



TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

Class XI
2023 -2024
Science

MONTH	English	Math	Physics	Chemistry	Biology	Computer science	Economics	Psychology	Ped.
JULY	<p>Literature:</p> <p>1)The Summer of the Beautiful White Horse</p> <p>2) "We're Not Afraid to Die... if We Can be Together</p> <p>3) The Laburnum Top</p> <p>4) Note Making and Summarisation</p>	<p>Topic: Relations and Functions</p> <p>*Cartesian product of sets.</p> <p>*domain and range of a relation.</p> <p>*function</p> <p>*domain and range of a function.</p> <p>*draw the graphs of various functions.</p> <p>Lab activities (SE)</p> <p>1) To distinguish between a Relation and a Function.</p>	<p>Topic: Kinematics- Motion in a plane</p> <p>Vector product of two vectors</p> <p>Projectile motion</p> <p>Uniform circular motion</p> <p>Conceptual questions and related numerical</p> <p>Art Integration (Director's Cut)</p> <p>make a short movie/video on</p>	<p>Topic: Classification Of Elements and Periodicity in Properties</p> <p>Sub-Topics: -</p> <p>Nomenclature of elements with atomic no. > 100</p> <p>- Electronic Configuration</p> <p>- Division into blocks- characteristics of s, p, d & f block elements.</p> <p>-Position in the periodic table</p> <p>-Trends in the periodic Properties:Atomic radii-ionic</p>	<p>Topic: Morphology of Flowering Plants</p> <p>Subtopics</p> <p>-The Leaf</p> <p>-The Inflorescence and The Flower</p> <p>-The Fruit</p> <p>-The Seed</p> <p>- Description of Solanaceae</p> <p>Topic: Anatomy of Flowering Plants</p> <p>Subtopics:</p> <p>-The Tissue System</p> <p>- Anatomy of Dicotyledonous and Monocotyledonous Plants</p> <p>Topic:</p>	<p>Unit II: Computational Thinking and Programming - 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.</p> <p>● Features of Python, Python Character Set, Token & Identifiers,</p>	<p>Elasticity of Demand</p> <p>Introduction statistics, definition of statistics, sources of data- primary and secondary data, questionnaire , tabular presentation</p> <p>life skills- interpersonal relationship skill</p>	<p>UNIT 2</p> <p>METHODS OF ENQUIRY IN PSYCHOLOGY</p> <p>Correlational Research</p> <p>Survey Research</p> <p>Psychological Testing</p>	<p>Unit IV Physical Education & Sports for CWSN (Children with Special Needs - Divyang)</p> <p>Concept of Disability and Disorder</p> <p>Types of Disability, its causes & nature (Intellectual</p>

<p>Life Skills: coping with emotions, Winning over temptations, interdependence, overcoming fear</p> <p>Values: compassion, empathy, respect, familial love</p> <p>General Awareness: Importance of integrity, safety</p> <p>Health and wellness: Mental and emotional health</p> <p>Sewa: care for parents, animals, and trees</p>	<p>2) To verify that for two sets A and B, $n(A \times B) = p \times q$ and the total number of relations from A to B is $2pq$, where $n(A) = p$ and $n(B) = q$</p> <p>Topic: Trigonometric Functions *Identify positive and negative angles. *Measure angles in radian and in degree and conversion from one measure to another. *define trigonometric functions with the help of unit circle. *Signs of trigonometric functions. *find the</p>	<p>projectile motion to show the factors on which the horizontal range of the projectile depends. Detailed instruction to be shared in the Google Classroom.</p> <p>Topic: Laws of Motion 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 (recapitulation only)</p>	<p>radii & inert gas radii - Ionization enthalpy, electron gain enthalpy - Electronegativity, valency and chemical reactivity)</p> <p>Topic: Redox Reactions</p> <p>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 -Balancing of redox reactions-Half reaction method and Oxidation</p>	<p>Structural organization in animals Subtopics: - Morphology of Frog -Anatomy of Frog Topic: Cell: The Unit of Life Subtopics: -Cell and Cell Theory -An Overview of Cells -Prokaryotic Cells -Eukaryotic Cells</p> <p>Art Integration 'Edible Cell Model' Students will build an edible model of either a plant or an animal cell (cake/pizza/cookie) using various food items to represent each part/organelle.</p> <p>Activities:</p>	<p>Keywords, Literals, Delimiters, 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-</p>		<p>Case Study Analysis of Data Limitations of Psychological Enquiry Ethical Issues</p> <p>UNIT 9 Motivation and Emotion</p> <p>Nature of motivation Types of motives Theories of</p>	<p>disability, Physical disability) Aim & Objective of Adaptive Physical Education Role of various professionals for children with special needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist & Special Educator)</p>
--	---	---	--	---	---	--	--	---

<p>Gender sensitivity: equality among genders</p>	<p>trigonometric ratio over the domain R *find the trigonometric ratio over the domain R *list the various formulas: $\cos(A \pm B)$ $\sin(A \pm B)$ $\tan(A \pm B)$ *State the S/D and product formulas *State the half angle formulas *recall the graphs of various trigonometric functions * apply all formulas and identities in solving questions. Experiential Activity. Trigo Tambola:</p>	<p>Lab Activity *To measure diameter of a given wire and thickness of a given sheet using screw gauge.</p> <p>Life Skill: Problem Solving, Critical Thinking</p> <p>Value: Scientific Attitude</p> <p>Gender Sensitivity: Gender and Society</p> <p>Health and Wellness: Staying Healthy During Monsoon</p>	<p>number method</p> <p>Lab Activity - Volumetric Analysis - Determine the strength of the given Na_2CO_3 solution by titrating it against M/10 HCl solution. - Qualitative analysis Instructions for the classification and the chemical tests of acidic radicals (anions) and basic radicals (cations). -To determine an anion and a cation present in the given salt samples. (Group 1 – Pb salts), (Zero Group – NH_4^+ salts)</p> <p>Art Integration 'Crossword Puzzle Game' on terms related to redox reactions.</p> <p>Life Skills:</p>	<p>-Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of particular geographical location) 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) -Different types</p>	<p>Arithmetic, Relational Operators, Logical Operators, Augmented Assignment Operators.</p> <ul style="list-style-type: none"> • 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 		<p>emotion.</p> <p>Managing negative emotions</p> <p>Enhancing positive emotions</p> <p>Health and Wellness: stress management</p> <p>Value: Diligence</p> <p>LS: Positive social learning</p>	<p>Unit V Physical Fitness, Health and Wellness</p> <p>Meaning and Importance of Wellness, Health and Physical Fitness</p> <p>Component s/Dimensions of Wellness, Health and Physical Fitness</p> <p>Traditional Sports & Regional Games for promoting wellness</p>
--	---	---	---	--	---	--	--	--

Students will create colourful tickets using trigonometric identities and formulas. The one who finish line, column or diagonal first will be the winner.

T	R	I	G	O
$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	undef.		
	$\frac{1}{2}$		$\frac{\sqrt{2}}{2}$	$-\sqrt{3}$
$\sqrt{3}$		$\frac{\sqrt{3}}{3}$		0
	$-\frac{\sqrt{3}}{2}$		$-\frac{\sqrt{2}}{2}$	1
	-1			$-\frac{\sqrt{3}}{3}$

Lab activities (SE)

To plot the graphs of $\sin x$, $\sin 2x$, $2\sin x$ and $\sin x/2$, using same coordinate axes.

Life

Skill: Critical Thinking, Problem Solving

Values-

Problem solving and Critical thinking
Value: Fostering Respect For Differences
Gender sensitivity: Gender Equality
Health and wellness: Stress management

of inflorescences (cymose and racemose)
 - Preparation and study of T.S. of dicot and monocot roots and stems (primary).
 - Study of distribution of stomata on the upper and lower surfaces of leaves.
 - Study of osmosis with a potato osmometer.

Life Skill: Teamwork

Value: Responsibility

Gender

Sensitivity: Gender equality

Health and wellness: Cell death

positive number etc.
Life Skill: Critical thinking, empathy
Value: Positive outlook
Gender Sensitivity: Women in Healthcare
Health & Wellness: Designing the Life You Want to Live

Gender sensitivity: Varied attention span of men and women.

Leadership through Physical Activity and Sports
 Introduction to First Aid – PRICE

	Responsibility							
	Gender Sensitivity-							
	Awareness							
	Health and Wellness- Time management							
	General Awareness- Equity and Equality							



TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

<p>AUGUST</p>	<p>Literature:</p> <p>1) Discovering Tut: the Saga Continues</p> <p>2) The Voice of the Rain (Poem)</p> <p>3) The Address (Prose)</p> <p>Writing Skills:</p> <p>1) Debate Writing</p> <p>Life Skills:</p> <p>including science in daily life activities, coping with stress, managing emotions</p> <p>Values:</p> <p>respecting heritage,</p>	<p>Limits and Derivatives</p> <p>*define limit of a function</p> <p>*perceive the geometrical interpretation of limits</p> <p>*evaluate the limit of various functions</p> <p>*define derivative of a function at a point</p> <p>*perceive the geometrical interpretation of derivatives</p> <p>*evaluate derivatives using the method of first principle.</p> <p>*learn the formulas of derivatives of</p>	<p>Topic: Laws of Motion</p> <p>Law of conservation of linear momentum and its applications</p> <p>Friction and its cause</p> <p>Static and kinetic friction, laws of friction</p> <p>Level curved road and banked curved road</p> <p>Art Integration</p> <p>(Framing Questions)</p> <p>“Design A Caricature Quiz” on “Laws of Motion”. A quiz (at least five questions) that covers the basics of Newton’s laws of motion. This is</p>	<p>Topic: Redox Reactions</p> <p>Sub topics:</p> <p>-Redox reactions and electrode processes, Galvanic cell, electrochemical series and its applications</p> <p>Topic: Structure Of Atom</p> <p>Sub topics: - Developments leading to Bohr’s model of atom- dual character of electromagnetic radiation -Wave nature of electromagnetic radiation- Electromagnetic spectrum -Dual behaviour of electromagnetic radiation, -Atomic spectra- Emission & absorption spectra, Line spectrum of Hydrogen Bohr’s model- Postulates &</p>	<p>Topic: Cell Cycle and Cell Division</p> <p>Subtopics:</p> <p>-Cell Cycle -M Phase - Significance of mitosis -Meiosis</p> <p>Topic: -Significance of Meiosis</p> <p>Subtopics:</p> <p>-Primary and Secondary Metabolites - Biomacromolecules -Proteins -Structure of Proteins - Polysaccharides -Nucleic Acids -Enzymes</p> <p>Topic: Photosynthesis in Higher Plants</p> <p>Subtopics:</p> <p>-Early experiments - Site of photosynthesis and types of pigments involved in photosynthesis</p> <p>-Light reaction</p>	<p>Unit I: Computer Systems and Organization</p> <p>Concept of cloud computing and cloud services (SaaS, IaaS, PaaS), cloud (public/private), Blockchain technology</p> <p>Unit II: Computational Thinking and Programming - Strings: Traversal, operations – concatenation, repetition, membership; functions/methods-len(), capitalize(), title(), upper(), lower(), count(), find(), index(), isalnum(), islower(), isupper(), isspace(), isalpha(), isdigit(), split(), partition(), strip(), lstrip(),</p>	<p>Diagrammatic presentation, Graphical presentation, Mean</p> <p>values- compassion</p>	<p>UNIT 4</p> <p>Human Behaviour</p> <p>Meaning of development</p> <p>Life-span perspective on development</p> <p>Bronfenbrenner’s contextual view of development.</p> <p>Prenatal development</p> <p>Childhood development</p>	<p>Unit VI</p> <p>Test, Measurement & Evaluation</p> <p>Concept of Test, Measurement & Evaluation in Physical Education & sports</p> <p>Importance of Test, Measurements and Evaluation in Sports</p> <p>Calculation of BMI, Waist – Hip Ratio, Skin fold measurement (3-site)</p> <p>Somato</p>
----------------------	---	--	--	--	--	---	---	---	--

<p>perseverance, determination</p> <p>General Awareness: the pharaohs of Egypt, Impact of wars on people, water cycle</p> <p>Gender sensitivity: equality among genders</p>	<p>some standard functions</p> <p>*perceive the concept of chain rule, quotient rule and product rule</p> <p>Experiential Activity:</p> <p>Verification of the geometrical significance of derivatives.</p> <p>Topic: Sequence and Series</p> <p>*define A.M between two numbers a & b</p> <p>*define a G.P</p> <p>*find the nth term of a G.P</p> <p>*state the formula for sum of n terms of G.P</p>	<p>to determine your knowledge and retention.</p> <p>Topic: Work, Energy Power</p> <p>Work done by a constant force and a variable force</p> <p>Kinetic energy, Work Energy Theorem</p> <p>Connected Motion and Power</p> <p>Notion of potential energy, potential energy of a spring</p> <p>Conservation of mechanical energy</p> <p>Elastic and Inelastic</p>	<p>Limitations - Developments leading to Quantum Mechanical Model of atom - Dual behaviour of matter (de-Broglie equation) & Heisenberg uncertainty principle- Significance and Limitations</p> <p>-Numerical related to wave characteristics, de-Broglie equation and Heisenberg uncertainty principle. - Quantum Mechanical Model of atom- Schrodinger wave equation and Postulates -Quantum number - Concept of orbitals - Shapes & energy of atomic orbitals- s, p and d,</p>	<p>-The electron transport -The Calvin cycle - The C₄ Pathway - Photorespiration</p> <p>Topic: Respiration in Plants</p> <p>Subtopics: - Glycolysis - Fermentation</p> <p>Art Integration 'Word Search Game'</p> <p>Students will make a word search game on light reaction/ electron transport/Calvin cycle/ C₄ Pathway /photorespiration and their peers will search the words.</p> <p>Activities:</p> <p>-Mitosis in onion root tip cells and animal cells (grasshopper)</p>	<p>replace(); String slicing.</p> <p>Lists: Definition, Creation of a list, Traversal of a list. Operations on a list - concatenation, repetition, membership; functions/methods-len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), min(), max(), sum(); Lists Slicing; Nested lists; 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.</p> <p>Life Skill: critical thinking, empathy,</p>		<p>al stages</p> <p>Development during adolescence</p> <p>Health and Wellness: Cognitive agility</p> <p>Value: Morality</p> <p>LS: Problem solving</p> <p>Gender sensitivity: Ethics</p> <p>and gender role</p>	<p>Types (Endomorphy, Mesomorphy & Ectomorphy)</p> <p>Measurements of health-related fitness</p> <p>Unit VII Fundamentals of Anatomy, Physiology in Sports</p> <p>Definition and Importance of Anatomy and Physiology in exercise and sports</p>
---	--	--	---	---	--	--	---	---

	<p>Life Skills Construct logical arguments</p> <p>Values Responsibility</p> <p>Gender Sensitivity Awareness</p> <p>Health and Wellness Time Management</p> <p>General Awareness Equity and Equality</p>	<p>collisions in one and two dimensions</p> <p>Creative Corner</p> <p>Using PhEt simulation draw graphs to show transformation of energy and energy conservation</p> <p>Lab Activity</p> <p>To study the relationship between force of limiting friction and normal reaction and to find the coefficient of friction between a block and a horizontal surface.</p> <p>Life Skill: Problem Solving, Critical Thinking</p>	<p>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</p> <p>Topic:Chemical Bonding and Molecular Structure Subtopics: -Kossel- Lewis approach to chemical bonding, octet rule, -Modes of chemical combination- ionic bond, Covalent bond and Coordinate bond.</p> <p>Lab Activity</p>	<p>from permanent slides. -Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials - Separation of plant pigments through paper chromatography -Study of the rate of respiration in flower buds/leaf tissue and germinating seeds.</p> <p>Life Skill Problem solving Value Teamwork Gender Sensitivity Gender bias Health and Wellness: Uncontrolled cell division</p>	<p>decision making Value: team work Gender Sensitivity: women in sports Health & Wellness: Balance and Flexibility</p>			<p>Functions of Skeletal system, classification of bone and types of joints</p> <p>Properties and Functions of Muscles</p> <p>Function and Structure of Circulatory system and heart</p> <p>Function and Structure of Respiratory system</p>
--	--	---	---	---	--	--	--	--

Value:
Empathy

Gender Sensitivity:
Gender
Stereotype

Health and Wellness:
Magic of
Meditation

(Qualitative analysis) -To
determine an
anion and a
cation present
in the given salt
samples
(Group 3 – Al
salts) (Group 5
–Ba, Sr, Ca
salts)
(Group 4 –Zn
salts)

Student's Presentation
On
Electromagnetic
spectrum Dual
behaviour of
electromagnetic
radiation,
Atomic spectra-
Emission &
absorption
spectra, Line
spectrum of
Hydrogen

Art Integration Activity:
Model Making
on the shapes
of orbitals

Life Skill:



TAGORE INTERNATIONAL SCHOOL
EAST OF ASH, NEW DELHI

Critical Thinking
Value: Integrity
Gender Sensitivity:
Awareness
Health and Wellness:
Energy promotes health and wellbeing



TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

<p>SEPT MBER</p>	<p>Writing Skills: Classified Advertisement</p> <p>Integrated Grammar</p> <p>Assessment of Listening and Speaking Skills</p> <p>Revision</p>	<p>Topic: Sequence and Series *find the sum to infinity of a G.P *define G.M between two numbers a & b *recognize the relationship between A.M and G.M</p> <p>Life Skills Problem Solving Construct logical arguments</p> <p>Values Responsibility</p> <p>REVISION</p>	<p>Topic: System of Particles and Rotational Motion</p> <p>Motion of System of Particles and Rigid body: center of mass of a two-particle system, center of mass of n particle system</p> <p>Velocity and acceleration of centre of mass</p> <p>Centre of mass locations of rigid body and momentum conservation</p> <p>Experiential Activity</p> <p>To find the centre of mass of regular/ irregular lamina, concept of moment of</p>	<p>Topic: Chemical Bonding and Molecular Structure</p> <p>Subtopics: -Lewis dot structure & formal charge calculation</p> <p>-Valence bond theory of covalent bond- Energy concept -Orbital overlap concept-σ and π bond</p> <p>Lab Activity (Qualitative analysis) -To determine an anion and a cation present in the given salt samples. (Group 6 –Mg salts)</p> <p>Revision for Mid Term Examination</p> <p>Life Skill: Adaptability</p>	<p>Topic Respiration in Plants (contd.)</p> <p>Subtopics: -Aerobic respiration - Tricarboxylic Acid Cycle - Electron Transport System (ETS) and Oxidative Phosphorylation -The respiratory balance sheet -Amphibolic pathway</p> <p>Revision for Mid Term Examination</p> <p>Life Skill: Building healthy relationships</p> <p>Value: Sensitivity to environment</p> <p>Gender Sensitivity: Gender stereotype</p> <p>Health and wellness:</p>	<p>Tuple Value: Good behavior in human interaction Life Skill : Self awareness Gender sensitivity: Discuss “equality between men and women” Definition, Creation of a Tuple, Traversal of a tuple. Operations on a tuple - concatenation, repetition, membership; functions/methods – len(), tuple(), count(), index(), sorted(), min(), max(), sum(); Nested tuple; Tuple slicing; finding the minimum, maximum, mean of values stored in a tuple; linear search on a tuple of</p>	<p>Measures of central tendency- Median, Mode</p> <p>values-equality</p> <p>life skills-compassion</p>	<p>UNIT-5</p> <p>Sensory, Attentional and Perceptual Processes</p> <p>Knowing the world;</p> <p>Nature of stimuli;</p> <p>Nature and functioning of sense modalities</p> <p>;Sensory</p> <p>Adaptation</p> <p>Attention :</p> <p>Nature and determinants;</p> <p>Selective and sustained</p>	<p>Revision</p>
----------------------	--	--	--	---	--	---	--	--	------------------------

inertia through activity of different shaped objects rolling down a plane.

Life Skill:
Problem Solving,
Critical Thinking

Value:
Empathy

Gender Sensitivity:
Gender Stereotype

Health and Wellness:
Magic of Meditation

y Value:
Fostering Respect for Differences
Gender Sensitivity:
Consent and Healthy Relationships
Health and Wellness:
Healthy Aging

Coping with stress

numbers, counting the frequency of elements in a tuple.
REVISION FOR MID TERM EXAMS
Value:
Responsibility

Life Skill:
Creative thinking

Gender sensitivity:
Discuss “Businesswomen & Women CEOs in India”

Health & Wellness:
Acupressure

attention;

Perceptual Processes,

The Perceiver,

Principles of Perceptual Organisation.

Perception space, depth and distance.

Perceptual constancies, Illusions,

Socio-cultural influences on perception.

Life skill:
Mindfulness

Value :
Respecting

							elders Gender Sensitivity: Gender and cultural differences General Awareness: Importance of culture Health and Wellness: Seasonal diet		
OCTOBER	Literature: Mother's Day (Play)	Topic: Straight Lines *find the slope of a line	Topic: System of Particles and Rotational Motion	Topic: Chemical Bonding and Molecular Structure Subtopics:	Topic: Plant Growth and Development Subtopics:	Dictionary: Definition, Creation, Accessing elements of a dictionary, add	Unit 3- production, cost, revenue, Production Cost	UNIT-6 Learning Nature of	Unit VIII Fundamentals of Kinesiology and

<p>Life Skills: Parenting, coping with emotions, adopting practicality and rational thinking</p> <p>Values: love, compassion, empathy, respect</p> <p>General Awareness: Familial bonds</p> <p>Health and wellness: Mental and emotional health</p> <p>Sewa: care for parents</p> <p>Gender sensitivity:</p>	<p>*convert various forms of equation of a line:</p> <ol style="list-style-type: none"> one-point form, two-point form, slope-intercept form, intercept form <p>*Calculate the distance of a point from a line</p> <p>Topic: Conic Sections</p> <p>*state and explain various sections of a cone</p> <p>*write the equation of a circle with given radius and</p>	<p>Torque, angular momentum its conservation & applications</p> <p>Rigid body rotation, EOM</p> <p>Moment of inertia and value of moments of inertia of simple geometrical objects</p> <p>Learning Activity</p> <p>Brain storming to discuss about centre of mass and its trajectory, torque based on demonstrations.</p> <p>Topic:</p> <p>Gravitation</p> <p>Universal law of gravitation. Acceleration due</p>	<p>Bond characteristics, Resonance Concept of Hybridisation (concept, types- sp³, sp², sp, sp³d, sp³d², sp³d³)</p> <p>Concept of Hybridisation (types- sp³, sp², sp, sp³d, sp³d², sp³d³)</p> <p>VSEPR Theory and its limitations</p> <p>Polar and non-polar covalent bond-Dipole moment</p> <p>Hydrogen bonding-concept, types and its effects on physical properties.</p> <p>Molecular orbital theory, energy level diagrams (diatomic homoatomic molecules)</p> <p>Art Integration Activity: 3-D Ball and Stick models Design two (3-D) molecular models [for covalent</p>	<p>-Growth - Differentiation, Dedifferentiation , Redifferentiation</p> <p>-Development</p> <p>-Plant Growth Regulators</p> <p>Topic: Breathing and Exchange of Gases</p> <p>Subtopics: - Respiratory organs and human respiratory system - Mechanism of breathing - Respiratory volumes and capacities - Exchange of gases - Transport of gases - Regulation of respiration - Disorders of respiratory system</p> <p>Topic: Body Fluids and Circulation</p> <p>Subtopics:</p>	<p>an item, modify an item in a dictionary; Traversal, functions/methods – len(), dict(), keys(), values(), items(), get(), update(), del(), del, clear(), fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), count(), sorted() copy(); Suggested programs : count the number of times a character appears in a given string using a dictionary, create a dictionary with names of employees, their salary and access them</p> <p>Random module (random, randint, randrange),</p>	<p>Revenue Production function and Returns to a Factor Cost and Revenue and their Relationship supply and elasticity Supply</p> <p>Supply-Concept, Supply schedule, function</p> <p>Law of Supply</p> <p>Price</p> <p>Elasticity</p> <p>life skills- character building</p>	<p>learning and learning curve: Paradigms of learning : Classical and Operant Conditioning, Observational Learning, Cognitive learning</p> <p>Factors</p> <p>facilitating learning</p> <p>: Learning disabilities;</p> <p>Life skill: Positive social learning</p> <p>Value: Diligence</p> <p>Gender Sensitivity: Varied</p>	<p>Biomechanics in Sports</p> <p>Definition and Importance of Kinesiology and Biomechanics in sports</p> <p>Principles of Biomechanics</p> <p>Kinetics and Kinematics in Sports</p> <p>Types of Body Movements - Flexion, Extension, Abduction, Adduction, Rotation, Circumduct</p>
--	--	---	--	--	--	--	--	--

<p>equality among genders</p>	<p>centre *find the centre and radius of a circle *define a parabola and recognize/find the standard equation of parabola *define/find the coordinates of focus, axis, equation of directrix and length of latus rectum of a parabola *define an ellipse and recognize /find the standard equations of an ellipse *state the relationship between semi-major axis,</p>	<p>to gravity Variation of acceleration due to gravity with altitude and depth Gravitational Field Intensity, Gravitational potential energy and gravitational potential Superposition Principle and its application Escape velocity, orbital velocity of a satellite Experiential Activity Students will note the time taken by different objects (paper, cloth, coin etc) to fall through the same</p>	<p>compounds /isomers / diamond / graphite (allotropes of C) and explain the hybridisation involved in the structure of compound (using materials of your choice). Lab Activity (Qualitative analysis) To determine an anion and a cation present in the given unknown salt sample/s. Extended Learning: Amazing H Bond Life Skill: Adaptability Value: Fostering Respect for Differences Gender Sensitivity: Consent and Healthy Relationships Health and Wellness:</p>	<p>-Blood -Blood groups - Coagulation of blood -Lymph and Circulatory pathways -Human circulatory system Art Integration- 'Model making' Students will create an amusement park based on the various systems and organs within the human body and display the same in the class. Activities: -Comparative study of the rates of transpiration in the upper and lower surfaces of leaves. -Study of plasmolysis in epidermal peels (e.g. Rhoeo/lily</p>	<p>statistics module (mean, median, mode</p>	<p>attention span of men and women. General Awareness: Functioning of various human senses that enrich our perceptions Health and Wellness: Stress management</p>	<p>ion, Supination & Pronation Axis and Planes – Concept and its application in body movements</p>
-------------------------------	--	---	--	--	--	--	---

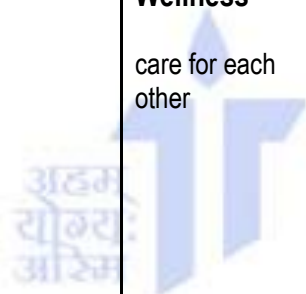
	<p>semi-minor axis and the distance of focus from the centre of the ellipse</p> <p>*define eccentricity</p> <p>*define/find the coordinates of foci, vertices, lengths of major axis, and minor axis, eccentricity and length of latus rectum of the given ellipse</p> <p>*define a hyperbola and recognize/find the standard equations of a hyperbola</p> <p>*define/find the coordinates of foci, vertices,</p>	<p>height under acceleration due to gravity and draw their own conclusion.</p> <p>Life Skill: Honesty and Integrity</p> <p>Value: Empathy</p> <p>Gender Sensitivity: Gender Stereotype</p> <p>Health and Wellness: Effective Time Management</p>	<p>Healthy Aging</p>	<p>leaves or flashy scale leaves of onion bulb)</p> <p>Life Skill Interpersonal relationship</p> <p>Value Respect for Law and Order</p> <p>Gender Sensitivity Gender discrimination</p> <p>Health and Wellness: Knowing your body</p>		
--	---	--	----------------------	---	--	--

		<p>eccentricity and length of latus rectum of the given hyperbola</p> <p>Experiential Learning:</p>  <p>Lab Activity: Construct a Parabola</p>							
NOVEMBER	<p>Literature:</p> <p>1) The Adventure</p> <p>2) Birth</p> <p>3) Childhood (Poem)</p>	<p>Topic: Permutation and Combination *state the fundamental principle of Addition / Multiplication * factorial</p>	<p>Topic: Properties of Bulk Matter</p> <p>Difference between stress and strain, types of stress and strain</p> <p>Elastic behaviour,</p>	<p>Topic: Organic Chemistry : Some Basic Principles And Techniques Subtopics: Introduction to organic compounds, Nature of</p>	<p>Topic: Body Fluids and Circulation (contd.) Subtopics: -Cardiac cycle - Electrocardiograph -Double circulation</p>	<p>Unit III: Society, Law and Ethics</p> <ul style="list-style-type: none"> ● Cyber safety: safely browsing the web, identity protection, confidentiality, social networks, cyber trolls and bullying. ● Appropriate usage of social networks: 	<p>Correlation, index numbers</p> <p>Teaching point – How indices are used in budgeting</p> <p>values-</p>	<p>UNIT-7 Human Memory</p> <p>Nature of memory;</p>	<p>Unit IX <u>Psychology & Sports</u></p> <p>Definition & Importance of Psychology in Physical Education</p>

<p>Life Skills: Interdependence, communication, self-awareness</p> <p>Values: compassion, empathy, respect, familial love</p> <p>General Awareness: Theories regarding alternate reality,</p> <p>Balance between personal and professional life</p> <p>Importance of practice</p> <p>Health and wellness: Mental and emotional</p>	<p>notation *define permutation. *find the number of permutations of n different objects with or without repetition. *define combination. *differentiate btw Permutation and Combination *apply the various formulas of ${}^n P_r$ and ${}^n C_r$ in solving statement questions.</p> <p>Topic: Probability</p>	<p>stress strain relationship</p> <p>Hooke's Law, three moduli of elasticity</p> <p>Pressure due a liquid column, Pascal's Law and its application, effect gravity on liquid pressure</p> <p>Viscosity, Stokes Law, terminal velocity, streamline and turbulent flow.</p> <p>Bernoulli's theorem and its application</p> <p>Surface energy, surface tension</p> <p>Excess pressure, liquid drop and soap bubble</p>	<p>Carbon Types of Structures and representations Classification Nomenclature Isomerism- structural & stereoisomerism Fundamental concepts in organic reaction mechanism (homolytic & heterolytic fission, intermediate formation Inductive effect</p> <p>Lab Activity (Qualitative analysis) To determine an anion and a cation present in the given unknown salt sample/s</p> <p>Activities Explore Molecular model</p> <p>Life Skills:</p>	<p>-Regulation of cardiac activity -Disorders of circulatory system Topic: Excretory Products and their elimination Subtopics: -Modes of excretion -Human excretory system -Urine formation -Function of tubules -Mechanism of concentration of filtrate -Regulation of kidney function and micturition -Role of other organs of excretion and disorders of excretory system Topic: Locomotion and</p>	<p>spread of rumours, and common social networking sites (Twitter, LinkedIn, and Facebook) and specific usage rules.</p> <ul style="list-style-type: none"> ● Safely accessing web sites: adware, malware, viruses, trojans ● Safely communicating data: secure connections, eavesdropping, phishing and identity verification. ● Intellectual property rights, plagiarism, digital rights management, and licensing (Creative Commons, GPL and Apache), open source, open data, privacy. ● Privacy laws, fraud; cyber- 	<p>Acceptance</p> <p>life skills- Citizenship</p>	<p>Information Processing Approach:</p> <p>The Stage Model,</p> <p>Memory Systems: Sensory, Short-term and Long-term memories.</p> <p>Levels of processing; Types of Long-term memory,</p> <p>representation and organization in memory;</p> <p>Memory as a constructive process;</p> <p>Nature</p>	<p>& Sports</p> <p>Developmental Characteristics at Different Stages of Development</p> <p>Adolescent Problems & Their Management</p> <p>Team Cohesion and Sports</p> <p>Introduction to Psychological Attributes: Attention, Resilience, Mental Toughness</p>
--	---	---	--	---	---	--	---	--

<p>health</p> <p>Sewa: Care for parents</p> <p>Gender sensitivity: equality among genders</p>	<p>*recall the concept of probability</p> <p>*recall the definition of random experiment, sample space</p> <p>*write the sample space of a Random experiment</p> <p>*list the various kinds of events : mutually exclusive, exhaustive events</p> <p>*prove events to be mutually Exclusive or exhaustive</p> <p>*state and apply the formulae for probability of an event</p> <p>*state the Addition</p>	<p>Lab Activity</p> <p>To determine the coefficient of viscosity of a viscous liquid by plotting a graph between terminal velocity and (radius)², expansion of metallic strip.</p> <p>Life Skill: Web of relationship, Critical thinking</p> <p>Value: Honesty and Integrity</p> <p>Gender Sensitivity: Gender Stereotype</p> <p>Health and Wellness: Effective Time Management</p>	<p>Problem solving and Critical thinking</p> <p>Value: Fostering Respect For Differences</p> <p>Gender sensitivity: Gender Equality</p> <p>Health and wellness: Stress management</p>	<p>Movement</p> <p>Subtopics:</p> <ul style="list-style-type: none"> -Types of movement -Muscle -Structure of contractile proteins -Mechanism of muscle contraction -Skeletal system -Joints and disorders of muscular and skeletal system. <p>Art Integration- Design a flyer /poster</p> <p>Students will design a flyer/ poster to create awareness on "Heart Health"</p> <p>Activities:</p> <ul style="list-style-type: none"> -Test for presence of urea in urine. -Test for presence of 	<p>crime- phishing, illegal downloads, child pornography, scams; cyber forensics, IT Act, 2000.</p> <ul style="list-style-type: none"> ● Technology and society: ● understanding of societal issues and cultural changes induced by technology. ● E-waste management: proper disposal of used electronic gadgets. ● Identity theft, unique ids and biometrics. <p>Gender and disability issues while teaching and using computers.</p> <p>Skills: Analytical, Problem Solving, Creative Thinking, Inter-</p>	<p>and causes of forgetting; Enhancing memory</p>	<p>Unit X Training and Doping in Sports</p> <p>Concept and Principles of Sports Training</p> <p>Training Load: Over Load, Adaptation, and Recovery</p> <p>Warming-up & Limbering Down – Types, Method & Importance</p> <p>Concept of Skill, Technique, Tactics &</p>
---	---	---	--	--	--	---	---

	<p>formulae of Probability</p> <p>Life Skills Communication Team Work</p> <p>Values Conflict Resolution</p> <p>Health and Wellness care for each other</p>			<p>sugar in urine. -Test for presence of albumin in urine. -Test for presence of bile salts in urine -Human skeleton and different types of joints with the help of virtual images/models only.</p> <p>Life Skill: Making connections</p> <p>Value: Team work</p> <p>Gender Sensitivity: Gender bias</p> <p>Health and wellness: Cardiac Health</p>	<p>personal relationship,</p> <p>Values: Team Work, Share ideas and Knowledge, Respect family values Gender Sensitivity- Women in farming</p> <p>Health & Wellness Yoga in Life</p>		<p>Strategies</p> <p>Concept of Doping and its disadvantages</p>
--	---	--	--	---	---	--	--



TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

<p>DECEMBER</p>	<p>Literature:</p> <p>1) Silk Road (Prose)</p> <p>2) Father to Son</p> <p>Life Skills:</p> <p>Interdependence, communication, self-awareness</p> <p>Values:</p> <p>compassion, empathy, respect, familial love</p> <p>General Awareness:</p> <p>Environment, geographical features of Northern most part of India, importance</p>	<p>Topic: Probability</p> <p>Lab Activity:</p> <p>1. To find the number of ways in which three cards can be selected from given 5 cards</p> <p>2. To write a sample space, when a coin is tossed once, twice, thrice and four times</p> <p>Topic:</p> <p>Binomial Theorem</p> <p>*Expansion of $(a+b)^n$</p> <p>*Pascal's Triangle</p> <p>Topic: Matrices & Determinants</p> <p>*identify a_{ij}</p>	<p>Topic: Oscillation and Waves</p> <p>Periodic motion and their representation in the form of periodic functions, Simple harmonic motion and its equation</p> <p>Energy in simple harmonic motion, derivation of expression for time period of simple pendulum, mass spring system</p> <p>Resonance</p> <p>Displacement relation for a progressive wave</p> <p>Superposition of waves, stationary wave in string and organ pipe, fundamental mode and</p>	<p>Topic:</p> <p>Organic Chemistry : Some Basic Principles And Techniques</p> <p>Subtopics:</p> <p>Inductive effect & Electromeric effect, Resonance effect and hyperconjugation</p> <p>Topic:</p> <p>Hydrocarbons</p> <p>Subtopics:</p> <p>Classification of hydrocarbons- Saturated and unsaturated. Isomerism</p> <p>Alkanes, Alkenes and Alkynes (preparation, physical & chemical properties)</p> <p>Name reactions – Wurtz</p>	<p>Topic:</p> <p>Neural Control and Coordination</p> <p>Subtopics:</p> <p>-Human neural system</p> <p>-Neuron</p> <p>-Generation and conduction of nerve impulse</p> <p>-Transmission of impulse</p> <p>-Central neural system</p> <p>Topic:</p> <p>Chemical Coordination and Integration</p> <p>Subtopics:</p> <p>-Hypothalamus</p> <p>-The Pituitary Gland</p> <p>-The Pineal and Thyroid gland</p> <p>-Thymus and adrenal gland</p> <p>- Pancreas</p> <p>-Testis and ovary</p> <p>-Hormones of</p>	<p>Unit III: Database Management (XII) Database Concepts: Introduction to database concepts and its need. Relational data model: Concept of domain, relation, tuple, attribute, degree, cardinality, key, primary key, candidate</p> <p>Life Skills- Planning, Time Management</p> <p>Critical Thinking, Social Interaction, Problem solving, Communication</p> <p>Health & Wellness: Have You Tried Yoga?</p> <p>Values- Integrity and Accountability</p> <p>Gender Sensitivity- We have seen that daughters are</p>	<p>Market forms and price equilibrium, dispersion</p> <p>Teaching point- Market behaviour</p> <p>life skills- Computational skills</p>	<p>UNIT-8</p> <p>Thinking</p> <p>Nature of thinking;</p> <p>The processes of thinking ;</p> <p>Problem Solving, Reasoning</p> <p>Decision making,</p> <p>Nature and Process of creative thinking;</p> <p>Developing creative</p>	<p>Revision</p>
-----------------	---	--	---	--	---	---	---	--	-----------------

<p>of communication</p> <p>Health and wellness: Mental and emotional health</p> <p>Sewa: care for parents, animals, and trees</p> <p>Gender sensitivity: equality among genders</p>	<p>element of a matrix</p> <p>*apply the basic operations of +, -</p> <p>*define various types of matrices</p> <p>*solve the problem of equality of matrices.</p> <p>*define transpose of a matrix</p> <p>*define symmetric and skew symmetric matrices.</p> <p>*find the transpose of a matrix</p> <p>*differentiate between symmetric and skew symmetric matrices.</p>	<p>harmonics</p> <p>Demonstration</p> <p>To study the dependence of time period of oscillation of a mass spring system on the value of the suspended mass.</p> <p>Lab Activity</p> <p>To study the relation between frequency and length of a given wire under constant tension using sonometer, to study the relation between the length of a given wire and tension for constant frequency using sonometer.</p> <p>Life Skill: Web of</p>	<p>reaction, Decarboxylation, Kolbe reaction.</p> <p>Conformations- Sawhorse and Newmann projection formulae of Ethane Aromatic hydrocarbons (preparation, physical and chemical properties with mechanisms, structure and uses of benzene)</p> <p>Activity: Conformations of ethane using ball and stick model</p> <p>Life Skill: Problem Solving</p> <p>Value: Compassion and</p>	<p>heart, kidney and gastrointestinal tract</p> <p>-Mechanism of hormone action</p> <p>Life Skill: Analytical thinking</p> <p>Value: Conflict resolution</p> <p>Gender Sensitivity: Gender discrimination</p> <p>Health and wellness: Neural Health</p>	<p>raised like sons. What will happen if boys are raised like daughters?</p> <p>Life Skills- Critical Thinking, Empathy, Social Interaction</p> <p>Values- Respect for women</p> <p>Gender Sensitivity- Respect Females and understand that women also have right to choose Health & Wellness Fruit Diet</p>		<p>thinking;</p> <p>Thought and Language; Development of language and language use</p> <p>Life skill: Time Management</p> <p>Value: Human productivity</p> <p>Gender Sensitivity: Understanding gender roles.</p> <p>General Awareness: Reward and punishment relationship</p>
--	--	--	--	---	--	--	--

relationship,
Critical thinking

Value:
Honesty and
Integrity

**Gender
Sensitivity:**
Gender
Stereotype

**Health and
Wellness:**
Effective Time
Management

empathy
**Gender
Sensitivity:**
Gender
Stereotypes
**Health and
Wellness:**
Environmental
Wellness

Health and
Wellness:

Yoga in daily
life



TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

<p>JANUARY</p>	<p>Literature:</p> <p>1) The Tale of Melon City</p> <p>Revision</p> <p>Life Skills:</p> <p>Interdependence, communication, self-awareness</p> <p>Values:</p> <p>Respect, empathy</p> <p>General Awareness:</p> <p>Importance of sense and sensibility</p> <p>Health and wellness:</p> <p>Mental and emotional</p>	<p>Topic: Matrices & Determinants</p> <p>* concept of Determinants, minors, cofactors, adjoint and inverse.</p> <p>* find the area of triangle</p> <p>*solve the system of equations using matrices</p> <p>Life Skill:Critical Thinking, Problem Solving</p> <p>Values- Responsibility</p> <p>Gender Sensitivity- Awareness</p> <p>Health and Wellness-Time management</p>	<p>CLASS 12 TOPICS</p>	<p>Topic: Hydrocarbons</p> <p>Subtopics</p> <p>Directive influence of substituents in monosubstituted benzene compounds</p> <p>Carcinogenicity and toxicity.</p> <p>Interconversions</p> <p>Topic: Chemical Equilibrium</p> <p>SubTopics : Equilibrium in physical and chemical processes, nature and characteristics of equilibria. Law of mass action & Law of chemical equilibrium</p> <p>Relation between K_p and K_c $K_c -$</p>	<p>Topic: Sexual Reproduction in Flowering Plants</p> <p>Subtopics</p> <p>-Flower-A fascinating organ of angiosperms</p> <p>-Pre-fertilization: structures and events</p> <p>-Double Fertilization</p> <p>-Post-fertilization: structures and events</p> <p>-Apomixis and Polyembryony</p> <p>Life Skill: Interpersonal Relationship</p> <p>Value: Dependability</p> <p>Gender Sensitivity: Gender Equality</p> <p>Health and wellness: Health problems</p>	<p>Project work</p> <p>Revision</p> <p>Life Skills- Problem Solving Skills, Decision-making skills, Critical Thinking</p> <p>Values- Responsibility and accountability</p> <p>Gender Sensitivity- Stop violence against women. Health & Wellness: Brisk Walk</p>	<p>Indian economy on the eve of independence,</p> <p>Economic planning</p> <p>values- Patriotism</p> <p>life skills- Nationality</p>	<p>UNIT 1(Class XII Syllabus)</p> <p>VARIATIONS IN PSYCHOLOGICAL ATTRIBUTES</p> <p>Individual Differences in Human Functioning</p> <p>Assessment of Psychological Attributes</p> <p>Intelligence, Individual Differences in Intelligence</p> <p>Culture & Intelligence</p> <p>Emotional Intelligence</p> <p>Special</p>	<p>Revision</p>
-----------------------	--	---	-------------------------------	--	---	--	--	---	------------------------

<p>health</p> <p>Sewa: care for parents, animals, and trees</p> <p>Gender sensitivity: equality among genders</p>	<p>General Awareness- Equity and Equality</p> <p>REVISION</p>		<p>characteristics, expression, units, Related numerical</p> <p>Types of equilibria- Homogeneous and heterogeneous equilibria</p> <p>Factor s affecting Kc</p> <p>Le Chatliers principle & its applications.</p> <p>Ionic equilibrium in solutions-</p> <p>Strong & weak electrolytes, ionic equilibria, ionization of weak electrolytes(Ost wald's Dilution Law) Acid base concepts. Strength of acids & bases- ionization</p>	<p>caused due to pollen</p>			<p>abilities</p> <p>Life skill: Resilience</p> <p>Value: Perseverance</p> <p>Gender Sensitivity: Management of emotions amongst males and females</p> <p>General Awareness: Strategies to enhance creative thinking</p> <p>Health and Wellness: Managing emotions</p>
---	---	--	--	-----------------------------	--	--	---



TAGORE INTERNATIONAL SCHOOL
EAST OF WASH, NEW DELHI

constants.
Ionic product of water K_w .
pH and pOH-
concept and numerical.
Solubility equilibria of sparingly soluble salts (K_{sp}) brief idea & common ion effect, Applications of solubility product K_{sp} and common ion effect.

Buffer solutions & buffer action

Activities :

Extended Learning:

Learning:

List down at least three applications and two limitations of Henry's Law.

Life Skill:

				Problem Solving Value: Compassion and empathy Gender Sensitivity: Gender Stereotypes Health and Wellness: Environmental Wellness					
FEBRUARY	Assessment of Listening and Speaking Skills Revision	Revision and doubt clarification	Revision for Final Examination	Revision for Final Examination		Revision Life Skill Decision Making Value Courtesy Gender Sensitivity Gender equality	Revision	Revision and End Term Practical Examination	Revision