

ACADEMIC PLANNER 2017-2018

**CLASS X
SCIENCE**

Date/day	CONTENTS	EXPERIMENT/ACTIVITY
April 1-15		
No. of days-8		
Phy.	Chap-12 : Electricity	
	Electric current, potential difference, circuit diagram, Ohm's law	To verify Ohm's Law.
Chem.	Chap-1 : Chemical Reactions & Equations	
	Balancing a chemical equation	To perform & observe the following reactions & classify them into
	Types of chemical reactions - Combination reaction	(a) combination reaction
	Decomposition reaction, Displacement reaction .	(b) decomposition reaction
		(c) displacement reaction
		(d) double displacement reaction
Bio.	Chap- 6 : Life processes	
	Nutrition, Autotrophic Nutrition in plants and Heterotrophic	To show experimentally that light is necessary for photosynthesis
	Nutrition in human beings	
April 16-30		
No. of days-12		
Phy.	Chap-12 : Electricity : Arrangement of resistance-in series & in parallel	1) To determine the equivalent resistance of two resistances when connected in parallel. 2) To determine the equivalent resistance of two resistances when connected in series.
Chem.	Chap -1 : Chemical Reactions and Equations	
	Types of chemical reactions- double displacement , precipitation,	
	oxidation & reduction (redox) , Application of oxidation in daily life: corrosion and rancidity	
Bio.	Chap-6 : Life Processes	
	Types of respiration , respiratory system,	To show experimentally that carbon dioxide is given out during respiration
	transportation - structure of heart, blood vessels , lymph	
MAY 1-15		
No. of days-9		
Phy.	Chap-12 : Electricity : Heating effects of electric current , electric power	
	Chap-14 : Sources of energy:	

	Good sources of energy ,fossil fuels, thermal power plant,hydro power plant,bio mass, wind energy,alternative sources of energy,solar energy	
Chem.	Chap -2 : Acid, Bases and Salts	
	Definitions of acids and bases, examples & uses, physical properties , indicators, strength of acids & bases	
Bio.	Chap. 6 Life Processes- Transportation in plants, transport of water and food , excretion in human beings and in plants	To prepare a temporary mount of a leaf peel to show stomata
SUMMER VACATION		
July 1-15		
No. of days-12		
Phy.	Chap-14 :Sources of energy :Tidal energy, Wave energy, OTEC, geothermal energy nuclear energy ,enviornmental consequences	PRACTICAL SKILLS ASSESSMENT
Chem.	Chap- 2 Acids , bases and salts: Chemical properties of acids and bases	To study the properties of acids &bases by reaction with
	a) Reaction of acid & bases with metals, metal carbonates, metal bi-carbonates	(1) Litmus solution
	b) reaction of metallic oxide with acids & reaction of non metallic oxide with bases	(2) Zn metal
	c) Reaction of acids and bases with each other	(3) Solid sodium carbonate
Bio.	Chap-7 : Control and coordination	
	Nervous system, reflex action, human brain, action caused by brain	
July16- 31		
No. of Days-13		
Phy.	Chap-13 Magnetic Effects of Electric Current	
	Magnetic field & magnetic field lines, magnetic field due to current carrying conductor,magnetic field due to a current carrying coil or solenoid	
Chem.	Chap-2 Acids , Bases and Salts-	To find the pH of the following solutions using a pH paper.
	pH and its importance.	(1) Dil. HCl
	chemicals from common salts- sodium hydroxide, bleaching powder, baking soda,	(2) Dil.NaOH solution
	washing soda, POP (Plaster of Paris)	(3) Dil. Ethanoic acid
		(4) Lemon juice
		(5) Water
		(6) Dil. Sodium bicarbonate
Bio.	Chap-7 : Control and Coordination	
	Coordination in plants, immediate response to stimulus, movement due to growth hormones in animals	
REVISION FOR UT 1		
Aug 1-15		
No. of days-10		

UNIT TEST- I (02-08-2017)		SCIENCE (2 AUGUST 2017) SYLLABUS CHAPTER-1 CHEMICAL REACTIONS AND EQUATIONS CHAPTER-6 LIFE PROCESSES CHAPTER-12 ELECTRICITY
Phy.	Chap-13 contd .Force on current carrying conductor, Fleming's L.H.R, electromagnetic induction, Fleming's R.H.R, direct current	
Chem.	Chap-3 Metals and Non-Netals- Physical Properties of metals and non-metals	To observe the action of Zn, Fe, Cu, Al on following salts-
	Chemical properties: Reaction of metals with air, water and acids, Reaction with metal salt solution	ZnSO ₄ , FeSO ₄ , CuSO ₄ , Al ₂ (SO ₄) ₃
	Reactivity series , Reaction between metals & non metals	And arrange the metals in order of decreasing reactivity
Bio.	Chap-8 How Do Organisms Reproduce	
	Variation and its importance, asexual reproduction - fission , fragmentation,regeneration,budding	
Aug.16-31		
No. of days-14		
Phy	Chap-13 - alternating current, domestic electric circuit.	
Chem.	Chap-3 -Metals and Non Metals (contd)	
	Ionic bond and Ionic compounds, Properties of Ionic compounds	
Bio.	Chap-8 How Do Organisms Reproduce	
	vegetative propagation, spore formation	
		REVISION and NOTE BOOK ASSESSMENT
Sep 1-15	Half Yearly examinations 4 SEPT-15 SEPT.	HALF YEARLY EXAM: 13TH SEPTEMBER
No. of days-11		
		Chap-1 Chemical Reactions and Equations
		Chap-2 Acid bases and salts
		Chap-3 Metals & Non metals
		Chap- 6 Life processes
		Chap-7 Control & coordination
		Chap- 6 Electricity
		Chap-13 Magnetic effects of electric current
		Chap- 6 Sources of energy
Sep 16-30		
No. of days-10		
Phy	Chap-10 Light- Reflection & Refraction:Reflection of light, spherical mirrors, image formation	
Chem.	Chap-3 -Metals and Non Metals (contd.): Metallurgy, corrosion of metals & Its prevention	
	Chap-4 Carbon & its compounds	
	Bonding in carbon, saturated & unsaturated compounds,	
Bio.	Chap-8 How do organisms reproduce	
	sexual reproduction in plants and in human beings	

Oct 1-15		
No. of days-9		
Phy	Chap-10 Light : Mirror formula , Refraction, Refractive index	To Determine the focal length of Concave mirror and Convex lens by obtaining the image of distant object.
Chem.	Chap-4 Carbon & its compounds	To study the following properties of acetic acid
	Homologous Series, Nomenclature of carbon compounds	(1) odour
	Chemical properties of carbon compounds	(2) solubility in water
		(3) effect on litmus
		(4) reaction with sodium bi carbonate
Bio.	Chap- 9 Heredity & Evolution	
	Heredity, Mendel contribution, trait expression,	To study binary fission, budding in yeast with the help of prepared slides
OCT 16-31		
No. of days-11		

Phy	Chap-10 Light contd.	
	image formation in lenses, lens formula , power of lens	1) To trace the path of ray of light passing through a rectangular glass slab. 2) To draw the images of an object formed by a convex lens when placed at various position.
Chem.	Chap-4 Carbon and its compounds (contd).	
	Properties of Ethanol and Ethanoic acid	1) To study saponification reaction for preparation of soap
		2) To study the comparative cleaning capacity of a sample of soap in soft & hard water
Bio.	Chap- 9 Heredity & Evolution	
	Sex determination. Evolution, acquired & inherited traits	To identify the different parts of an embryo of a dicot seeds.(Pea, gram & Red kidney bean)
	Speciation , classification , evidences of evolution	
Nov 1-15		
No. of days-11		
Phy.	Chap-11 Human eye and colourful world	
	structure of human eye, defects of vision.	To trace the path of ray of light passing through a glass prism.
Chem.	Chap-4 Carbon and its compounds (contd).	
	Soaps & Detergents, Hard water and soft water, cleansing action of soaps.	
Bio.	CHAP 15 OUR ENVIORNMENT	
	Addition of waste, ecosystem,its components, food chain &	
Nov.16-30		
No. of days-13		
Phy	Chap-11 contd. Dispersion of light refraction in prism,	
Chem.	Chap -5 Periodic Classification of Elements	
	Doberneir's Triads, Newlands classification, Mendeleev classification.	
Bio.	CHAP 15 OUR ENVIORNMENT	To study homology & analogy with the help of preserved / available specimens of either animals or plants.
	Effect of activities on enviornment, ozone layer, its depletion,	
	garbage management	
Dec 1-15		
No. of days-11		
Phy	Chap-11 atmospheric refraction	
Chem.	Chap-5 contd. Modern classification- properties of groups and periods,	
Bio.	Chap 16 Management of Natural Resources -	
	reduce, recycle, reuse, need for resource management, forests & wild life, stake holders,	REVISION FOR UT 2

	UNIT TEST- 2 : 11.12.2017	SCIENCE (11TH DECEMBER 2017) SYLLABUS CHAPTER-10 LIGHT :REFLECTION AND REFRACTION CHAPTER-4 CARBON AND ITS COMPOUNDS CHAPTER-8 HOW DO ORGANISMS REPRODUCE
Dec.16-31		
No. of days-12		
Phy	Chap-11 Tyndall effect, scattering of light.	
Chem.	Chap -5 Periodic classification of elements Trends in Modern Periodic Table	
Bio.	Chap 16 Management of Natural Resources --sustainable management, dams, watershed management , over-view of natural resource management	
		Revision for Pre Board Examination
		PRACTICAL SKILLS ASSESSMENT
Jan 1-14	WINTER VACATION	
Jan 18-27	PRE- BOARD EXAMINATION	ENTIRE SYLLABUS
No. of days-13	24th Jan 2017	
Feb.1-15	Revision	Revision for Board Examination
No. of days-11		NOTE BOOK ASSESSMENT
Feb.16-29		
No. of days-12		
		Board EXAMINATION
	SYLLABUS AT A GLANCE	

UNIT TEST 1	CH-1 Chemical Reactions and Equations
	CH-6 Life Processes
	CH-12 Electricity
HALF YEARLY EXAMINATION	Ch-1 Chemical Reactions and Equations
	Ch-2 Acid bases and salts
	Ch-3 Metals & Non metals
	Ch- 6 Life processes
	Ch-7 Control & coordination

	Ch- 6 Electricity
	Ch-13 Magnetic effects of electric current
	Ch- 6 Sources of energy
UNIT TEST 2	CH-10 Light : Reflection and Refraction
	CH-4 Carbon and its Compounds
	CH-8 How do Organisms Reproduce
Pre Board and board Examination	Complete Syllabus

