

Subject : Science
 Grade : X
 Year : 2019-20



Year Planner

Text book used: NCERT

Month& No. of Teaching Days	Units	Sub Units	Objectives	Activities Planned	Evaluation
Feb Mar (21)	Ch: 1 Chemical reactions & equations	<ul style="list-style-type: none"> Chemical equations Types of chemical reactions (Till 1.2) 	<ul style="list-style-type: none"> Know what chemical changes are. Write equations to represent a chemical reaction Understand types of reactions, oxidation and reduction and their effects. 	<p>Lab activity: To perform and observe the following reactions and classify them into:</p> <ul style="list-style-type: none"> (i) Combination (ii) Decomposition (iii) Displacement (iv) Double displacement 	Worksheet-1A (P & C)
	Ch 6 (B): Life processes	<ul style="list-style-type: none"> Nutrition 	<ul style="list-style-type: none"> Identify vital life processes Describe different modes of nutrition 	<p>Lab activity: To Prepare a temporary mount of a leaf peel to show stomata.</p>	Worksheet-1B (Bio)
Apr (9)	Ch 12 (P): Electricity Ch 6 (B): Life processes	<ul style="list-style-type: none"> Current Electric Potential Ohm's law (Till 12.4) Respiration 	<ul style="list-style-type: none"> To know the meaning of the concepts- electric current and circuit. Understand what electric potential and potential difference is. Illustrate Ohm's law. Explain about the respiratory organs and the mechanism of respiration. 	<p>Lab activity: To study the dependence of potential difference (V) across a resistor on their current (I) passing through it and determine its resistance. Also plot a graph between V and I.</p> <p>Lab activity: To show experimentally that carbon dioxide is given out during respiration.</p>	Slip Test-1
June (15)	Ch 12 (P): Electricity	(Contnd.. from 12.4) <ul style="list-style-type: none"> Factors on which resistance of a conductor depends 	<ul style="list-style-type: none"> List factors on which the resistance of a conductor depends 	<p>Lab activity: To determine the equivalent resistance of two resistors when</p>	

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		<ul style="list-style-type: none"> Resistance of a system of resistors Heating effect of electric current 	<ul style="list-style-type: none"> Discuss the resistance of a system of resistors. Demonstrate heating effects of electric current. Understand effective resistance in series and parallel and its heating effect. 	connected in series and parallel.	
	Ch 1 (C): Chemical reactions Ch 6 (B): Life processes Ch 14 (B): Sources of Energy	(Contnd.. from 1.3) <ul style="list-style-type: none"> Oxidation and Reduction Corrosion Transportation Excretion Conventional Sources of Energy 	<ul style="list-style-type: none"> Know what chemical changes are. Write equations to represent a chemical reaction Understand types of reactions, oxidation and reduction and its and its effects. Understand the process of transportation of substances in plants and humans; excretion in animals. Students will understand our energy requirements and ways to improve the efficiency of energy and exploit new sources of energy. 	Lab activity: To perform and observe the following reactions and classify them into: <ul style="list-style-type: none"> (v) Combination, (vi) Decomposition (vii) Displacement, (viii) Double displacement <ul style="list-style-type: none"> Text book activities: To show the movement of transpiration in trees Text book activities: Based on conventional and non – conventional sources of energy. 	Worksheet-2A (P & C) Worksheet-2B (Bio) Slip Test 2
	Ch 2 (C): Acids, Bases and Salts	<ul style="list-style-type: none"> Action of acids and bases pH and its importance Salts Magnetic field 	<ul style="list-style-type: none"> Differentiate between properties of acids, bases and salts and also about pH indicators. 	Lab activity: To study the properties of an acid and base by their reactions with	

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	Ch 13 (P): Magnetic effects	Generation and rules	Understand magnetic field lines around straight line and circular conductors.	<input type="checkbox"/> Litmus solution (blue/red) Zinc metal/ solid sodium carbonate.	
July (24)	Ch 7(B): Control and Coordination	<ul style="list-style-type: none"> • Nervous system • Coordination in plants • Hormones in animals 	<ul style="list-style-type: none"> • Explain the structure and function of nervous system in human beings. • Describe reflex action. • Recognize the process of coordination in plants. • Discuss various tropic movements in plants. • Locate the major endocrine glands in the human body. 	Text book activity: To study the response of the plant to the direction of light.	Periodic Test –I Worksheet-3A (P & C) Worksheet-3B (Bio) Multiple Assessment -1 Slip Test – 3
Aug (22)	Ch 13 (P): Magnetic effects	<ul style="list-style-type: none"> • Electromagnetic induction • Motor and generator 	<ul style="list-style-type: none"> • To familiarize students with concepts of magnetic induction and its applications. 	Class activity : To determine that current carrying conductor produces magnetic effect.	Worksheet-4A (P & C) Worksheet-4B (Bio) Portfolio -1 Subject Enrichment Assessment - 1
	Ch 3 (C): Metals and Non metals	<ul style="list-style-type: none"> • Properties of metals and non-metals • Reactivity series Extraction of metals 	<ul style="list-style-type: none"> • Distinguish between the physical properties of Metals and Non- Metals. • Explain the chemical properties of Metals and 	Lab activity: To observe the action of Zinc, Iron, Copper, Metals on the salt solutions such as ZnSO ₄ , FeSO ₄ , CuSO ₄ ,	Slip test-4

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			Non-Metals. <ul style="list-style-type: none"> Identify Acids and Bases by chemical reaction. Understand the mechanism of displacement Reactions. <ul style="list-style-type: none"> List out the uses of Metals and Nonmetals. 	$Al_2(SO_4)_3$.	
	Ch 5 (C): Periodic classification (Introduction)	Classification of elements (till 5.1)	Realize the need for the classification of elements.	Class activity: To study Mendeleev and Mosley's periodic table with the help of chart.	
	Ch 8 (B): How do organisms reproduce. (Introduction)	The importance of variations (till 8.1)	<ul style="list-style-type: none"> Identify the different modes of reproduction by unicellular organisms. Discuss sexual reproduction in plants. Explain sexual reproduction in humans. 		
Sept(18)					Revision Worksheet – 1 Half Yearly Examinations (PT-2)
October (18)	Ch 5 (C): Periodic Classification	Cont. from 5.2 <ul style="list-style-type: none"> Classifications Trends 	<ul style="list-style-type: none"> Understand how to classify elements in an order. 	Class activity	
		Cont. from 8.2	<ul style="list-style-type: none"> Understand the process 		

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	Ch 8(B): How do organisms reproduce?	<ul style="list-style-type: none"> • Modes of reproduction • Reproductive health 	<p>of reproduction in plants and animals;</p> <ul style="list-style-type: none"> • Know the various methods of family planning; • Understand the importance of Women's health. 	<p>Lab activity: To study (a) Binary fission in Amoeba. (b) Budding in yeast.</p>	<p>Worksheet-5A (P & C) Worksheet-5B (Bio) Multiple Assessment – 2 Slip Test 5</p>
	Ch 9(B): Heredity and Evolution	<ul style="list-style-type: none"> • Heredity • Sex determination • Evolution • Speciation • Evolution and Classification 	<ul style="list-style-type: none"> • Identify "DNA as the genetic material". • Learn about Mendel's Laws of Inheritance. • Know the mechanism of sex determination. Discuss theory of Darwinism & Lamarckism. • Understand the process of human evolution. 	<p>Lab activity: To identify the different parts of an embryo of a dicot seed (Pea, gram, or red kidney bean).</p>	
	Ch 4(C): Carbon and its Compounds (Introduction)	Saturated and unsaturated compounds (till 4.1)	<ul style="list-style-type: none"> • Understand the importance of Carbon in nature. 		
	Ch.10(P): Light (Reflection)	Reflection of light, Spherical mirrors, Uses of mirrors	Recognize the formation of images through spherical mirrors.	<p>Lab activity: To determine the focal length of concave mirror by obtaining the images of a distant object.</p>	
Nov (25)	Ch 4(C): Carbon and its compounds	<p>Cont. from 4.2onwards</p> <ul style="list-style-type: none"> • Nomenclature • Properties of acids, • alcohol and soap 	<ul style="list-style-type: none"> • To make students understand how carbon compounds are formed. • Learn about the 	<p>Lab activity: Preparation of soap.</p>	<p>Worksheet-6A (P & C) Worksheet-6B (Bio)</p>

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			preparation of soaps.		
	Ch 10(P): Light (Refraction)	<ul style="list-style-type: none"> • Refraction • Spherical lenses 	<ul style="list-style-type: none"> • Understand concepts of refraction through prism, gas slab and lens. 	Lab activity: To trace the path of a ray light passing through a rectangular glass slab for different angles of incidence.	Slip Test -6
	Ch 15(B): Our environment	<ul style="list-style-type: none"> • Eco system • Activities affecting our environment 	<ul style="list-style-type: none"> • To create awareness among the students about the eco system, environmental problems, waste production and their solutions. • Differentiate biodegradable and non-biodegradable substances. 	Text book activities To collect information about pesticides from newspaper reports.	Portfolio – 2 Periodic test- 3
Dec (22)	Ch 11(P): Human eye and colorful world	<ul style="list-style-type: none"> • Parts of human eye • Corrections • Atmospheric refraction • Scattering 	Understand the concepts of human eye and its effects.	Class activity To trace the path of a way of light through glass prism.(concept of rainbow formations).	Worksheet-7A (P & C)
	Ch 16(B): Management of natural resources	<ul style="list-style-type: none"> • Need to manage resources • Forests and wild life • Water for all • Coal and Petrol 	Understand the need for conservation and judicious use of natural resources; forests and wild life, coal and petroleum conservation.	Text book activities To make a collage on natural resources.	Worksheet-7 B (Bio)