DELHI WORLD PUBLIC SCHOOL RAJKOT
Annual Syllabus Breakup 2023-24
CLASS: 11 - Science

Subject: English

1st Term

Month	Topics
APRIL-MAY	Literature Reader: Portrait of a Lady - about a boy describing about his travel with his grand mother A Photograph Supplementary Reader The Summer of the Beautiful White Horse two brothers enjoying a horse ride
June-July	Literature Reader Portrait of a Lady (Revision) A Photograph (Revision) We're not afraid to die
	Supplementary Reader The Summer of the Beautiful WhiteHorse (Revision) The Address
August	Literature Reader: Discovering Tut
	Supplementary Reader Ranga's Marriage
September	Literature Reader: The Voice of the Rain Supplementary Reader Albert Einstein at School
2Nd Term	
October	Literature Reader: The Ailing Planet Childhood
November	Supplementary Reader Mother's Day Literature Reader The Browning Version
December	Novel - The Canter ville Ghost- Ch.-1 to 3
January February	Revision + Annual Exam

Suggested Reading List For Class XI

1. Father Brown – G K Chesterton
2. Pay It Forward
3. Uncle Tom's cabin – Harriet Beecher Stowe
4. To kill a Mocking Bird – Harper Lee
5. Animal Farm – George Orwell

6. Nineteen eighty four-George Orwell
7. Short Story Collections By Indian Authors
8. Books by Jane Austen
9. Books by George Elliot
10. Books by Charlotte Bronte
11. Books by Emily Bronte
12. Pickwick Papers – Charles Dickens
13. The Diary of a Young Girl – Anne Frank
14. Three men in a Boat - Jerome K Jerome
15. My Family and Other Animals – Gerald Durrell
16. Rosie is my Relative – Gerald Durrell
17. One Flew Over the Cuckoo's Nest Other Books and Authors suggested:
1. Satyajeet Ray
2. R K Narayan
3. Sudha Murthy
4. IsmatChugtai
5. Vikas Swaroop
6. APJ AbdulKalam
7. Mark Twain
8. Guy de Maupassant
9. O'Henry

Subject : Biology

1st term

MONTH	Topics
June – July	**Ch : 1 The Living World** ➢ Biodiversity; Need for classification ➢ three domains of life; taxonomy and systematic ➢ concept of species and taxonomical hierarchy ➢ binomial nomenclature **Ch : 2 Biological Classification** ➢ Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups ➢ Lichens, Viruses and Viroids ➢ Activity : Demonstration of different plant specimens **Ch : 3 Plant Kingdom** ➢ Classification of plants into major groups;

	Salient and distinguishing features and a few examples of Algae, Bryophyta, Pteridophyta, Gymnospermae (Topics excluded – Angiosperms, Plant Life Cycle and Alternation of Generations) ➢ Activity : Demonstration of different plant specimens **Ch : 4 Animal Kingdom** ➢ Salient features and classification of animals, non-chordates up to phyla level and chordates up to class level (salient features and at a few examples of each category). (No live animals or specimen should be displayed.) ➢ Activity : Demonstration of different Animal specimens **Ch : 5 Morphology of Flowering Plant** ➢ Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed ➢ Description of family Solanaceae ➢ Activity : Demonstration of different models, chart and specimens
August	**Ch : 6 Anatomy of Flowering Plants** ➢ Anatomy and functions of tissue systems in dicots and monocots. ➢ Activity : Demonstration of different models, chart and specimens **Ch : 7 Structural Organization in Animals** ➢ Morphology, Anatomy and functions of different systems (digestive, circulatory,respiratory, nervous and reproductive) **Ch : 8 Cell the Unit of Life** ➢ Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells ➢ Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function ➢ Endo membrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultra structure and function); nucleus. **Ch : 9 Bio-molecules** ➢ Chemical constituents of living cells: bio molecules, structure and function of proteins, carbohydrates, lipids, nucleic acids ➢ Enzyme - types, properties, enzyme action. (Topics excluded: Nature of Bond Linking Monomers in a Polymer, Dynamic State of Body Constituents ➢ Concept of Metabolism, Metabolic Basis of Living, The Living State) **Ch : 10 Cell Cycle and Cell division** ➢ Cell cycle, mitosis, meiosis and their significance
September	Revision for Half Yearly Exam

2nd Term

October	**Ch : 13 Photosynthesis in higher plants** ➢ Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea) ➢ photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation ➢ chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.
November	**Ch : 14 Respiration in higher plants** ➢ Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic) ➢ TCA cycle and electron transport system (aerobic) ➢ energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient. **Ch : 15 Plant growth and development** ➢ Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and re differentiation ➢ sequence of developmental processes in a plant cell; growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA **Ch : 17 Breathing and Exchange of Gases** ➢ Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases ➢ transport of gases and regulation of respiration, respiratory volume ➢ disorders related to respiration - asthma, emphysema, occupational respiratory disorders.
December	**Ch : 18 Body Fluids and Circulation** ➢ Composition of blood, blood groups, coagulation of blood; composition of lymph and its function ➢ human circulatory system - Structure of human heart and blood vessels ➢ cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity ➢ disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure. **Ch : 19 Excretory Products and their Elimination** ➢ Modes of excretion - ammonotelism, ureotelism, uricotelism ➢ human excretory system – structure and function; urine formation ➢ osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus ➢ role of other organs in excretion; disorders - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant. **Ch : 20 Locomotion and Movements** ➢ Types of movement - ciliary, flagellar, muscular; skeletal muscle, contractile proteins and muscle contraction ➢ skeletal system and its functions; joints; disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout

January	**Ch : 21 Neutral Control and Co-ordination** ➢ Neuron and nerves; Nervous system in humans - central nervous system ➢ peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse **Ch : 22 Chemical Co-ordination and Integration** Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads ➢ mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease.
February	Revision + Annual Exam

Subject : Physics

1st Term

MONTH	Topics
April	**Ch 2 Physical World and Measurement** Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. significant figures. Dimensions of physical quantities, dimensional analysis and its applications. **Chapter–3: Motion in a Straight Line** Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and non-uniform motion, instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment)
June - July	**Chapter–4: Motion in a Plane** Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of uniform velocity and uniform acceleration-projectile motion, uniform circular motion **Chapter–5: 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. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road). **Chapter–6: Work, Energy and Power** Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: non- conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions. **Chapter–7: System of Particles and Rotational Motion** Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications
August	**Chapter–7: System of Particles and Rotational Motion**

	Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation) **Chapter–8: Gravitation** Kepler's laws of planetary motion, Universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape velocity, orbital velocity of a satellite.
September	Revision for Half Yearly Exam

2nd Term

October	**Chapter–9: Mechanical Properties of Solids** Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy. **Chapter–10: Mechanical Properties of Fluids** Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity,
November	**Chapter–10: Mechanical Properties of Fluids** Bernoulli's theorem and its simple applications. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.
December	**Chapter–11: Thermal Properties of Matter** Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity. Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law . **Chapter–12: Thermodynamics** Thermal equilibrium and definition of temperature zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics, Second law of thermodynamics: gaseous state of matter, change of condition of gaseous state -isothermal, adiabatic, reversible, irreversible, and cyclic processes. **Chapter–13: Kinetic Theory** Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.
January	**Chapter–14: Oscillations** Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their application. Simple harmonic motion (S.H.M) and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period.

	Chapter – 15 Waves Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats
February	Revision + Annual Exam

SUBJECT: CHEMISTRY

1st Term

MONTH	TOPIC
JUNE	**Chapter : 2 Structure of Atom (half)** ✓ Discovery of electron, proton and neutron ✓ Atomic number, isotopes and isobars ✓ Thomson's model and its limitations ✓ Rutherford's model and its limitation ✓ Bohr's model and its limitations ✓ Concept of shells and subshells ✓ Dual nature of matter and light ✓ De Brogle's relationship ✓ Heisenberg uncertainty principle ✓ Concept of orbitals ✓ Quantum numbers ✓ Shapes of s, p and d orbitals ✓ Rules for filling electrons in orbitals ✓ Aufbau principle ✓ Pauli's exclusion principle ✓ Hund's rule ✓ Electronic configuration of atom ✓ Stability of half filled and fully filled orbitals **Chapter : 1 Some Basic Concepts of Chemistry** ✓ General introduction ✓ Importance and scope of chemistry ✓ Nature of matter ✓ Laws of chemical combination ✓ Dalton's atomic theory
JULY	**Chapter : 1 Some Basic Concepts of Chemistry** ✓ Concept of elements, atoms and molecules ✓ Atomic and molecular mass ✓ Mole concept and molar mass ✓ Percentage composition ✓ Empirical and molecular formula ✓ Chemical reaction ✓ Stoichiometry and calculation based on stoichiometry **Chapter : 3 Classification of Elements and Periodicity in Properties** ✓ Significance of classification ✓ Brief history of the development of periodic table ✓ Modern periodic law and the present form of periodic table ✓ Periodic trends ✓ Atomic and Ionic radii ✓ Innert gas radii

	✓ Ionisation enthalpy ✓ Electron gain enthalpy ✓ Electronegativity ✓ Valency ✓ Nature of element with atomic number greater than 100 **Chapter : 4 Chemical Bonding and Molecular Structure** ✓ Valence electrons ✓ Ionic bond, Covalent bond and bond parameters ✓ Lewis's structure ✓ Polar nature of covalent bond ✓ Covalent nature of ionic bond ✓ Valence bond theory ✓ Resonance ✓ Geometry of covalent molecules ✓ VSEPR theory ✓ Oncept of hybridization ✓ Shapes of orbitals ✓ Hydrogen bond
AUGUST	**Chapter : 6 Thermodynamics(half)** ✓ Concept of system and types of system ✓ Work and heat energy ✓ Extensive and Intensive property ✓ State function ✓ First law of thermodynamics ✓ Heat capacity and specific heat capacity ✓ Hess's law of constant heat summation ✓ Enthalpy ✓ Gibb's energy change ✓ Third law of thermodynamic **Chapter 7: Equilibrium** ✓ Equilibrium in physical process ✓ Equilibrium in chemical process ✓ Dynamic equilibrium ✓ Equilibrium constant ✓ Factors affecting
SEPTEMBER	Revision for half yearly exam

2nd Term

OCTOBER	**Chapter : 8 Redox reactions** ✓ Oxidation ✓ Reduction ✓ Balancing **Chapter : 12 Organic Chemistry** ✓ General introduction ✓ Method of purification ✓ Qualitative and quantitative analysis ✓ Classification and IUPAC name ✓ Inductive effect
NOVEMBER	✓ Resonance and hyper conjugation ✓ Homolytic and heterolytic fission

	✓ Free radical and carbocation ✓ Types of organic reaction Chapter : 13 Hydrocarbons (half) ✓ Alkanes : ✓ Nomenclature ✓ Isomerism ✓ Conformations ✓ Physical properties ✓ Chemical reactions ✓ Combustion and pyrolysis ✓ Alkenes: ✓ Nomenclature ✓ Structure of double bond ✓ Geometrical isomerism ✓ Physical properties ✓ Method of preparation ✓ Chemocal reactions ✓ Mechanism of electrophilic addition ✓ Alkynes : ✓ Structure of triple bond ✓ Acidic nature of alkynes ✓ Addition reactions
DECEMBER	Chapter : 13 Hydrocarbons (continue) ✓ Aromatic hydrocarbons: ✓ Benzene and its aromatic nature ✓ Electrophilic substitution reaction ✓ Directive influence of the functional in monosubstited benzene ✓ Carcinogenecity and toxicity
JANUARY	Revision for Annual exam
FEBRUARY	Practical +Annual Exam

Subject: Informatics Practices (065)

Month	Topic
	1st Term
April	Unit 2: Introduction to Python ✓ Basics of Python programming, Python interpreter - interactive and script mode, the structure of a program, indentation, identifiers, keywords, constants, variables, types of operators, precedence of operators, data types, mutable and immutable data types, statements, expressions, evaluation and comments, input and output statements, data type conversion, debugging.
June – July	✓ Control Statements: if-else, if-elif-else, while loop, for loop ✓ Lists: list operations - creating, initializing, traversing and manipulating lists, list methods and built-in functions – len(),list(),append(),insert(), count(),index(),remove(), pop(), reverse(), sort(), min(),max(),sum()

	✓ Dictionary: concept of key-value pair, creating, initializing, traversing, updating and deleting elements, dictionary methods and built-in functions – dict(), len(), keys(), values(), items(), update(), del(), clear()
August	Unit 1: Introduction to Computer System ✓ Introduction to computer and computing: evolution of computing devices, components of a computer system and their interconnections, Input/output devices. ✓ Computer Memory: Units of memory, types of memory, data deletion, recovery. ✓ Software: purpose and types – system and application software, generic and specific purpose software.
September	Revision
2nd Term	
October	Unit 3: Database concepts & SQL ✓ Database Concepts: Introduction to database concepts and its need, Database Management System. ✓ Relational data model: Concept of domain, tuple, relation, candidate key, primary key, alternate key ✓ Advantages of using Structured Query Language, Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL, creating a database using MySQL, Data Types ✓ Data Definition: CREATE DATABASE, CREATE TABLE, DROP, ALTER ✓ Data Query: SELECT, FROM, WHERE with relational operators, BETWEEN, logical operators, IS NULL, IS NOT NULL ✓ Data Manipulation: INSERT, DELETE,UPDATE
November	Unit 4: Introduction to the Emerging Trends ✓ Artificial Intelligence, Machine Learning, Natural Language Processing, Immersive experience (AR, VR), Robotics, Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); Grid Computing, Block chain technology.
December	Revision

Subject: MATHEMATICS

Month	Topics
June –July	1. Sets 2. Linear Inequality 3. Relation and Functions 4. Trigonometric Functions
August	1. Permutation and Combination 2. Binomial Theorem 3. Probability
September	1. Complex Numbers and Quadratic Equations. 2. Sequence and Series 3. Straight lines
October	1. Conic Sections. 2. Limits and Derivatives
November	.
December	1. Introduction to 3D Geometry 2. Statistics
January	1. Revision
February	

Subject: Hindi

वितान–१

प्रथम सत्र पाठयपुस्तक: आरोह-१

माह	पाठ्यक्रम
अप्रैल–मई	गद्य : १ : प्रेमचंद – नमक का दारोगा
जून–जुलाई	गद्य : २ : कृष्णा सोबती – मियाँ नसीरूदीन वितान : १ : पाठ :१ कुमार गंधर्व – लता मंगेशकर फीचर लेखन, संचार माध्यम
अगस्त	गद्य : ४ : बालमुकुंद गुप्त – विदाई संभाषण संचार माध्यम, आलेख , पत्र लेखन वितान : १ : अनुपम मिश्र – राजस्थान की रजत बूँदे
सितम्बर	गद्य : ५ : शेखर जोशी – गलता लोहा पद्य : ५ : भवानी प्रसाद मिश्र – घर की याद

द्वितीय सत्र

अक्टूबर नवम्बर	गद्य : ३ मन्नू भंडारी– रजनी पद्य : ६ त्रिलोचन – चंपा काले काले अच्छर नहीं चीन्हती वितान : १ पाठ : ४ बेबी हालदार – आलो आँधारि
दिसम्बर	गद्य : ८ कृश्नचंदर – जामुन का पेड गद्य : ९ जवाहरलाल नहेरू – भारत – माता पद्य : ७ दुष्यंत कुमार – गजल पद्य : ८ अक्क महादेवी – १ हे भूख १ मत मचल २ हे मेरे जुही के फूल जैसे ईश्वर
जनवरी	पद्य : ९ अवतार सिंह पाश – सबसे खतरनाक पद्य : १० निर्मला पुतुल – आओ, मिलकर बचाएँ संचार माध्यम , निबंध लेखन , आदि पुनरावर्तन

Subject Teacher: _____

Subject In-charge: _____ Principal : _____