Logical Reasoning	
Chapter Name	**Subtopics**
Analogy	Number, Alphabet, Word, Figure Analogy
Classification	Number, Alphabet, Word, Figure Classification (Odd One Out)
Series	Number, Alphabet, Mixed Series, Missing Term, Wrong Term
Coding-Decoding	Letter, Number, Mixed, Matrix Coding
Blood Relations	Family Tree, Coded Blood Relations
Direction Sense	Distance & Direction, Shortest Path, Turns
Ranking & Order	Rank, Position, Order Arrangement
Alphabet Test	Dictionary Order, Word Formation, Letter Position
Non-Verbal Reasoning	Mirror Image, Water Image, Paper Folding, Paper Cutting, Embedded Figures, Figure Completion, Figure Series, Cube & Dice
Mathematical Operations	Symbol Replacement, Number Operations
Logical Reasoning	Cause & Effect, Decision Making, Logical Sequence, Assertion & Reason
Counting of Figures	Triangles, Squares, Rectangles, Cubes

9th Std Maths	
Chapter Name	**Subtopics**
Number System	Natural, Whole, Integers, Rational & Irrational Numbers, Real Numbers, Decimal Expansion, Surds & Radicals, Laws of Exponents, Scientific Notation, Rationalization, HCF & LCM
Polynomials	Degree, Types, Zeros, Factor Theorem, Remainder Theorem, Factorization, Polynomial Identities, Graphs
Linear Equations	One Variable, Two Variables, Graphs, Graphical Method, Consistency
Coordinate Geometry	Cartesian Plane, Coordinates, Quadrants, Area Using Coordinates, Collinearity
Lines and Angles	Complementary, Supplementary, Vertically Opposite, Linear Pair, Parallel Lines & Transversal, Corresponding, Alternate Interior, Co-interior Angles
Statistics	Mean, Median, Mode, Histograms, Bar Graph, Frequency polygone Graph

10th Maths	
Chapter Name	**Sub Topics**
Quadratic Equations	Standard Form, Roots, Factorization, Completing the Square, Quadratic Formula, Nature of Roots, Discriminant, Word Problems
Trigonometry	Ratios, Standard Values, Reciprocal Ratios, Identities, Complementary Angles, Heights & Distances, Applications
Arithmetic Progressions	Sequence & Series, Common Difference, nth Term, Sum of First n Terms, Arithmetic Mean, Word Problems
Mensuration (2D & 3D)	Area of Plane Figures (Triangle, Square Rhombud, Rectangle, Parallelogram and Trapezium), Surface Area & Volume of Cube, Cuboid, Cylinder, Cone, Sphere, Hemisphere, Unit Conversions
Linear Equations	Pair of Linear Equations, Graphical Method, Substitution Method, Elimination Method, Consistency
Polynomials	Degree, Types, Zeros, Relationship between Zeros & Coefficients, Factor Theorem, Remainder Theorem, Factorization, Polynomial Identities, Graphs
Coordinate Geometry	Cartesian Plane, Coordinates, Quadrants, Distance Formula, Section Formula, Midpoint Formula, Area Using Coordinates, Collinearity
Probability & Statistics	Mean, Median, Mode, Cumulative Frequency, Histograms, Experimental & Theoretical Probability

9th Std Physics	
Chapter Name	**Subtopics**
Motion	Distance & Displacement, Speed, Velocity (Speed with direction), Average speed, Average velocity, Acceleration (rate of change of velocity), Distance-time graph, Displacement-time graph, Velocity-time graph, Equations of motion & its application, Uniform circular motion
Force & Laws of Motion	Force, Balanced & Unbalanced forces, First law of motion, Inertia & mass, Linear momentum, Second Law of motion & its application, Third law of motion & its application
Gravitation	Universal law of gravitation & its importance, Free fall & acceleration due to gravity, Motion of objects under the influence of gravitational force of the earth, Mass & weight, Weight of an object on the moon, Thrust & Pressure, Pressure in fluids, Buoyancy, Archimedes' principle
Work & Energy	Scientific Conception of Work, Work done by a constant force, Energy, Forms of energy, Kinetic Energy, Relation between Kinetic energy & work, Potential Energy, Potential Energy of an object at a height, Law of Conservation of Energy, Rate of doing work (Power)
Sound	Production of sound, Propagation of sound, Longitudinal wave & Transverse wave, Characteristic of a sound wave, Reflection of sound, Echo, Reverberation, Uses of Multiple reflection of sound, Range of hearing, Applications of Ultrasound

10th Physics	
Chapter Name	**Sub Topics**
Light - Reflection & Refraction	Reflection of light, Spherical mirrors, Image formation by spherical mirrors, Representation of Images formed by Spherical mirrors using Ray diagrams, Sign convention for Reflection by spherical mirrors, Mirror formula & Magnification, Refraction of light, Refraction through a rectangular glass slab, Snell's Law of refraction, The refractive index, Refraction by spherical lenses, Image formation by lenses, Image formation in lenses using Ray diagrams, Lens formula and magnification, Power of a lens
The Human Eye & the Colourful World	The Human Eye, Power of accommodation, Defects of vision & their correction, Myopia, Hypermetropia, Presbyopia, Refraction of light through a prism, Dispersion of white light by a glass prism, Atmospheric refraction, Twinkling of stars, Advance sunrise and delayed sunset, Scattering of light, Tyndall effect, Blue colour of the clear sky
Electricity	Electric current & circuit, Electric potential & Potential difference, Ohm's Law, Resistance of a Conductor, Resistance of a system of resistors, Resistors in Series, Resistors in Parallel, Heating effect of Electric Current & its application, Electric Power
Magnetic Effects of Electric Current	Magnetic field & field lines, Magnetic field due to a current-carrying conductor, Magnetic field due to a current through a straight conductor, Right-hand thumb Rule, Magnetic field due to a current through a circular loop, Magnetic field due to a current in a solenoid, Force on a current carrying conductor in a magnetic field, Fleming's left hand rule, Domestic Electric circuits

9th Std Chemistry	
Chapter Name	**Subtopics**
Matter in Our Surroundings	**Physical Nature of Matter**: Matter is made up of particles and their size. Characteristics of Particles: Spaces between particles and their continuous motion. **States of Matter**: Solid, liquid, and gaseous states with their properties. **Change of State**: Effect of temperature (Melting, Boiling, Latent Heat) and pressure. **Evaporation**: Factors affecting evaporation and its cooling effect.
Is Matter Around Us Pure?	**Types of Mixtures**: Homogeneous and Heterogeneous mixtures. Solutions, Suspensions, and Colloids: Properties, concentration of solutions, and Tyndall effect. **Separation Techniques**: Centrifugation, chromatography, and distillation. Physical vs Chemical Changes: Differences between physical and chemical processes. **Pure Substances**: Types of pure substances, including elements and compounds.
Atoms and Molecules	**Laws of Chemical Combination**: Law of conservation of mass and law of constant proportions. **Atom Concepts**: What is an atom, atomic mass, and modern symbols. **Molecules and Ions**: Molecules of elements/compounds and polyatomic ions. Writing Chemical Formulae: Rules for writing formulas of simple compounds. **Mole Concept**: Relationship between molecular mass, mole, and Avogadro's number.
Structure of Atom	**Subatomic Particles**: Discovery and properties of electrons, protons, and neutrons. **Atomic Models**: Thomson's, Rutherford's, and Bohr's models of an atom. Electron Distribution: Rules for distributing electrons in different shells (Bohr-Bury model). Valency: Definition and how to determine the combining capacity of an element. **Atomic/Mass Number**: Concepts of atomic number, mass number, isotopes, and isobars.

10th Std Chemistry	
Chapter Name	**Sub Topics**
Chemical Reactions and Equations	**Chemical Equations**: Writing and balancing chemical equations. **Types of Chemical Reactions**: Combination, Decomposition, Displacement, Double Displacement, and Redox Reactions. **Effects of Oxidation in Daily Life**: Corrosion and rancidity.
Acids, Bases and Salts	**Chemical Properties**: Reactions of acids and bases with metals, metal carbonates, and neutralization. pH Scale: Definition, importance of pH in everyday life. Calculation of pH of Acid & Base. **Chemicals from Common Salt**: Sodium Hydroxide, bleaching powder, baking soda, washing soda, and Plaster of Paris/ Gypsum.
Metals and Non-metals	**Physical & Chemical Properties**: Key properties and reactions with air, water, and dilute acids. **Reactivity Series**: Relative reactivities of metals and displacement mechanisms. **Ionic Compounds**: Formation, properties, and nature of ionic bonds. **Metallurgy & Corrosion**: Basic metallurgical processes, refining of metals, and prevention of corrosion.
Carbon and its Compounds	**Covalent Bonding**: Shared pairs of electrons and versatile nature of carbon. Saturated and unsaturated hydrocarbons, homologous series. Functional groups and IUPAC names of the compounds, Properties, preparation, and uses of Hydrocarbon, Alcohol, Aldehyde, Ketone and Carboxylic acid. **Chemical Properties**: Combustion, oxidation, Addition and Substitution reactions. Soaps and Detergents: Structure, cleansing action, and micelle formation.

9th Std Biology	
Chapter Name	**Sub Topic**
The Fundamental Unit of Life	* ***Cell Theory:*** Contributions of Hooke, Leeuwenhoek, Schleiden, Schwann, and Virchow. * *Prokaryotic vs. Eukaryotic Cells:* Structural differences, nucleoid vs. nucleus, presence of membrane-bound organelles. * *Plasma Membrane & Cell Wall:* Fluid Mosaic Model basics; mechanisms of transport: *diffusion, osmosis* (hypotonic, hypertonic, isotonic solutions, plasmolysis), endocytosis. * *Cell Organelles (Structure & Function):* * Nucleus: Nuclear membrane, nucleolus, chromatin/chromosomes (DNA and proteins). * Endomembrane System: Rough and Smooth Endoplasmic Reticulum (lipid/protein synthesis, detoxification), Golgi apparatus (packaging and dispatch). * Energy Transformers: Mitochondria (ATP production, own DNA/ribosomes) and Plastids (Chloroplasts, Chromoplasts, Leucoplasts). * Lysosomes: Hydrolytic enzymes, intracellular digestion ("suicide bags"). * Vacuoles, Ribosomes, and Centrosomes.
Tissues (Structural Organization)	* ***Plant Tissues:*** * Meristematic Tissue: Apical, intercalary, and lateral meristems (locations and growth roles). * Permanent Tissue: Simple (Parenchyma, Collenchyma, Sclerenchyma) and Complex (Xylem and Phloem components like tracheids, vessels, sieve tubes, companion cells). * ***Animal Tissues:*** * **Epithelial Tissues::** Squamous, cuboidal, columnar, ciliated, and glandular (locations and protective roles). * **Connective Tissues::** Blood, lymph, bone, cartilage, areolar, adipose, tendons, and ligaments (matrix composition and binding roles). * **Muscular Tissues**:: Striated/skeletal, unstriated/smooth, and cardiac muscles (structural differences and voluntary vs. involuntary control). * **Nervous Tissues::** Structure of a basic neuron (axon, dendrites, cyton).

10th Std Biology	
Chapter Name	**Subtopic**
Life Processes	* **Nutrition & Bioenergetics:** * **Autotrophic Nutrition**: Detailed mechanism of photosynthesis (light and dark reactions, though keep dark reaction overview, raw materials, role of stomata * **Heterotrophic Nutrition: Human digestive system anatomy, specific digestive enzymes** (pepsin, trypsin, amylase, lipase) and their optimal pH environments, and the mechanics of absorption in the small intestine. * **Respiration:** * Aerobic vs. anaerobic pathways (glycolysis overview, breakdown of pyruvate in yeast, muscle cells, and mitochondria). * Human respiratory system structure, gas exchange mechanics in alveoli, and transport of oxygen and carbon dioxide via hemoglobin. * **Transport & Circulation:** * Plants: Xylem vs. phloem mechanisms (transpiration pull theory vs. active translocation of food). * Humans: Structure of the human heart, double circulation, composition of blood (plasma, RBCs, WBCs, platelets) basic knowledge, and the lymphatic system. * **Excretion & Osmoregulation:** * Structure and functional unit of the human kidney (the nephron). structure of kidney and nephron * Ultrafiltration, selective reabsorption, and tubular secretion. * Excretion strategies in plants
Control and Coordination	* **Nervous Coordination (Humans):** * Structure of a neuron, synapse mechanics, and electrical/chemical impulse transmission. * Reflex action and the pathway of a reflex action. * Central Nervous System (Forebrain, Midbrain, Hindbrain ,Spinal Cord structure and functions) and Peripheral Nervous System overview. * *Chemical Coordination (Endocrine System):* * Major human endocrine glands (Pituitary, Thyroid, Pancreas, Adrenals, Gonads).

	* Hormones secreted and their specific functions (e.g., insulin/glucagon, adrenaline, thyroxine). Gonads) and their specific secretions * *Plant Coordination:* * Plant hormones (Auxins, Gibberellins, Cytokinins, Abscissic Acid, Ethylene) and their specific roles. * Tropic movements (Phototropism, Geotropism, Hydrotropism, Thigmotropism) vs. Nastic movements (touch-sensitive responses).
Reproduction in Organisms	* ***Asexual Reproduction:*** Mechanisms and examples of fission (binary and multiple), fragmentation, regeneration, budding, vegetative propagation (natural and artificial), and spore formation. * ***Sexual Reproduction in Flowering Plants:*** * Anatomy of a flower (unisexual vs. bisexual). * Process of pollination (agents and types) and double fertilization (formation of zygote and endosperm). * Structure of a seed and germination stages. * ***Human Reproduction & Health:*** * Male and female reproductive systems anatomy and gamete production (sperm and ova). * The menstrual cycle phase overview. * Reproductive health: Contraceptive methods (mechanical, chemical, surgical), and awareness of Sexually Transmitted Infections (STIs).
Heredity and Evolution	* ***Mendelian Genetics:*** * Mendel's experiments with Pisum sativum (pea plants) and why he chose them. * Monohybrid and Dihybrid crosses (predicting F1 and F2 generations, genotypic and phenotypic ratios). * Laws of Inheritance: Dominance, Segregation, and Independent Assortment. * *Sex Determination:* Mechanism of sex determination in humans (XX/XY system). * ***Evolutionary Concepts***:* * Basic concepts of inherited vs. acquired traits. * Evidence for evolution: Homologous organs (shared ancestry, different functions) vs. Analogous organs (different ancestry, same function), and fossils.

Our Environment	**Ecosystem Dynamics** **Focuses on ecological balance and human impact**. * *Ecosystem Structure:* Biotic and abiotic components, food chains, and complex food webs. * *Energy Flow:* The 10% Law of energy transfer across trophic levels, and the concept of ecological pyramids. * *Environmental Issues:* * Biological Magnification (how toxins concentrate up the food chain). * Ozone layer depletion (causes, chemical reactions involved, and international steps taken). * Waste management strategies and biodegradable vs. non-biod biodegradable substances.