain the various operations on sets i.e. Union, intersection, complement, difference **Activity : Mathematical Laboratory Activity** Verify that if a set has **n elements**, the **total number of subsets is 2^n** **Life Skills** Communication, Team Work **Topic:** Linear Inequalities **Subtopics:** *define an Inequation *find an	-draw diagram to show regions of root tip. -differentiate between racemose and cymose inflorescence -compare hypogynous, perigynous and epigynous flowers -explain the four main types of aestivations. -describe the types of placentation -distinguish between dicot and monocot seed -draw the floral diagram of Solanaceae and mention its floral formula **Topic:** Anatomy of Flowering Plants **Subtopics:** -The Tissue System -Anatomy of Dicotyledonous and Monocotyledonous Plants	numerical Learning outcomes: Each student will be able to: Explain the characteristics of three states of matter. Classify different substances into elements, compound and mixtures. Define & explain various laws of chemical combination and solve related numerical. Discuss the significance of atomic mass, average atomic mass, molecular mass and formula mass. Explain the term mole and write formulae related to mole concept. Solve numerical on mole concept. Lab Activity (Volumetric	Byte, KB, MB, GB, TB, PB) ● Types of software: system software (operating systems, system utilities, device drivers), programming tools and language translators (assembler, compiler & interpreter), application software ● Operating system (OS): functions of operating system, OS user interface ● Boolean logic: NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's	and secondary sources of data *Evaluate various methods of collection of primary data *Compare and contrast census and sampling method *familiarise with the techniques of sampling. *Demonstrate an appreciation for the importance of structured data organization, showing increased confidence and enthusiasm in applying proper data management techniques to enhance organizational effectiveness. *They will value the ethical considerations in data collection and ensure integrity and consistency in data presentation. *Appreciate the significance of	everyday life. **Learning Outcome:** Students will be able to: - Define psychology and also understand it as a discipline of science and social science. Identify key milestones in the historical development of psychology. Differentiate between the popular notions of psychology with the scientific explanations for the same. Recognise the relationship between psychology and other disciplines and how psychology can be applied to everyday life. **Activity 1:** Students will be presented with statements where they will have to explain which statement is a myth and	surface, wearable gear and sports equipment, Technological advancements 4. Career options in Physical Education 5. Khelo-India Program and Fit – India Program **Learning Outcome** • To make the students understand the meaning, aims, and objectives of Physical Education. • To Teach students about the development of physical education in India after Independence . • To educate students about the development

	Art Integrated Activity: Create a visual collage or diary entry depicting the grandmother's life and her relationship with the narrator **Gender:** Respect for homemakers **2. Topic** Poster Making **Sub-topics:** • Elements of a poster (headline, slogan, visuals, layout) • Purpose and types (awareness, advertisement, social issues) • Use of persuasive language •Importance of clarity, brevity, and visual appeal • Creativity and originality **Learning Outcome** Design a poster with an effective slogan and relevant visuals. Identify and apply key	**compare fundamental units with derived units.** **Activity 2: Lab Activity:** **Expt 1: To measure diameter of a small spherical/cylindrical body using Vernier Callipers.** **Life Skill: Teamwork and Collaboration.** **Topic: Kinematics - Motion along Straight line** **Subtopics:** *** Rest and Motion** ***Uniform and non- uniform motion, average speed, and instantaneous velocity.** ***Uniformly accelerated motion, velocity - time and position-time graphs.** ***Equations for uniformly accelerated motion and their application in numerical**	algebraic solution of linear inequalities in one variable and represent it on the number line. *find graphical solutions of linear inequalities in two variables and represent it graphically. **Learning Outcomes:** **Each Student will be able to:** *define an Inequation *find algebraic solutions of linear inequalities in one variable and represent it on a number line. *find graphical solutions of linear inequalities in two variables and represent it graphically. **Activity :** Verify that the graph of the inequality 5x + 4y - 40 < 0 of	**Learning outcomes:** Each student will be able to: -distinguish between simple tissues and complex tissues' -mention three types of tissue systems -differentiate between open and closed vascular bundles -compare the anatomy of dicot and monocot plants **Topic:** Structural organization in animals **Subtopics:** - Morphology of Frog -Anatomy of Frog **Learning outcomes:** Each student will be able to: -compare the features of male frogs and	Analysis) Instructions for Volumetric analysis & experiment demonstration and file format discussion. Determine the strength of the given NaOH solution by titrating it against M/10 HCl solution. Life Skills: Problem Solving Topic: Some Basic Concepts Of Chemistry contd.. Sub Topics: Empirical and molecular formula-numerical Reactions in solutions (mass %age, molarity, molality, mole fraction). Limiting reagent, Stoichiometry ad stoichiometric calculations, related numerical.	laws and logic circuits ● Number system: Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems. ***Flipped Learning Resource: NCERT TEXT/ YouTube video*** ● Encoding schemes: ASCII, ISCII and UNICODE (UTF8, UTF32) **Learning outcome** **Each Child will be able to–** ➢ Develop a basic understanding of computer systems -	organization of data into appropriate structures (e.g., tables, rows, columns, categories) to facilitate easier analysis and retrieval. **DEMAND** **Subtopics:** Meaning of Demand Determinants of Demand Demand Function Demand Schedule and Demand Curve Law of Demand Exceptions to Law of Demand Each student will be able to: *explain the concept of demand and distinguish it from desire, want, and need. *analyze the factors affecting demand and interpret their impact using real-life examples. *construct and interpret demand	which statement is a fact. **Activity 2:** Students will be shown certain video clips, followed by which, they will analyse where all psychology is being applied. **Life Skills:** Understanding one's thoughts, emotions, and behaviour patterns. Also understanding others, feelings and perspective. **Topic:** Methods of Enquiry. **Subtopics:** Goals of - - Psychological enquiries. - Nature of psychological data. -Important methods of research in psychology. - Analysis of data. - Limitations of psychological enquiry. - Ethical issues	of sports surfaces, wearable gear, sports equipment, and technology. • To make students know the different career options available in the field. **Topic** Olympism Value Education **Subtopic** 1. Olympism – Concept and Olympics Values (Excellence, Friendship & Respect) 2. Olympic Value Education – Joy of Effort, Fair Play, Respect for

	elements of a well-structured poster. Use persuasive and concise language appropriate to the theme. Analyse the impact of posters in conveying messages. Create a poster on a given theme demonstrating creativity and clarity. **Activity 1** Group Activity: Analyse different posters and identify their key elements and effectiveness **Activity 2** Art Integrated Activity: Create a poster on a social issue (e.g., Save Environment, Digital Safety, Health Awareness) using appropriate visuals and slogans **Life Skills** Effective written	**questions.** **Learning Outcomes:** ***Differentiate between rest and motion.** ***Represent graphically the variation of position, velocity, displacement etc with time for one dimensional motion.** ***Compare uniform motion with non-uniform motion with examples.** ***Write the equations for uniformly accelerated motion.** ***Apply relevant equations and solve related numerical questions.** **Activity 1:** **Perform activity to measure reaction time in free fall taking help of either sibling or parent and note the**	the form $ax+by+c < 0$ represents **one of the two half planes** determined by the line $ax+by+c=0$. **Life Skills -** Problem Solving **Values -** Responsibility **Topic:** Complex Numbers and Quadratic Equations **Subtopics:** *Introduction *Complex numbers *Algebra of complex numbers **Learning Outcomes:** **Each Student will be able to:** *recognize the need of a system of numbers beyond Real Numbers. *define iota. *define a complex number * find the sum, difference, quotient and product of two	female frogs. -explain digestive, circulatory, respiratory, nervous and reproductive system of frog **Topic** Cell: The Unit of Life **Subtopics:** -Cell and Cell Theory -An Overview of Cells -Prokaryotic Cells Eukaryotic Cells **Learning Outcomes** Each student will be able to: -explain discovery of cell -mention the cell theory -compare plant cell and animal cell as well as prokaryotic cell and eukaryotic cell -state the role of mesosome in prokaryotic cell -mention the structure and function of cell	Learning Outcomes: Each student will be able to: Define the term empirical formula and molecular formula and relate the two. Define the terms- molarity, molality and mole fraction. Calculate the empirical & molecular formula for a compound from the given data. Solve numerical based on molarity, molality and mole fraction. Analyse and explain the terms-limiting reagent and stoichiometry. Solve numerical based on limiting reagent and stoichiometric calculations. Topic: Classification Of Elements and Periodicity in Properties Sub Topics:	➢ architecture, operating systems. ➢ Develop basic understanding of new technologies in Information technology and how are they affecting the modern lifestyle ➢ Develop a basic understanding of computer systems - architecture, ➢ operating systems. ➢ Explain the concept of data ➢ Categorize a data as Structured,	schedules and demand curves. **Activity**:Students conduct a mini-survey within the class by asking peers how many units of a product (e.g., chocolates, pens) they would buy at different price levels. Record responses Create an individual demand schedule Plot a demand curve on graph paper. **Introduction to microeconomics** **Subtopics** *Meaning of Microeconomics *Central Problems of an Economy *Production Possibility Curve (PPC) *Opportunity Cost *Economic vs Non-Economic Activities **Learning Outcomes:**	while conducting research **Learning Outcomes:** Students will be able to : . Identify the main goals of psychological enquiry. Recognise different types of psychical data. Compare experimental, observational and survey methods. Analyse basic techniques of data analysis. Recognise the ethical principles in psychological research. **Activity 1:** The class will be divided into small groups. Each group will become an ethic committee. Short situations will be provided to the students. Each student has to decide	Others, Pursuit of Excellence, Balance Among Body, Will & Mind 3. Ancient and Modern Olympics 4. Olympics - Symbols, Motto, Flag, Oath, and Anthem 5. Olympic Movement Structure - IOC, NOC, IFS, Other members. **Learning Outcome** •To make the students aware of Concepts and Olympics Values (Excellence, Friendship & Respect) • To make students learn about Olympic Value

	communication **3. Topic** A Photograph **Sub-topics:** •Introduction to the poet Shirley Toulson • Theme of loss and nostalgia • Contrast between past and present • Symbolism (photograph, sea, silence) • Poetic devices (alliteration, imagery, irony) • Tone and mood of the poem **Learning Outcome** Summarise the poem in one's own words. Analyse the theme of loss and nostalgia with textual references. Explain the contrast between the poet's past and present in a structured paragraph. Identify 4 poetic devices with examples from the poem.	**factors on which reaction time depends.** **Activity 2: Lab Activity:** **Expt 2: To measure internal diameter and depth of a given beaker/calorimeter using Vernier Calipers and hence find its volume.** **Topic: Kinematics - Motion in a plane** **Subtopics:** ***Scalar and vector quantities.** ***Position and displacement vectors, general vectors and their notations; equality of vectors.** **Learning Outcomes:** ***Differentiate between scalar and vector quantities.** ***Represent**	complex numbers. *define conjugate and modulus of z **Life Skills** Construct logical arguments.	membrane, cell wall, Golgi apparatus, vacuoles, endoplasmic reticulum and lysosomes -differentiate between smooth endoplasmic reticulum and rough endoplasmic reticulum -explain the structure and function of mitochondrion and draw its diagram -name the three types of plastids and state their functions -describe the structure of chloroplast and draw its diagram -compare the electron microscopic structure of cilia/flagella and centriole -draw four types of chromosomes based on the position of centromere -draw labeled diagram of plant and animal cell	Need of classification, History of classification Mendeleev's Periodic Table Modern periodic law and the present long form of periodic table Nomenclature of elements with atomic no. > 100/ Electronic Configuration Division into blocks- characteristics of s, p, d & f block elements. Position in the periodic table Learning Outcomes: Discuss the need of classification of elements. Discuss the basis and features, law, merits and demerits of Mendeleev's and Modern Periodic Table. Explain the significance of electronic configuration as the basis of	➢ Unstructured, or ➢ Semi-structured ➢ Explain data capturing, processing, storage, retrieval, storage including the concept of data loss and recovery ➢ Correlate the processes like data capture, processing, storage and retrieval with the components of a computer system like input, CPU and Memory respectively. Each Child will	Each student will be able to: *explain the scope and importance of microeconomics in real-life decision making. *analyze the central problems of an economy and relate them to scarcity and choice. *interpret the concept of opportunity cost using practical examples and PPC. Activity: **PPC Construction Activity** Students will be given limited resources (e.g., paper tokens representing labour and capital) and asked to "produce" two goods (like notebooks and pens). *Allocate resources in different combinations *Record output combinations	whether that statement is ethical or unethical and which ethical principle is involved. **Activity 2:** Different kinds of interview questions will be presented to the students. The students will construct similar interview questions for their project work. **Life skills:** Development of ethical awareness where students learn to respect privacy, consent and fairness in everyday situations.	Education – Joy of Effort, Fair Play, Respect for Others, Pursuit of Excellence, Balance Among Body, Will & Mind • To make students understand ancient and modern Olympic games. •To make the students aware of Olympics - Symbols, Motto, Flag, Oath, and Anthem • To make students learn about the working and functioning of IOC, NOC and IFS, and other members. **Topic** Yoga

	Interpret the significance of the photograph in conveying emotions. **Activity 1** Recitation Activity: Expressive reading of the poem highlighting tone and emotions **Activity 2** Talking about a favourite picture in class **Life Skills:** Coping with loss **4. Topic** Speech Writing **Sub-topics:** • Purpose and types of speeches (informative, persuasive, motivational) • Structure (introduction, body, conclusion) • Use of rhetorical devices (anaphora, rhetorical questions, repetition) • Audience awareness and	**vectors graphically using arrows.** ***Identify and categorize physical quantities as scalars or vectors.** ***Infer the condition for equality of vectors.** **Activity 1: Diagrammatically represent vectors on graph sheet with magnitude and direction.** **Activity 2: Lab Activity:** **Expt 3: To measure diameter of a given wire and thickness of a given sheet using screwgauge.** **Health and Wellness:** **Importance of healthy diet**		**Topic** Cell Cycle and Cell Division **Subtopics:** -Cell Cycle -M Phase and Significance of mitosis -Meiosis and Significance of Meiosis **Learning Outcomes:** Each student will be able to: -explain cell cycle -state three processes which take place in interphase -mention the significance of mitosis -describe the different stages of mitosis with the help of labelled diagrams -compare cytokinesis in plant cell and animal cell -differentiate between mitosis and meiosis -explain the significance of	classification. Write and explain the electronic configuration of first twenty elements (using rules for filling of orbitals). Classify the elements into s, p, d & f blocks and compare their characteristics. Write IUPAC names for elements with Z > 100 Predict the position of the elements (period and group no) in the periodic table using configuration. Lab Activity (Volumetric Analysis) Determine the strength of the given NaOH solution by titrating it against M/20 oxalic acid solution. Value: Fostering Respect For	be able to–. ➢ Identify various gates ➢ Write Truth Tables ➢ Design Circuits ➢ Write equations for circuit diagrams ➢ Identify Boolean laws ➢ Describe encoding and the need for it. ➢ Represent character data in its internal binary ➢ form, depending on the character set used. ➢ Demonstrate of the basis of different number ➢ systems ➢ Convert a	*Plot a Production Possibility Curve on graph paper.			**Subtopic** 1. Meaning and importance of Yoga 2. Introduction to Astanga Yoga 3. Yogic Kriyas (Shat Karma) 4. Pranayama and its types. 5. Active Lifestyle and stress management through Yoga **Learning Outcome** •To make the students aware of the meaning and importance of yoga • To make them learn about Astanga yoga. • To teach students about yogic kriya, specially shat karmas. • To make the learn and practice types

	tone • Importance of clarity, coherence, and impactful delivery **Learning Outcome** Draft a well-structured speech with a clear introduction, body, and conclusion. Use appropriate tone and language suited to the audience and purpose. Incorporate at least 3 rhetorical devices effectively. Analyse sample speeches to identify key features. Deliver a short speech confidently with proper expression and clarity. **Activity 1** Speaking Activity: Deliver a 1–2 minute speech on a given topic focusing on voice			meiosis -describe the different stages of meiosis I and II with the help of labelled diagrams **Activity 1** Study and describe locally available common flowering plants, from family Solanaceae including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf (arrangement shape, venation, simple and compound) **Activity 2** Preparation and study of T.S. of dicot and monocot roots and stems	Differences	value from one number base / ➢ represent ation to another ➢ Describe the need of using different number ➢ systems. ➢ For example, relation between the hexadeci mal ➢ represent ation of colours in computer s. Activity: Make Chart of all the gates with TT Life Skills-Problem Solving Skills, Decision-making skills, Critical Thinking			of Pran • To make them learn the importance of yoga in stress management. **Topic** Physical Education and Sports for Children with Special Needs **Subtopic** 1. Concept of Disability and Disorder 2. Types of Disability, its causes & nature (Intellectual disability, Physical disability) 3. Disability Etiquette 4. Aim and objectives of Adaptive physical Education 5. Role of various professionals for children

	modulation and expression **Activity 2** Art Integrated Activity: Design a cue card/poster highlighting key points and rhetorical devices for a speech on a contemporary issue **Health and Wellness:** Mental health awareness			(primary). **Health and Wellness:** Cell Health Awareness					with special needs (Counselor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist, and Special Educator) **Learning Outcome** • To make the students aware concept of Disability and Disorder. • To make students aware of different types of disabilities. • To make students learn about Disability Etiquette • To make the students Understand the aims and objectives Adaptive Physical Education

									• To make students aware of role of various professionals for children with special needs.
July **Topic** **Subtopic** **Learning Outcome** **Activitiy1** **Activity2** **Life Skill** **Value** **Gender** **Health and Wellness**	**1. Topic** The Summer of the Beautiful White Horse **Sub-topics:** •Introduction to the author William Saroyan •Background of the Garoghlanian tribe • Character sketch – Aram and Mourad • Theme of honesty, trust, and moral values • Irony and humour in the story •Significance of the horse **Learning Outcome** Analyse Mourad's character citing at least 3 textual evidences.	**Topic:** **Kinematics - Motion in a plane** **Subtopics:** ***Addition and subtraction of vectors.** ***Mmultiplication of vectors by a real number.** ***Resolution of a vector in a plane, rectangular components.** ***Scalar and Vector product of vectors.** ***Projectile motion.** ***Uniform Circular Motion.** ***Conceptual and Numerical Questions.** **Learning Outcomes:** ***Conclude the effect on the**	**Topic:** Relations and Functions **Subtopics:** * Introduction *Cartesian Products of Sets *Relation *Functions: a) Some functions and their graph **Learning Outcomes:** **Each Student will be able to** * find ordered pair * find cartesian product of two non- empty sets. * Define Relation between two non- empty sets. its Domain and Range. * Define Function. its	**Topic** Biomolecules **Subtopics:** -Primary and Secondary Metabolites and -Biomacromolecules -Proteins and Structure of Proteins -Polysaccharides and -Nucleic Acids -Enzymes **Learning Outcomes:** Each student will be able to -give two examples of biomacromolecules -give reason as to why lipids are not biomacromolecu	Topic:Basic Concepts of Chemistry Sub-Topics: Revision of numerical concepts Learning Outcomes: Solve numerical problem questions on the concept of molarity, molality and mole fraction. Topic: Classification Of Elements and Periodicity in Properties Contd. Sub-Topics: Modern periodic law and the present long form of periodic table Nomenclature of elements with atomic no. > 100/ Electronic	**Familiarization with the basics of Python** Programming: a simple "hello world" program, the process of writing a program (Interactive & Script mode), running it and print statements; simple data-types: integer, float and string. ● Features of Python, Python Character Set, Token & Identifiers, Keywords, Literals, Delimiters,	**Consumer's Equilibrium** ● Meaning of Utility (Total Utility & Marginal Utility) ● Law of Diminishing Marginal Utility ● Conditions of Consumer's Equilibrium (Utility Analysis) ● Equilibrium using Indifference Curve (Basic idea) **Learning Outcomes:** Each student will be able to: ● explain utility concepts and the law of diminishing marginal utility with examples.	**1. Topic: Learning** **Sub-topic:** Nature of learning Classical conditioning Operant conditioning Observational learning. Cognitive learning Verbal learning Skill learning Factors facilitated learning Learning disabilities **Learning Outcomes:** Students will be able to: - Explain nature and keep processes of learning with relevant examples.	**Topic** Physical Fitness, Wellness, and Lifestyle **Subtopic** 1. Meaning & importance of Wellness, Health, and Physical Fitness. 2. Components/ Dimensions of Wellness, Health, and Physical Fitness 3. Traditional Sports & Regional Games for promoting wellness 4. Leadership through Physical Activity and

	Examine the theme of honesty and moral values in a structured paragraph. Identify 4 literary devices with examples from the text. Explain the significance of the horse in the story. **Activity 1** Role Play: Enact a scene between Aram-Mourad and John Byro discussing the horse **Activity 2** Art Integrated Activity: Create a storyboard illustrating key events of the story with brief captions **Life skills:** Balancing societal expectations and personal desires **2. Topic** The Laburnum Top **Sub-topics:** •Introduction to the poet Ted Hughes	**magnitude of a vector when multiplied by a real number.** ***List examples (at least two each) for horizontal and angular projectile.** ***List the terms related to rotational motion and relate these with linear motion.** ***Represent the rectangular component of vectors by mathematical equation.** ***Represent horizontal projectile and angular projectile diagrammatically.** ***Derive mathematical equations for trajectory, time of flight, height and range for horizontal as well as angular projectile.** ***Apply the formulae logically and solve**	Domain and Range. * Difference between relation and function. * How different types of functions can be represented by graphs. **Activity 2: Dance and Mathematics** Students use **hand movements and body positions** to represent different graphs of functions, helping visualize increasing and decreasing functions. **Gender Sensitivity** Awareness **Values** Responsibility **Topic:** Trigonometric Functions (13) **Subtopics:** *Introduction *Angles *Degree measure *Radian measure	les - list the functions of proteins, carbohydrates and nucleic acids -explain four levels of protein structure -describe the structure of DNA -mention three properties of enzymes and explain their functions -explain activation energy of enzymes -list three factors affecting the functions of enzymes -state three kinds of cofactors and mention their application. **Topic:** The Living World **Subtopic:** Diversity in the living world and taxonomic categories **Learning Outcomes:**	Configuration Division into blocks-characteristics of s, p, d & f block elements. Position in the periodic table Position of the elements in the periodic table Trends in the periodic Properties: Atomic radii-ionic radii & inert gas radii, ionization enthalpy, electron gain enthalpy electronegativity, valency and chemical reactivity) Learning Outcomes: Explain the significance of electronic configuration as the basis of classification Write and explain the electronic configuration of first twenty elements (using rules for filling of orbitals). Classify the	Operators. ● Comments: (Single line & Multiline/ Continuation statements), Clarity & Simplification of expression ● Introduce the notion of a variable and methods to manipulate it (concept of L-value and R-value even if not taught explicitly). ● Knowledge of data types and operators: accepting input from the console, assignment statement, expressions, operators and their precedence. ● Operators & types: Binary operators-Arithmetic, Relational Operators, Logical Operators,	• analyze how a consumer reaches equilibrium under given income and prices. • apply equilibrium conditions to solve simple numerical and real-life situations. **Activity:** Utility Measurement Experiment (Eating Activity) Students are given small eatables (e.g., toffees/biscuits). ● Consume units one by one ● Record satisfaction level after each unit (assign imaginary utility units) ● Calculate Total Utility and Marginal Utility ● Observe and verify the Law of Diminishing Marginal	-Differentiate between types of learning such as classical conditioning, operant, conditioning, observation, learning, and verbal learning. - Apply principles of classical conditioning and operant conditioning to real life situations. - Analyse factors that facilitate learning and their impact on performance. - Evaluate different learning processes and identify their effectiveness in every day context. -Recognise learning disabilities and suggest support strategies for inclusive learning. **Activity 1:** One student will be asked to step	Sports 5. Introduction to First Aid – PRICE **Learning Outcome** • To make the students understand the Meaning & importance of Wellness, Health, and Physical Fitness • To make students aware of the Components/ Dimensions of Wellness, Health, and Physical Fitness • To make students learn Traditional Sports & Regional Games to promote wellness • To develop Leadership qualities through Physical Activity and Sports in students • To make students

	• Theme of life emerging from stillness • Contrast between silence and activity • Symbolism (laburnum tree, goldfinch, yellow colour) • Imagery and poetic devices • Tone and movement in the poem **Learning Outcome** Summarise the poem in one's own words. Analyse the contrast between stillness and activity with examples. Explain the role of the goldfinch in transforming the scene. Identify 4 poetic devices with examples from the poem. Interpret the symbolic significance of the laburnum tree. **Activity 1** Role Play-Dialogue exchange	**conceptual question, numerical.** **Activity 1: Students working in groups will create a comic strip or storyboard of a real-world projectile (e.g., throwing a ball, a firework). Label velocity components, path, time of flight, max height, and range.** **Activity 2: Lab Activity: Expt 4: To study the relation between force of limiting friction and normal reaction and to find the coefficient of friction between surface of a moving block and that of a horizontal surface.**	*relation between degree and radian *Trigonometric functions *Signs of trigonometric functions *Trigonometric Functions of sum and difference. **Learning Outcomes:** **Each Student will be able to** *convert Radian and Degree measure and conversion from one to another. * Transform trigonometric functions in all four quadrants *Write trigonometric functions of sum and difference of two angles. * write sum and difference formulas for $Cos(A \pm B)$ $Sin(A \pm B)$ $Tan(A \pm B)$ * Exress multiple formulas like sin 2x, cos 2x, tan	Each student will be able to: -give reason as to why it is important to classify organisms -explain binomial nomenclature with an example -list the universal rules of nomenclature -name taxonomic categories in ascending order of hierarchical arrangement **Topic:** Biological Classification **Subtopics:** -Kingdom Monera -Kingdom Protista -Kingdom Fungi -Kingdom Plantae, -Kingdom Animalia -Viruses, Viroids, Prions and lichens **Learning Outcomes:**	elements into s, p, d & f blocks and compare their characteristics Write IUPAC names for elements with Z > 100 Predict and explain the position of the elements (period and group no) in the periodic table using configuration. Predict the position of the elements (period and group no) in the periodic table using configuration. Define periodic properties- atomic and ionic radii, ionization enthalpy, electron affinity, electronegativity, valency and chemical reactivity. Explain the trends and exceptions related to the above periodic properties. Compare the	Augmented Assignment Operators. . ● Execution of a program, errors- syntax error, run-time error and logical error. ● Conditional statements: if, if-else, if-elif-else; simple programs: e.g.: absolute value, sort 3 numbers and divisibility of a number. ● Notion of iterative computation and control flow: for(range(),len()), while, using flowcharts, suggested programs: calculation of simple and compound interests, finding the factorial of a positive number etc	Utility. **PRESENTATION OF DATA** **Sub-topics** Tabular Presentation Diagrammatic Presentation-bar diagram simple bar diagram, multiple and subdivided bar diagram deviation bar diagram, percentage bar diagram, histogram frequency of frequency polygon **Learning Outcomes:**	outside the classroom briefly. A small object will be hidden in the classroom. The student will be called back in the class and must guide that student towards that without speaking. The entire class will clap loudly when the student moves closer to the object. They stay silent or clap softly when the volunteer moves away from the hidden object. Activity 2: Student stand in a circle and one student is appointed as the leader. The leader starts doing simple actions such as stretching, clapping head movements. Everyone must watch and copy immediately. No instructions are given. Subtly	learn First Aid and its management skills. **Topic** Test, Measurement & Evaluation **Subtopic** 1. Define Test, Measurements and Evaluation. 2. Importance of Test, Measurements and Evaluation in Sports. 3. Calculation of BMI, Waist – Hip Ratio, Skin fold measurement (3-site) 4. Somato Types (Endomorphy Mesomorphy & Ectomorphy 5. Measurements of health related fitness. **Learning Outcome**

	between the laburnum tree and the goldfinch, expressing gratitude. **Activity 2** Art Integrated Activity: Create a post for any social media platform related to birds and their protection. **Gender:** Respect for caregivers and nurturers **3. Topic** Debate Writing **Sub-topics:** • Purpose and format of a debate (for/against) • Structure (introduction, arguments, rebuttal, conclusion) • Use of formal and persuasive language • Framing strong arguments and counterarguments • Use of rhetorical devices (rhetorical questions,	**Topic: Laws of Motion** **Subtopics:** *** Intuitive concept of force, Inertia, Newton's first law of motion.** *** Momentum and Newton's second law of motion.** *** Impulse; Newton's third law of motion.** **Learning Outcomes:** ***State the laws of motion.** ***Explain the effect of force in terms of the different changes that it may cause on an object.** ***Apply formulae to solve related questions.** *** Draw graph between force and time to represent Impulse.** ***Explain the relation between force and inertia (relate to real life example)** ***Interpret the**	2x, sin 3x, cos 3x, tan 3x. **Lab Activity** To plot the graphs of sin x, sin 2x, 2sinx and sin x/2 , using the same coordinate axes **Life Skill:** Logical Reasoning Analytical skill	Each student will be able to: -compare characteristics of the five kingdoms -name the four categories of bacteria based on their shape -distinguish between Archaebacteria and Eubacteria -name the groups of Kingdom Protista and state two characteristics of each. -mention two features of Kingdom Fungi -compare the features of classes of fungi -mention one feature each of viruses, viroids, prions and lichens **Topic:** Plant Kingdom **Subtopics:** -Algae -Bryophytes - Pteridophytes -	relationship between ionization enthalpy and metallic character. Explain diagonal relationship shown by Li and Mg, Be and Al. Solve reasoning-based questions on the periodic trends. Topic: Redox Reactions Sub-Topics: Classical and Electronic concept of redox reactions –Oxidation and Reduction reactions. Redox reactions in terms of Oxidation number and calculation of oxidation number Types of redox reactions- Disproportionation reaction etc Balancing of redox reactions- Half reaction method and Oxidation	**Learning outcome** **Each Child will be able to–** ➢ state the purpose behind algorithms and flowcharts. ➢ Identify different shapes of flowchart ➢ use each shape in a flowchart. ➢ Define data and identify different data types. ➢ Understand rules of naming variables and identifying datatypes	Each student would be able to: *compare and analyse the diagrams *compute median and mode using diagrams. *develop sensitivity to the consequences of manipulating or misrepresenting data. **Activity:** create bar graphs, pie charts, line graphs, and other visual representations of data using appropriate tools.	and quietly, the leader will switch, and see how quickly others will notice and adapt **Values** Responsibility for learning as to take ownership of one's behaviour and learning process. Empathy and inclusivity that is supporting and understanding individuals with learning disability. **Topic 2: Memory** **Sub-Topic:** Nature of memory Information processing approach Working memory levels of processing Types of long-term memory Nature and cause of forgetting Enhancing	• To Introduce the students with the terms like test, measurement and evaluation along with its importance • To Introducing them the methods of calculating BMI, Waist- hip ratio and Skin fold measurement. • To make the students aware of the different somatotypes. •To make the students learn the method to measure health-related fitness.

	repetition, emphasis) **Learning Outcome** Draft a well-structured debate expressing clear arguments for or against a topic. Use persuasive language and appropriate tone. Present at least 2–3 strong arguments with supporting examples. Incorporate a rebuttal effectively. Analyse sample debates to identify key features. **Activity 1** Group Activity: Conduct a classroom debate on a contemporary topic (for/against) **Activity 2** Drafting debates in pairs. **Life Skills:** Critical Thinking, Effective	**relation between inertia and mass.** ***State the applications of conservation of linear momentum.** **Activity 1: Concept Mapping :Students will create a concept map connecting Newton's Laws to other concepts: mass, force, inertia, momentum.** **Activity 2: Lab Activity: Expt 5: To determine the coefficient of viscosity of a given liquid by measuring the terminal velocity of a spherical body.** **Gender Sensitivity: Gender and Society**		Gymnosperms - Angiosperms **Learning Outcomes:** Each student will be able to: -describe the basis of classification of algae -explain two characteristics each of algae and bryophytes -give two examples each of algae and bryophytes -compare Chlorophyceae, Phaeophyceae and Rhodophyceae on the basis of their pigments, stored food and cell wall -differentiate between liverworts and mosses -explain the importance of algae and bryophytes **Activity 1** Test for the presence of sugar, starch, proteins and fats	number method Learning Outcomes: Define the terms oxidation, reduction, oxidizing & reducing agent in terms of classical concept and electronic concept. Cite examples for redox reactions in terms of classical, electronic & Oxidation number concept. Apply rules to calculate oxidation number of an atom in different species. Define the term disproportionation reaction. Apply the rules to calculate oxidation number for an element in different species. Balance redox reactions using half reaction & oxidation number method	➢ Be able to assign proper variable names. ➢ Use the statements according to syntax and in proper sequence. ➢ Identify the different types of operators used in PYTHON. ➢ Use the operator according to requirement in the program ➢ use the statements according to the syntax ➢ form proper condition checking statements		memory. **Learning Outcomes:** Students will be able to: - Explain the nature of memory using everyday examples. -Differentiate between working memory levels of processing and types of long-term memory. Analysing causes of forgetting and relating them to real life events. Applying strategies for enhancing memory in Academic and real life situations. Evaluating the effectiveness of different memory techniques for improving retention. **Activity 1:** Students will be asked to solve a	

	Communication **4. Topic** We Are Not Afraid to Die… If We Can All Be Together **Sub-topics:** •Introduction to the author Gordon Cook •Background of the voyage and setting (sea journey) • Character sketch – Narrator, Mary, Jonathan, Suzanne • Theme of courage, resilience, and family unity • Conflict between man and nature • Use of descriptive language and narrative technique **Learning Outcome** Analyse the narrator's leadership and decision-making with textual references. Examine the theme of courage and survival in a			in suitable plant and animal materials. **Activity 2** Specimens/slides/models and identification with reasons - Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen. **Values:** Respect for Life: Responsibility: Integrity in Science	Activity 1 Lab Activity (Volumetric Analysis) Determine the strength of the given Na_2CO_3 solution by titrating it against M/10 HCl solution Activity 2 Qualitative analysis To determine an anion and a cation present in the given salt samples. (Group 1 – Pb salts) Life Skills: Problem solving and Critical thinking	➢ differentiate among looping statements di ➢ use these statements in programs ➢ Use if..else statements in a program ➢ Use loops to create applications ➢ use the nested loops statements according to the syntax ➢ form proper condition checking statements ➢ use the statements in programs Activity Develop a		pseudo puzzle within a given 20 minutes, explaining to them, how it improves in remembering information and decreasing the probability of Alzheimer's disease. **Activity 2:** Students will be taken for a walk to an active area of the school. They'll be asked to observe their surroundings. After that they'll be taken back to class and they'll be asked to recall everything that all around them, this will simply be to understand the functioning of sensory memory. **Life Skill:** Effective time management strategies.	

	structured paragraph. Identify 4 literary devices with examples from the text. Evaluate the role of family support in overcoming adversity. **Activity 1** Role Play: Enact a scene depicting the family's response during the storm **Activity 2** Write a diary entry as the narrator highlighting what kept him motivated during the tough times at the sea. **Life skills:** Adopting Positive thinking to come out of an adverse situation					game Gender Sensitivity- Women as game developers		Developing perseverance, such as overcoming, forgetting through consistent practice.	
August **Topic**	**1. Topic** The Address **Sub-topics:** • Introduction to	**LAWS OF MOTION** *Law of conservation of	**TOPIC : Limits and Derivatives** Subtopics:	**Topic:** Animal Kingdom **Subtopics:**	Topic: Redox Reactions contd.. Sub-Topics:	Strings: introduction, indexing, string	**Topic:Measures of Central Tendency** Subtopics:	**Topic: Motivation and emotion**	**Topic** Fundamentals of Anatomy,

Subtopic **Learning Outcome** **Activitiy1** **Activity2** **Life Skill** **Value** **Gender** **Health and Wellness**	the author Marga Minco • Historical background (post-war context) • Theme of loss, memory, and displacement • Character sketch – Narrator and Mrs Dorling • Symbolism (objects, address, house) • Tone of detachment and emotional restraint **Learning Outcome** Summarise the story in 150 words. Analyse the narrator's feelings towards her past with textual references. Examine the theme of loss and displacement in a structured paragraph. Identify 4 literary devices with examples from the text. Interpret the	linear momentum and its applications *Friction and its cause *Static and kinetic friction, laws of friction *Level curved road and banked curved road **Learning Outcome:** * Explain the law of conservation of linear momentum using Newton's laws. * Distinguish between types of friction (static, kinetic, rolling). *Compare static and kinetic friction with examples. * Explain the need for banking of roads using centripetal force concepts. *Solve numerical problems involving collisions *Calculate	Introduction to Limits Intuitive Idea of Derivatives Limits (LHL, RHL, Existence) Limits of Trigonometric, Exponential and Algebraic Functions Introduction to Derivatives Derivatives by First Principle Rules: Sum, Difference, Product, Quotient, Chain Rule **Learning Outcomes:** **Each Student will be able to** Define and interpret limits graphically Evaluate limits of different functions Distinguish LHL, RHL and existence of limits Define derivative as rate of change and slope Apply first principle to find derivatives Use standard derivative	-Basis of classification and Levels of Organisation -Porifera and Coelenterata -Ctenophora and Platyhelminthes -Aschelminthes and Annelida -Arthropoda and Mollusca -Echinodermata and Hemichordata -Chordata **Learning Outcomes:** Each student will be able to: -explain the different features used as the basis of animal classification. -state two characteristic features of different phyla (Porifera, Coelenterata, Ctenophora, Platyhelminthes Aschelminthes, Annelida) -give one example each of Porifera, Coelenterata, Ctenophora,	Redox reactions and electrode processes, Galvanic cell, electrochemical series and its applications Learning Outcomes: Apply the concept of redox reactions in terms of electrode process (Galvanic cell) and electrochemical series Apply electrochemical series to determine the relative strength of oxidants and reductants and feasibility of reactions Topic: Structure Of Atom Sub-Topics: Developments leading to Bohr's model of atom- dual character of electromagnetic radiation Wave nature of electromagnetic radiation- Electromagnetic	operations (concatenation , repetition, membership & slicing), traversing a string using loops, built-in functions: len(), capitalize(), title(), lower(), upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha(), isdigit(), islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), split() ● Lists: introduction, indexing, list operations (concatenation , repetition, membership & slicing), traversing a	• Meaning and Objectives of Central Tendency • Arithmetic Mean (Simple & Weighted) • Median (Ungrouped & Grouped Data) • Mode • Comparison of Mean, Median, and Mode Learning Outcomes: Each student will be able to: • computer mean, median, and mode for different types of data. • analyze which measure is most appropriate in different real-life situations. • interpret data using measures of central tendency for meaningful conclusions. **Activity: Class Data Collection & Calculation**	**Sub topic:** Nature of Motivation. Types of motives Malow's hierarchy of needs Nature of emotions, expression of emotions Managing negative emotions Enhancing positive emotions **Learning Outcomes:** **Students will be able to** Understand the nature of human emotion Describe the nature of Motes and emotional expressions Analyse the relationship between culture and emotions And apply how to manage one's own and others emotions. **Activity 1:**	Physiology in Sports **Subtopic** 1. Definition and importance of Anatomy and Physiology in Exercise and Sports. 2. Functions of Skeletal System, Classification of Bones, and Types of Joints. 3. Properties and Functions of Muscles. 4. Structure and Functions of Circulatory System and Heart. 5. Structure and Functions of Respiratory System. **Learning Outcome** • The students will learn the meaning and definition & identify the importance of

	significance of the title "The Address." **Activity 1** Role Play: Enact the interaction between the narrator and Mrs Dorling **Activity 2** Art Integrated Activity: Create a memory box (sketch or description) representing objects from the narrator's past and their emotional value. **Values:** Peace, Global Harmony, Non-violence **2. Topic** Note Making and Summarisation **Sub-topics:** • Purpose and importance of note making • Features of effective notes (headings, subheadings, abbreviations, symbols) • Methods of note making (linear and non-	frictional forces using appropriate formulas. *Create diagrams showing forces on vehicles on curved roads. *Compare and contrast friction with electrical resistance. **Activity 1-** Lab Activity: To find the force constant of a helical spring by plotting a graph between load and extension. **Activity 2- *** Students will be asked to mark the various forces acting on a vehicle negotiating a banked curved road in a diagram **Work, Energy Power** -Work done by a constant force and a variable force -Kinetic energy, Work Energy	formulas Apply product, quotient and chain rules Solve application-based problems **Activity : Verification of Limit using Table Method (NCERT Lab Manual)** Students take a function (e.g., $f(x)=x^2-1/\ x-1$ and evaluate its value for inputs approaching a point from left and right using a table. They observe LHL and RHL to verify the existence of limits. **Values** Accuracy and precision in calculations.	Platyhelminthes Aschelminthes and Annelida state two characteristic features of different phyla (Arthropoda, Mollusca and Echinodermata) -mention one example each of Arthropoda, Mollusca and Echinodermata and two characteristic features each of Amphibia, Reptilia, Aves and Mammalia -mention one example each of Amphibia, Reptilia, Aves and Mammalia **Topic** Photosynthesis in Higher Plants **Subtopics:** -Early experiments -Site of photosynthesis and types of pigments involved in photosynthesis	spectrum Dual behaviour of electromagnetic radiation, Atomic spectra-Emission & absorption spectra, Line spectrum of Hydrogen Bohr's model-Postulates & Limitations Developments leading to -Quantum Mechanical Model of atom Dual behaviour of matter (de-Broglie equation) & Heisenberg uncertainty principle-Significance and Limitations Numerical related to wave characteristics, de-Broglie equation and Heisenberg uncertainty principle. Quantum Mechanical Model of atom-Schrodinger wave equation and Postulates, Quantum	list using loops, built-in functions: len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list **Learning outcome** **Each Child will be able to–** ➢ Declare strings and use strings in	**Activity** Students collect real data (e.g., marks of classmates in a test or number of siblings). Organize the data into a table. Calculate mean, median, and mode. Compare results and identify which measure best represents the data.	Students will be divided into small groups and different situations will be assigned to Each group. Each group will act out their situation. Others will observe carefully. Students will guess which stage of the name is being shown and depicted in that act. **Activity 2:** Students will practise shifting from negative positive emotional responses. Certain situations will be discussed with the students. Initially the students may show their instant reaction which will be negative, and suddenly they will be asked to switch that reaction to a	anatomy, physiology, and kinesiology. • Students will understand the main functions and Classification of Bone and the Types of Joints. . • The students will learn the Properties and Functions of Muscles. • The students will learn the Structure and Functions of the Circulatory System and Heart. • The students will learn the Structure and Functions of Respiratory System. **Topic** Fundamentals Of Kinesiology And Biomechanics in Sports **Subtopic** 1. Definition

	linear formats) • Steps in summarisation • Difference between note making and summarising • Use of appropriate title and key points **Learning Outcome** Prepare well-structured notes using headings, subheadings, and abbreviations. Identify and extract main ideas and supporting details from a passage. Write a concise summary in one's own words adhering to word limit. Apply appropriate format and maintain coherence and clarity. Analyse a passage to differentiate between essential and non-essential information. **Activity:**	Theorem -Connected Motion and Power -Notion of potential energy, potential energy of a spring -Conservation of mechanical energy -Elastic and Inelastic collisions in one and two dimensions **Learning Outcomes:** *interpret the conditions for positive, negative and zero work done. * list different types of energy. *state and prove mathematically work energy theorem. write the equation for common acceleration and tension. * correlate between the two types of potential energy with real life examples.		-Light reaction -The electron transport -The Calvin cycle -The C4 Pathway -Photo respiration -Factors affecting photosynthesis **Learning Outcomes:** Each student will be able to: -state the importance of photosynthesis -mention the site of photosynthesis -name four pigments involved in photosynthesis -explain the structure of chloroplast and its role in photosynthesis -compare cyclic and non-cyclic photophosphorylation -illustrate Calvin cycle and Hatch and Slack pathway -differentiate between the	number Concept of orbitals Shapes & energy of atomic orbitals- s, p and d, nodes. Electronic configuration- Rules for filling of atomic orbitals- Aufbau principle, n+l Rule, Pauli's exclusion principle, Hund's rule of maximum multiplicity. Electronic configurations & their stability of Reasons Learning Outcomes: Discuss the postulates and limitations of Bohr atomic model. Derive de Broglie equation and formula for Heisenberg's Uncertainty Principle Solve numerical on de Broglie equation and Heisenberg's	programming ➢ Apply string functions in programming ➢ use functions for different operations- character math , string etc. ➢ create user defined functions ➢ apply concepts of string slicing in programming ➢ use different inbuilt functions in string programming ➢ Define lists ➢ Declare lists and nested		positive one. **Values:** Self control - Managing reactions, instead of acting impulsively. Expressing oneself in a calm and constructive way Developing resilience - Coping with challenges and bouncing back from setbacks	and Importance of Kinesiology and Biomechanics in Sports. 2. Principles of Biomechanics 3. Kinetics and Kinematics in Sports 4. Types of Body Movements - Flexion, Extension, Abduction, Adduction, Rotation, Circumduction, Supination & Pronation 5. Axis and Planes – Concept and its application in body movements **Learning Outcome** • The students will learn the meaning and definition & identify the

	Practice Activity: Prepare notes from a given passage using suitable format and abbreviations **3. Topic** Discovering Tut: the Saga Continues **Sub-topics:** • Introduction to A.R. Williams • Historical background of Tutankhamun • The process of mummification and CT scan • Scientific investigation vs myths (curse theory) • Description of Tut's tomb and artefacts • Tone and narrative style **Learning Outcome** Explain the significance of Tutankhamun's discovery with	*derive relation for work done by constant and variable force. *draw free body diagram of connected system. *derive expressions for potential energy of mass spring system. *mathematically derive equations related to collisions. *using value of ''e'', differentiate between elastic collision and inelastic collision *relate the conclusions for various cases of elastic collision to real life situations like in nuclear power plants. **Activity 1-** Venn diagram for conservative and non-conservative force, Elastic and inelastic collision. **Activity 2-**		anatomy of leaf in C3 and C4 plants -explain the process of photorespiration -list the various factors affecting the process of photosynthesis **Topic:** Respiration in Plants **Subtopics:** -Glycolysis - Fermentation -Aerobic respiration - Tricarboxylic Acid Cycle Learning Outcomes: Each student will be able to -name two types of respiration and compare them -explain glycolysis and fermentation -mention two steps of glycolysis in which ATP is utilized -illustrate the citric acid cycle	Uncertainty Principle. Discuss the basis and postulates of Quantum mechanical model. Discuss the properties of different types of orbitals (s, p, d, f). Draw orbital picture diagrams for s, p and d orbitals. Interpret the quantum numbers for a given notation. State and explain the rules involved in the filling of orbitals-Aufbau rule, n+rule, Pauli's Principle and Hund's rule. Predict and write the electronic configuration of the different species (atoms/ ions). Discuss reason for the exceptional configurations. Predict the magnetic	➢ lists ➢ Apply lists based functions in programs Activity Develop a game using Strings **Health and Wellness:** Protection against diseases of monsoon			importance of Kinesiology and Biomechanics in sports. • To make the students learn the principles of biomechanics • To make the students understand the concept of Kinetics and Kinematics in Sports • To make the students learn about different types of body movements. • To make the students understand the concept of Axis and Planes and its application in body movements.

	examples. Analyse how scientific methods helped unravel historical mysteries. Identify 4 literary devices with examples from the text. Evaluate the contrast between myth and scientific reasoning in a structured paragraph. **Activity 1** Research Activity: Find facts about Tutankhamun and present them in class **Activity 2** Art Integrated Activity: Create a fact file on Tutankhamun with visuals and key information **Values:** Respect for culture and heritage **4. Topic** The Voice of the Rain **Sub-topics:** • Introduction to the poet Walt Whitman	Hands-on on applications of conservation of energy **Health and Wellness:** Magic of Meditation		-differentiate between glycolysis and citric acid cycle **Activity 1** Virtual specimens/slides/models and identifying features of - Amoeba, Hydra, liver fluke, Ascaris, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit. **Activity 2** Separation of plant pigments through paper chromatography. **Life Skills:** Critical thinking Problem solving Scientific Literacy	behaviour of different species from their electronic configuration. Identify the iso-electronic species. Solve reasoning and application-based questions on the above topics. Activity 1 Art Integration Activity 'Cross word Puzzle Game' on terms related to redox reactions. Activity 2 Lab Activity (Qualitative analysis) To determine an anion and a cation present in the given salt samples. (Zero Group – NH_4^+ salts, Group 3 – Al salts, Group 5 –Ba, Sr, Ca salts) Gender Sensitivity: Awareness				

	• Theme of nature's cyclic process • Personification of rain • Symbolism (rain as life-giver, cycle of life) • Free verse and poetic style • Tone and philosophical message **Learning Outcome** Summarise the poem in one's own words. Explain the cyclic journey of rain with textual references. Analyse the use of personification in the poem. Identify 4 poetic devices with examples from the text. Interpret the philosophical message conveyed through the poem. **Activity 1** Recitation Activity: Expressive reading of the								

	poem focusing on tone and rhythm **Activity:** Art Integrated Activity: Create a diagram or illustration showing the water cycle as described in the poem with relevant lines included **Values:** Selflessness and care								
September **Topic** **Subtopic** **Learning Outcome** **Activitiy1** **Activity2** **Life Skill** **Value** **Gender** **Health and Wellness**	**1. Topic** Classified Advertisement **Sub-topics:** • Purpose and types (situation vacant, for sale, to-let, lost & found, matrimonial, etc.) • Format and structure (heading, content, contact details) • Use of abbreviations and concise language • Importance of clarity, brevity, and accuracy • Use of keywords and	**System of Particles and Rotational Motion** -Centre of mass of a two-particle system, centre of mass of a n particle system -Velocity and acceleration of centre of mass -Centre of mass locations of rigid body -Torque **Learning Outcomes:** *predict centre of mass and explain its physical significance in a	**Topic Sequence and Series** **Subtopics:** Sequence and Series: Introduction Arithmetic Mean Geometric Progression (GP) nth term of GP Sum of GP (finite and infinite) Geometric Mean Relationship between AM and GM **Learning Outcomes:** Each Student will be able to: Define	**Topic:** Respiration in Plants **Subtopics:** **-**Electron Transport System (ETS) - Oxidative Phosphorylation , -The respiratory balance sheet - Amphibolic pathway **Learning Outcomes:** Each student will be able to -describe electron transport system	Topic: Chemical Bonding and Molecular Structure Sub-Topics: Kossel- Lewis approach to chemical bonding, octet rule, Modes of chemical combination- Ionic bond, Covalent bond, Coordinate bond. Lewis dot structure & formal charge calculation Valence bond theory of covalent bond-	*REVISION* *Each child will be able to clarify doubts in Python and fundamentals:* **Learning outcome** **Each Child will be able to–** =>recapitulate the important concepts, laws and rules. =>apply the same to answer related questions. VALUE Hard Work	**Topic:Production Function** **Subtopic:** Meaning of Production Function Short Run and Long Run Production Total Product (TP), Average Product (AP), Marginal Product (MP) Law of Variable Proportions **Learning Outcomes:** Each student will be able to: *Explain the concept of production function and the	**Revision for the Mid Term Examinations**	**Revision for the Mid Term Examinations**

	standard expressions **Learning Outcome** Draft a classified advertisement using correct format and style. Use appropriate abbreviations and concise language effectively. Identify different types of classified advertisements and their features. Analyse sample advertisements for clarity and effectiveness. Create advertisements for various situations with relevant details. **Activity** Practice Activity: Write classified advertisements on a given situation (e.g., To-let, Lost & Found, Situation Vacant) **Life Skills** Effective written	rigid body. *Tabulate the position of centre of mass for some common rigid bodies. *Differentiate between center of mass and center of gravity. *Conclude torque as the rotational analogue of force *Evaluate real-life mechanical systems based on torque efficiency (e.g., longer vs. shorter levers). **Activity 1-** Experiential Activity *To find the centre of mass of regular/irregular lamina. **Activity 2-** *Demonstration of activity of principle of moments for torque followed with discussion and mathematical	sequence and series Identify patterns and write general terms Find nth term GP Calculate sum of n terms of GP Insert arithmetic and geometric means Apply formulas in real-life situations **Activity : AM and GM Activity** Students verify the relationship between AM and GM using numerical examples. **Life Skills:** Critical Thinking	-justify that aerobic respiration is more efficient -give reason to explain why the respiratory pathway is called the amphibolic pathway. **Activity 1** Study of distribution of stomata on the upper and lower surfaces of leaves. Activity 2 Study of the rate of respiration in flower buds/leaf tissue and germinating seeds. **Gender Sensitivity:** Sexual Dimorphism	Energy concept Learning Outcomes: Explain Kossel-Lewis approach to chemical bonding. State and explain octet rule & its limitations. Draw Lewis dot structure & hence calculate formal charge on each atom of the molecule Explain the valence bond approach to covalent bond. Activity 1 Simulation Activity: https://javalab.org/en/ionic_bond_2_en/?authuser=0 (Ionic Bond) https://javalab.org/en/covalent_bond_en/?authuser=0 (Covalent Bond) Activity 2 To determine an anion and a cation present in the given salt samples. (Group 6 –Mg salts)		relationship between inputs and output. *analyze TP, AP, and MP and understand their interrelationship. *Students will interpret the stages of the Law of Variable Proportions using data and graphs. Students simulate a production process (e.g., making paper boats or assembling paper shapes): ● One student starts production (fixed capital given) ● Gradually add more “labour” (students) ● Record total output at each stage.		

	communication **2. Topic:** Assessment of the Listening and Speaking Skills **3. Revision** of language and literature covered in Term 1.	derivation. **Life Skill:** Honesty and Integrity							