Curriculum
Subject - Science (086)
CLASS – X
Session: 2026-27

EVALUATION SCHEME		
THEORY		
Unit No.	**UNITS**	**Marks**
I	Chemical Substances-Nature and Behaviour	25
II	World of Living	25
III	Natural Phenomena	12
IV	Effects of Current	13
V	Natural Resources	05
Total		**80**
Internal Assessment		**20**
Grand Total		**100**

Chapter No/ Month	Name of chapter/ Learning Outcome	Practical and Competency Skill Based Activities/ Experiential Learning	Skill	Assessment
Biology: Chapter-5 (April-May)	**World of Living** **Life processes:** **Learning outcomes:** Student will be able to: ● Interpret terminologies related to "living beings". ● Illustrate basic concepts of nutrition. ● Illustrate respiration. ● Categorize transport in plants and animals. ● Describe excretion in plants and animals.	To show experimentally that carbon dioxide is given out during respiration. Preparing a temporary mount of a leaf peel to show stomata	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Experimentation Communication skills: Scientific communication Emotional and social development: Curiosity and exploration Academic and career readiness: Scientific literacy	Oral Test/ Class test/ Quizzes / lab activity Visit to Nutritionist/ Dietician
Biology: Chapter-6 (June-July)	**Control and coordination in animals and plants:** Students will able to: ● Describe Tropic movements in plants; ● Explain plant hormones. ● Analyze-Control and coordination in animals: Nervous system. ● Categorize-Voluntary, involuntary and reflex action. ● Express- Chemical coordination: animal hormones.	Observation and identification of reflex actions	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Experimentation Communication skills: Scientific communication. Emotional and social development: Curiosity and exploration Academic and career readiness: Scientific literacy	Oral Test/ Class test/ Quizzes
Chemistry: Chapter-1 (April-May)	**CHEMICAL REACTIONS AND EQUATIONS** **Learning outcome:** Students will be able to : ● Illustrate the Chemical equations with examples ● Balance a chemical equation ● Implication of a balanced chemical equation ● Categorise Types of chemical reactions like combination , decomposition, displacement , double displacement, precipitation , oxidation and reduction endothermic and exothermic reaction.	Performing and observing the following reactions and classifying them into: A. Combination reaction B. Decomposition reaction C. Displacement reaction D. Double displacement reaction (i) Action of water on quicklime (ii) Action of heat on ferrous sulphate crystals (iii) Iron nails kept in copper sulphate solution (iv) Reaction between sodium sulphate and barium chloride solutions.	Cognitive skills: Critical thinking, problem solving, analysis, research skills Practical and technical skills: Experimentation,data collection and recordings,use of tools and technology Communication skills: Scientific communication,team work, listening and interpretation	Oral Test/ Class test/ Quizzes / lab activity

			Emotional and social development: Curiosity and exploration, patience and perseverance Academic and career readiness: Scientific literacy, interdisciplinary learning, preparation for STEM careers	
Physics: Chapter-9 **(April-May)**	**Light-Reflection and Refraction** **Learning outcomes:** students will be able to : ● Explain and differentiate reflection of light by curved surfaces ● Describe images formed by spherical mirror. Centre of curvature , principal axis, principal focus, focal length ● Explain types of reflection, reflecting surfaces and image formation ● Define Mirror formula (derivation not required) ● Analyze: Refraction, laws of refraction and refractive index. Refraction of light by spherical lens, Image formed by spherical lenses. lens formula (Derivation not required) ● Describe: Magnification, Power of lens.	Determination of the focal length of (i) Concave mirror and (ii) Convex lens by obtaining the image of a distant object. Tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. Measure the angle of incidence, angle of refraction, angle of emergence and interpret the result.	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Experimentation, use of tools and technology Communication skills: Scientific communication, listening and interpretation Emotional and social development: Curiosity and exploration, responsibility Academic and career readiness: Scientific literacy, interdisciplinary learning	Oral Test/ Class test/ Quizzes / lab activity
Chemistry: Chapter- 2 (June-July)	**ACIDS , BASES AND SALTS** **Learning outcomes:** Students will be able to: ● Define acids and bases in terms of H^+ and OH^- ions, general properties examples and uses and neutralization. ● Explain the concept of pH scale by defining it. ● Analyze the importance of pH in everyday life ● Illustrate the preparation and uses of sodium hydroxide , bleaching powder, baking soda . ● Describe the preparation and uses of Sodium Hydroxide, Bleaching powder, Baking soda, Washing soda and Plaster of Paris.	A. Finding the pH of the following samples by using pH paper/universal indicator: (i) Dilute Hydrochloric Acid (ii) Dilute NaOH solution (iii) Dilute Ethanoic Acid solution (iv) Lemon juice (v) Water (vi) Dilute Hydrogen Carbonate solution B. Studying the properties of acids and bases (HCl & NaOH) on the basis of their reaction with: a) Litmus solution (Blue/Red) b) Zinc metal c) Solid sodium carbonate	Cognitive skills: Critical thinking, problem solving, analysis, research skills Practical and technical skills: Experimentation,data collection and recordings,use of tools and technology Communication skills: Scientific communication,team work, listening and interpretation Emotional and social development: Curiosity and exploration, patience and perseverance	Oral Test/ Class test/ Quizzes / lab activity

			Academic and career readiness: Scientific literacy, interdisciplinary learning,	
Physics: Chapter -10 (June-July)	**Human eye and colorful world** **Learning outcomes:** Students will be able to: ● Describe functioning of a lens in human eye ● Explain defects of vision and their correction ● Explain the application of spherical mirror and lenses. ● Define refraction of light through a prism, dispersion of light, scattering of light, application in daily life (Excluding color of the sun at sunrise and sunset	Tracing the path of ray of light through a glass prism	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Experimentation, use of tools Communication skills: Scientific communication Emotional and social development: Curiosity and exploration, responsibility and ethics Academic and career readiness: Scientific literacy	Oral Test/ Class test/ Quizzes / lab activity.
Chemistry: Chapter-3 (Aug-Sep)	**METALS AND NON-METALS** **Learning outcomes:** Students will be able to : ● Tabulate the properties of metals and non-metals. ● Recall and learn the reactivity series ● Illustrate the formation of ionic compounds ● Explain the properties of ionic compounds ● Describe basic metallurgical processes ● Define Corrosion and give measures for its prevention.	A. Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions: (i) $ZnSO_4$(aq) (ii)$FeSO_4$(aq) (iii) $CuSO_4$(aq) (iv) $Al_2(SO_4)_3$(aq) B. Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity based on the above result. Classifying substances around into metals and non-metals	Cognitive skills: Critical thinking, problem solving, analysis, research skills Practical and technical skills: Experimentation,data collection and recordings,use of tools and technology Communication skills: Scientific communication,teamwork, listening and interpretation Emotional and social development: Curiosity and exploration, patience and perseverance Academic and career readiness: Scientific literacy, interdisciplinary learning, preparation for STEM career	Oral Test/ Class test/ Quizzes / lab activity.

Biology : Chapter - 7 (Aug-Sep)	**How do Organisms reproduce:** **Learning outcomes:** Student will be able to: ● Interpret terminologies related to Reproduction in animals and plants. ● Categorize types of modes of reproduction in plants. (asexual and sexual). ● Describe reproductive health. ● Analyse need for reproductive health and methods of family planning. ● Describe the importance of safe sex vs. HIV/AIDS. ● Explain about Child bearing and women's health.	Studying (a) binary fission in Amoeba, and (b) budding in yeast and Hydra with the help of prepared slides. Identification of the different parts of an embryo of a dicot seed (Pea, gram or red kidney bean).	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Experimentation Communication skills: Scientific communication Emotional and social development: Curiosity and exploration Academic and career readiness: Scientific literacy	Oral Test/ Class test/ Quizzes / lab activity
Biology: Chapter- 8 (October)	**Heredity** **Learning outcomes:** Student will be able to: ● Explain:-Heredity;Mendel's contribution- Laws for inheritance of traits. ● Justify Sex determination.	Solving monohybrid and dihybrid cross.	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Communication skills: Scientific communication Emotional and social development: Curiosity and exploration Academic and career readiness: Scientific literacy	Oral Test/ Class test/ Quizzes / lab activity
Chemistry: Chapter - 4 (Oct-Nov)	**CARBON AND ITS COMPOUNDS** **Learning outcomes:** Students will be able to: ● Describe with examples the covalent bonding in carbon compounds ● Illustrate the versatile nature of carbon ● Define the homologous series ● Name the carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkanes and alkynes) ● Differentiate between saturated hydrocarbons and unsaturated hydrocarbons. ● Explain the Chemical properties of carbon compounds (combustion, oxidation, addition and substitution reaction). ● Describe the properties and uses of Ethanol and Ethanoic acid, soaps and detergents.	Study of the following properties of acetic acid (ethanoic acid): 1. Odour 2. Solubility in water 3. Effect on litmus 4. Reaction with sodium hydrogen carbonate.	Cognitive skills: Critical thinking, problem solving, analysis, research skills Practical and technical skills: Experimentation,data collection and recordings,use of tools and technology Communication skills: Scientific communication,team work, listening and interpretation Emotional and social development: Curiosity and exploration, patience and perseverance Academic and career readiness: Scientific literacy, interdisciplinary learning, prepration for STEM careers	Oral Test/ Class test/ Quizzes / lab activity

Physics: **Chapter-11** **(Aug.-Sept-oct)**	**Electricity** **Learning outcomes:** Students will be able to: ● Define 'electric current', potential difference and electric current, ohm's law. ● Distinguish between resistance and resistivity, factors on which resistance of the conductor depends. ● Explain effect of electricity ● Create circuits in series, parallel and combination and its application in daily life. ● Illustrate heating effect of electric current and its applications in daily life. ● Define and explai electric power, interrelation between P,V,I and R	Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determining its resistance. Also plotting a graph between V and I. Determination of the equivalent resistance of two resistors when connected in series and parallel.	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Practical and technical skills: Experimentation, use of tools and technology, recording data Communication skills: Scientific communication, interpretation Emotional and social development: Curiosity and exploration Academic and career readiness: Scientific literacy, interdisciplinary learning	Oral Test/ Class test/ Quizzes / lab activity Visit to Sainj Hydro Project
Biology: **Unit - 13** **(November)**	**Our Environment** **Learning Outcomes:** Student will be able to: ● Describe Eco-system, Environmental problems, Ozone depletion, waste production and their solutions. ● Compare Biodegradable and non-biodegradable substances.	Portfolio (Art Integration)	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Communication skills: Scientific communication Emotional and social development: Curiosity and exploration, responsibility and ethics Academic and career readiness: Scientific literacy	Oral Test/ Class test/ Quizzes / lab activity
Physics: **Chapter - 12** **(Oct- Nov)**	**Magnetic effect of current** **Learning outcomes:** Students will be able to**:** ● Describe magnetic field and field lines. ● Explain magnetic field due to current carrying conductor. ● Analyze the magnetic field due to current carrying coil or solenoid. ● Express force on a current carrying conductor in a magnetic field, Fleming's left hand rule . ● Describe: direct current, alternating current, frequency of alternating current, Advantages of AC over DC, domestic electric circuits.	Oersted's Experiment: To check the magnetic field due to the current carrying wire.	Cognitive skills: Critical thinking, problem solving, observation and analysis, research skills Communication skills: Scientific communication, interpretation Emotional and social development: Curiosity and exploration Academic and career readiness: Scientific literacy	Oral Test/ Class test/ Quizzes / lab activity.