

NAVODAYA VIDYALAYA SAMITI

CLASS-X

SUBJECT: SCIENCE

Unit No	NameoftheChapter/Unit	Marks	Periods
I	ChemicalSubstances- NatureandBehavior Chapters(1-4)	25	42
II	Worldofliving Chapters(6-9)	25	42
III	NaturalPhenomena Chapters(10-11)	12	21
IV	EffectsofCurrent Chapters(12-13)	13	21
V	NaturalResources Chapters(15-16)	05	8
	TOTAL	80	134
	INTERNALASSESSMENT 1. PeriodicWrittenTest(5M) 2. Multipleassessment(5M) 3. Portfolio(5M) 4. Subjectenrichment activity(5M)	20	

Month	No. of Days	No. of Periods	MAIN TOPICS AND SUB-TOPICS TO BE COVERED	PRACTICALS/ACTIVITIES PRACTICAL EXPERIMENTS TO HELD/SPECIFIC ASSESSMENT TOOLS(SUGGESTED)
April-2024	22	08	<b>Natural phenomena</b> Reflection of light by curved surfaces; Images formed by spherical mirrors, Centre of curvature, Principal axis, Principal focus, Focallength, Mirror formula (Derivation not required), Magnification, Refraction law of refraction, Refractive index, Refraction of light by spherical lens image formed by spherical lens	Determination of the focal length of : i) Concave mirror ii) Convex lens By obtaining the image of a distant object
	22	08	<b>UNIT: World of Living</b> Chapter: Life Processes Living Being: Basic concept of Nutrition & Respiration Transport and Excretion in Plants and Animals	Preparing a temporary Mount of a leaf peel to show stomata.

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	22	08	<p><b>Chemical Substances- Nature and Behavior</b> UNIT- 1: <b>Chemical reactions &amp; Chemical equation:</b> Chemical reactions, Chemical equation, Balanced chemical equation, Implication of a balanced chemical equation, types of chemical reactions: Combination, decomposition, Displacement, Double Displacement or precipitation. Endothermic. Exothermic reactions, Oxidation and reduction.</p>	<p>Performing and observing the following reactions and classifying them into: a) Combination reaction b) Decomposition reaction c) Displacement reaction d) Double displacement reaction-</p> <p>(i) Action of water on quick lime sulphate crystals (ii) action of heat on ferrous (iii) Iron nails kept in copper sulphate solution (iv) Reaction between sodium Sulphate and barium chloride solution</p>
			Periodic Written Test:- 26-29 April 2024	
July-2024	26	8	<p><b>Natural phenomena</b> Lens formula (Derivation not required); Magnification. Power of a lens, Applications of spherical mirrors and lenses functioning of a lens in human eye, Defects of vision and their corrections, Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life (excluding color of the sun at sun rise and sunset)</p>	<p>i) 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, Tracing the path of a ray of light passing through a glass prism</p>
	26	8	<p><b>Control And Coordination in animals and plants:</b> Tropic Movements in Plants; Introduction of Plant Hormones; Control and Coordination in Animals; Nervous System; Voluntary, In Voluntary and Reflex action Control and Coordination in animals and plants; Chemical Co-Ordination and Animal</p>	<p>c) Experimentally show that carbon dioxide is given out during respiration.</p>

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			Hormones	
	26	8	UNIT-2Chapter: <b>Acids, bases and salts</b> : Their definitions in terms of furnishing of H <sup>+</sup> and OH <sup>-</sup> ions, General properties, examples and uses, neutralization, concept of pH scale(Definition relating to logarithm not required)	Studying the properties of acids and bases (HCl & NaOH) by their reaction with: d) a)Litmus solution (Blue/ Red)(b)Zinc metal(c)Solid sodium carbonate
Agust-2024	22	7	<b>Effects of current:</b> Electric current, potential difference and electric current, ohms law, resistance, resistivity, factors of which the resistance of a conductor dispensations. Series and parallel combination of resistors and its applications in daily life. heating effect of electric current and its application in daily life .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 determine its resistance. Also plotting graph between V and I.
	22	7	Chapter: <b>Reproduction: Reproduction</b> in animals and plants(asexual and sexual) Reproductive health-need and methods of family planning; Safe Sex v/s HIV/AIDS; Child bearing and women's health.	Studying (a) binary fission in Amoeba, and (b) budding in yeast with the help of prepared slides
	22	7	UNIT-2- Importance of pH in everyday life; preparation and uses of Sodium Hydroxide, Bleaching powder, Baking soda, Washing soda and Plaster of Paris	Finding the pH of the different samples by using pH paper / universal indicator.
			<b>Periodic Written Test:- 08 To 10 August 2024</b>	
September-2024	17	06	<b>Magnetic effects of current:</b> Magnetic Field , Field lines, Field due to a current carrying conductor, Field due to a current carrying coil or Solenoid,	Determination of the equivalent resistance of two resistors when connected in Series and parallel
		06	Unit: <b>World of Living</b> Chapter: Heredity and Evolution: Heredity ; Mendel's contribution- Laws for inheritance of traits: Sex determination : brief introduction(Topics Excluded-evolution, evolution and Classification and evolution should not be equated with progress)	

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		06	UNIT-3 Chapter: Metals and Non-metals: Properties of metals and non-metals; Reactivity series; Formation and properties of ionic compounds. Basic metal surgical processes; Corrosion and its prevention. UNIT-4: Carbon compounds: Covalent bonding in carbon compounds. Versatile nature of Carbon. Homologous series.	Observing the action of Zn, Fe, Cu and Al, metals on the following salt solutions a) $ZnSO_4(aq)$ b) $FeSO_4(aq)$ c) $CuSO_4(aq)$  $Al_2(SO_4)_3(aq)$ Arrange Zn, Fe, Cu and Al, metals in decreasing order of reactivity based on the above result
<b>TERM-I: 23 September To 04 October 2024</b>				
October-2024	18	06	<b>Effects of electric current:</b> Force on current carrying conductor, Flemings left hand rule	
		06	Unit: Natural Resources: <b>Our Environment</b> Chapter: Our Environment: Eco- System, Environmental problems,	Identification of the different parts of an embryo of a divot seed(Pea, gram or red Kidney bean)
		06	UNIT-4: <b>Carbon compounds:</b> Nomenclature of carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkenes, and alkynes), difference between saturated hydrocarbons and unsaturated hydrocarbons	1) Study of the properties of acetic acid (ethic acid)
November-2024	20	07	<b>Effects of electric current:</b> Direct current, alternating current: frequency of Ac advantages of A cover Dc, domestic electric circuits	
		07	Unit: Natural Resources: <b>Our Environment</b> , Ozone depletion, waste production and their solutions. Biodegradable and non-biodegradable substances	

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		07	UNIT-4: <b>Carbon compounds:</b> Chemical properties of carbon compounds (combustion, oxidation, addition, and substitution reaction). Ethanol and Ethanoic acid(only properties and uses), Soap sand Detergents.	1)Study of the comparative cleaning capacity of a sample of soap in soft and hard water.
December -2024	17	08	Chapter16:Management of Natural Resources: (NCERT Chapter 16) will not be assessed in the year end examination however learners may be assigned to read the chapter and encouraged to prepare a brief write up on any concept of this chapter in their portfolio. This may be internal assessment and credit may be given periodic assessment /portfolio.	Revision
			<b>PRE-BOARD-I:- 04 To 14 December 2024</b>	
January -2025			<b>REVISION :PRE-BOARD-II:- 20 To 30 JAN 2025</b>	