CLASS XII PEDAGOGICAL PLAN - SCIENCE (2024-25)

SUBJECT: ENGLISH CORE
CLASS : XII
SESSION : 2024-2025

MONTH &TOPIC	SOURCES &RESOURCES	LEARNING OUTCOMES	LEARNING OBJECTIVES	SUGGESTED ACTIVITIES
April **The Last Lesson (Flamingo)**	https://diksha.gov.in/play/content/do_31299589752450252812 1	They would develop their optimistic attitude towards life amidst many struggles. They would be able to familiarize themselves with specific background information of Alphonse Daudet/ history of France.	to make the students identify the genre to which the story belongs. To understand the techniques used by the author. To enhance vocabulary. To enable them to comprehend the cultural background of the story. To enable them to realize the importance of a teacher in the life of a student.	On Line Group Discussion on Political enslavement is a curse on any Nation as it deprives it of its identity. PPT making based on chapter.
My Mother at sixty-six (Flamingo)	https://diksha.gov.in/play/content/do_31299589752450252812 1	The students would be able to grasp the theme and meaning of the poem. They would be able to read the poem with proper tone and rhyme and develop an interest in poetry. Their vocabulary would be strengthened. Their analyzing skills would be enhanced	To encourage the students to appreciate poetry and read aloud with proper intonation To prepare the students for poetic forms and adept with the figures of speech, rhyme and rhythm To build up didactics, empathy and sympathy with the loss of the speaker.	A comparative study of the poems A Photograph and My Mother At Sixty- six. The learners would discuss in their groups and draw a comparative analysis and present the synopsis of the discussion in the class. Extracts will be assigned.
The Third Level (Vistas)	https://diksha.gov.in/play/content/do_31299589617455104015 7	They would be able to differentiate between the level of reality that exists in our mind only and not in actual space and time. They would make virtual travel in time	To enable them to analyze Jack Finney's word choices. Toanalyze the text structure of the chapter	Video clippings of The Third Level Assignments Based on chapter
Writing Skills **Notice Writing & Application For a Job**	Online sharing of model writing short and long compositions	They will be able to identify important information in any given notice. Students will be able to use appropriate style and format to write a NOTICE effectively	To enable the students to apply the correct format while writing a notice. To make the students comprehend why a notice is written and the style and procedure	Notice Writing exercises Different topics on different fields of notices. and advertisements. The Learners would be asked to speak about what they remember. The standard format of the writing piece would be shown.
May Lost Spring (Flamingo)	Video clipping of Childern working in glass industries and images of ragpickers	Learners will be able to sensitize the problem of child labour. They will be facilitated to make connections between similar situations in different story lines/ life experiences.	They would be able to identify the problem, consider the options, weigh the pros and cons of each option, and reach options, weigh the pros and cons of each option, and reach a decision/opinion/solution. They would enhance their analytical skills. They would be able to uncover the motives of the poor parents/ policemen/middlemen.	Value based questions Assignment -Possible questions of the chapter
DEEP WATER (Flamingo)	https://diksha.gov.in/play/content/do_31306806389548646411169 6	The learners would unfold their logical thinking skills. Their vocabulary will be enriched. They would strengthen their decision making skills.	to enable the students to enhance their understanding skills and create an interest in the topic to be studies. To prepare them for crisis management' To inculcate the values of hardwork and determination. To make the students enrich their vocabulary and strengthen their understanding skills. To enable them to strengthen their logical and critical thinking skills.	Group discussion will be conducted on the topic ' How to deal with fear?' Value based questions.
The Tiger King (Vistas)	PPT based on chapter will be shown	The learner will be able to understand the behaviour kings in pre-independent India.	To enable the students about the irresposible behaviour of the powerful people towards wild life and their subordinates.	Gd on topics---cruelty against animals, Astrology as a Science.

KEEPING QUIET (Flamingo)	https://diksha.gov.in/play/content/do_31300175717272780813 1	The learners would be able to understand the need of the hour to maintain peace and cut out the clamour and bloodshed, correlating it with contemporary background and personal experiences. They would be able to up threat and gentle heeding with the predictable loss of the global domain	to read and recognize the purpose of economy of words and the hidden feelings and nuances of the lines, correlating them with author's Background-to build up didactics, empathy and sympathy with the Speaker . To inculcate the values of introspection, retrospection, peace, sensitivity to the environment, universal brotherhood, empathy and self awareness	Role Play on establishing Peace and Unity. PPT based on poem. Poem based extracts will be assigned
WRITING SKILLS Article Writing	Power point presentation on varoius types of articles will be shown.	The students would develop an interest towards writing. Their planning and organizing techniques would be enhanced. They would be able to research on any subject and derive information from facts and present him in the form of a written piece. Their creative writing would be analysed.	To enhance familiarizing with specific backgroundwould be enhanced. They would be able to research on any subject and derive information from the facts and present in the form of writing piece. Their creative writing would be analysed.	**Article Writing deriving ideas from interview** **Article Writing based on current topics (hints would be given)** **Article Writing on facts (based on research)**
THE RATTRAP **(Flamingo)**	https://youtu.be/oKQ5P6cMwGc	The students would be able to effectively provide a synopsis of the story. They will be able to analyze the values and thought process of the story. They would be able to identify the insecurity while tackling personal fears and horrors that lurk in the recesses of our mind. They would be able to appreciate the significance of developing personal fears yet rising above them to savour real liberty. They will be able to analyze the values and thought process of the story.	To guide the students to relate the characteristics of literature to larger cultural and human values. To facilitate making connections between similar situations in different storylines/life experiences.	**Debate on The whole World is nothing but a great Rattrap.**
WRITING SKILLS Letter to the Editor	https://youtu.be/o0BiobmCOSI	The learners would be able to organise their thoughts and express freely. They would develop an interest towards writing thus enhancing their writing skills	To express ideas harmoniously and chronologically without difficulty in expressions, grammar usage, format usage, relevant vocabulary. To make the students comprehend why a writing composition is written and the style and procedure.	Online sharing of model writing short and long compositions
Journey to the End of the Earth (Vistas)	PPT based on chapter will be shown	The learners would be able to understand about enviornmental issues. How to write a travelogueand life on Antarctica?	to inform the students about past,present and future of the Earth. To make them understand their role in conserving the planet.	GD on topics---Global warming,Erractic weather conditions-Reasons and solutions.
June Poem A Thing Of Beauty	https://diksha.gov.in/play/content/do_31299589764052582413 3	The learner will acquire the ability to listen and understand,develop the habit of reading for information and pleasure and draw inferences and relate texts to previous knowledge.	to enable the learners to appreciate poetry to infer the deeper meaning/message - to prepare the students for poetic forms and adept them with the figures of speech, rhyme and rhythm Learn to perceive beauty as a source of inspiration and joy, Also learn to develop a taste for Greek Mythology	Answer reference to context questions in detail.
A Roadside Stand(Flamingo)	Power point presentation on literary devices, theme and summary	the learner will be able to understand the resposibility of rich towards the poor.	To enable the learners to appreciate poetry to infer the deeper meaning/message	Students will be asked to gather ideas to bridge the gap between rich and poor.

AUNT JENNIFER'S TIGERS (Flamingo)	Power point presentation on literary devices, theme and summary	The learners will be able to facilitate making connections between similar situations in different storylines/life experiences. They will be able to empathize with Aunt Jennifer's problems and seek resolution. They will be able to think and produce spontaneous, fluid and expression in poetic texts to convey a social change. They would discern prevailing inequalities in various guises They will be able to empathize with Aunt	To enable the learners to appreciate poetry to infer the deeper meaning/message - to prepare the students for poetic forms and adept them with the figures of speech, rhyme and rhythm	Stuents will be asked to discuss various possible steps for the upliftment of women.
JULY Indigo (Flamingo)	https://youtu.be/MOo9iJ8RYWM	They would be able to understand the method and principles of Gandhian activism. They would be able to learn the oppressive policies that led to the involvement of the masses	To enable the students learn about an unequal battle between the oppressed and the oppressor. They will learn truthfulness, sincerity of purpose and untiring efforts of Indian Leaders.	Value based question answer Various incidents and stories about Gandhian movement will be discussed.
THE ENEMY (Flamingo)	https://diksha.gov.in/play/content/do_31299589755326464012 2	The learners will be able to familiarize themselves with specific background of political enmity. They will be able to identify and make connections between similar situations in own life experiences where our prejudices often hinder our human compassion and empathy for a political enemy. They will be able to understand the significance of professional ethics and social obligation in sensitive times.	To make the students realize the essential worth of human life and universal brotherhood To help them think beyond countries and continents and races and wars.	Possible questions based on chapter will be assigned
August---------- Poets and Pancakes(Flamingo)	PPT based on chapter will be shown	They will be able to identify and make connections between similar situations in their own country where each of us witness the dereliction of duty of the law keepers and their complacent laxity.	To enable the students to respect the generation gap. To strengthen family bonds enabling them to handle personal choices and happiness	Possible questions based on chapter will be assigned
The Interview& Going Places(Flamingo)	PPT based on chapter will be shown	The learners will be able to familiarize themselves with specific background of the cat and mouse role of the police and the criminal. They will be able to identify and make connections between similar situations in their own country where each of us witness the dereliction of duty of the law keepers and their complacent laxity.	To enable the learners to express their ideas cohesively without any difficulty. To enable them to comprehend different written texts for personal/public information, their formats and purpose	**Possible questions based on chapter will be assigned**
INVITATION WRITING/ REPLIES	Images and samples of different types of Invitations will be shared	The learners would be able to express their ideas cohesively, completely, fluently and spontaneously with expressions, grammar usage and relevant vocabulary for a hospitable announcement of an event.	To enable the learners to express their ideas cohesively without any difficulty . to enable them to comprehend different written texts for personal/public information, their formats and purpose	Framing and preparing invitation cards for different purposes
September---------- On The Face Of It (Vistas)	Video shoot of successful disabled persons.	they would accept the physically challenged people positively in their life and expand their social interaction. They would be able to build up optimism and self confidence.	To enable the students to view others by removing the glasses of prejudices, hatred and dislike. To adapt reality of life bravely. To build inner strength and look at the brighter sides of life.	Value based question answer

Memories of Childhood(Vistas)	Sharing of PPT covering all the concepts talked in the chapter.	The learners would familiarize themselves with specific background information of social inequalities. They would recognize the purpose of theme and the hidden pathos and indigenous / personal experiences. They would be able to build up empathy and sympathy with the prevalent inequalities of the society.	to guide the students to relate the characteristics of larger cultural and human values. To sensitize the students to the problem of child labour. To guide the students to become a social human	PPT of the poem-about poet, theme of the poem, literary devices Discussion on Different problems faced by slum childern. Reference to the context
Comprehension Passage	Online sharing of Model Comprehension Passages	The students will be able to solve a variety objective questions (MCQ) given with a comprehension passage.	To enhance the comprehension skill of the students. Discussion with the students on how to do a comprehension passage. Various methods on how to locate the correct answer and do vocabulary-based questions.	Discussion of sample Reading Comprehension passage
Revision of whole syllabus				
Full Length Test				
Pre Board Examination				
Revision for Board Exams				

Subject: Physics **Class: XII**			
MONTH & UNITS	**SOURCES/ RESOURCES**	**LEARNING OUTCOMES**	**SUGGESTIVE ACTIVITIES**
March/April Electrostatics	The following list of resources is suggestive. *Physics text book for class 12th part 1 published by NCERT. -http://ncert.nic.in /textbook/textbook .htm?leph1=1-8 -http://ncert.nic.in /textbook/textbook .htm?leph1=2-8 *Web links given in the side margins of the above mentioned text book *QR codes in the textbook and e-resources linked to those QR codes *NCERT official You tube channel. The links of e- resources are given below	Coulombs law dielectric constant and principle of superpositionElectric field intensity of point charge and dipole, torque and potential energy. Gauss theorem and its applications Electric potential due to a point charge and potential difference, potential energy of group of charges, equipotential surfaces. Capacitance of a parallel plate capacitor with and without dielectric, combinations, common potential and potential energy in a capacitor. After completion of unit Students will be able to understand the concept of electric force between the charges. They will find the electric field intensities due to distribution of charges, potential and potential energies of group of charges, equivalent capacitances of simple and complex capacitor combinations.	WEEK-1 Explore and understand the following concepts of your own using textbook and the web resources. □ Electric charges , conservation of charges □ Coulombs law-force between two point charges. □ Forces between multiple charges and continuous charge distribution. □ Electric field lines and electric flux.

April current electricity	/nd2_nce19_sc07/pre view • NCERT Official – YouTube channel https://www.youtube.com/channel/UCT0s92hGjqLX6p7qY9BBrSA • • Arvind Gupta Toys http://www.arvindguptatoys.com/electricity-magnetism.php www.swayam.gov.in www.cbseportal.com	Electric current, drift velocity and their relation Ohms law, resistance and resistivity Terminal potential difference and emf of a cell Combination of resistances and cells. Two non-identical cells in parallel combination. Kirchhoff's laws, Wheatstone bridge and its applications, Potentiometer and its applications. Heating effect of electric current Practical: 1 Resistance per cm of a wire by ohms law. After completion students will understand the concept of electric circuits and they will analyze simple and complex electrical circuits by finding currents in different branches and TPD's across different cells etc. Practical: 2 To find specific resistance of a wire 3 Series and parallel combinations of resistances	**WEEK-1** Explore and understand the following concepts using internet Variation of resistivity of metals insulators and semi-conductors Emf and terminal potential difference Formation of atmospheric electricity. WEEK-2 Make an investigatory project on primary and secondary cells. With this project try to understand how the reversal of chemical reactions helps in charging and discharging of batteries. WEEK-3 Try to explore various applications of Wheatstone bridge and potentiometer on internet. Studying these applications make this concept clear that why potentiometer is called an ideal voltmeter.
MAY Magnetic effects of current and magnetism	Physics text book for class 12th part 1 published by NCERT. -http://ncert.nic.in/textbook/textbook.htm?leph1 *Web links given in the side margins of the above mentioned text book *QR codes in the textbook and e-resources linked to those QR codes. *NCERT official You tube channel.	Biot Savart law and its applications to find B strength of straight conductor and circular coil Ampere circuital law and its applications solenoid and torroid. Magnetic force on a charged particle and motion of charged particle in it Magnetic force on a current carrying conductor, Force between two parallel conductors Torque on a rectangular coil and moving coil galvanometer Conversion of galvanometer into voltmeter and ammeter After studying this unit students will understand the link between electricity and magnetism. They will become able to calculate intensities of magnetic fields of various shapes of conductors. Students will be able to analyze the working of various electrical instruments like galvanometer voltmeter and ammeters. 4 Comparison of emf of two cells	WEEK-1 Using internet try to explore various types of magnetic field patterns. Like that of solenoid, toroid, circular coils, straight conductors. Make a colorful collection of patterns and try to reason why the patterns are different. WEEK-2 Using internet and other web resources try to explore the process of magnetic confinement and try to know how the concept of magnetic bottle contains the high energy plasma in fusion reactors. Try to explore ITER by visiting the website http://www.iter.org WEEK-3 Make an investigatory project on the combined magnetic field pattern of earth and that of a bar magnet. WEEK-4
		5 Internal resistance of a cell 6 To find figure of merit of a galvanometer by half deflection method **SUMMER VACATION**	characteristics of earths magnetic field. Tabulate various points how magnetic field of earth is helpful in the survival of life.Also explore how does climatic changes occur due to change in magnetic field axis of earth. Also explore the role of earth's magnetic field in the formation of aurora borealis and aurora australis
July Electromagnetic induction and A.C	*Physics text book for class 12th part (ii) published by NCERT. -http://ncert.nic.in/textbook/textbook.htm?leph1 *Web links given in the side margins of the above mentioned text book *QR codes in the textbook and e-resources linked to those QR codes. *NCERT official You tube channel.	Faradays laws, Lenz's law and applications Methods of producing induced emf, self-induction and mutual induction, self- inductance of a solenoid and mutual inductance of a pair of solenoids and energy conservation in these phenomena.. Mean value and rms value of a.c A.C applied across Resistor, inductor and capacitor LR, CR, LCR circuits, resonance, q factor. AC generator and transformer. After completion of chapter electromagnetic induction students will differentiate between direct and alternating current. Students will be able to draw phasor diagrams for various ac circuits and they will understand the concept of capacitive reactance and inductive reactance.	WEEK-2 Electromagnetic Damping using two hollow thin cylindrical pipes of equal internal diameters made of aluminum and pvc respectively. Allow a magnet to fall along both the pipes. Note down the times of crossing the pipes. Probable explanation of migratory pattern of birds on the basis of electromagnetic induction. WEEK-3 To measure the resistance and impedance of an inductor with and /or without iron core using an inductance coil soft iron core which may be inserted in to the inductor, a battery, a rheostat, d.c ammeter, d.c voltmeter, a.c ammeter, a.c voltmeter, variable output step down transformer and connecting wires. WEEK 4 Construction of a transformer using insulated copper wire of different thickness, soft iron sheets and an insulating frame.

August Electromagnetic waves	*Physics text book for class 12th part (ii) published by NCERT. -http://ncert.nic.in /textbook/textbook .htm?leph1	Inconsistency of ampere circuital law and concept of displacement current. Maxwell's equations and concept of em waves Production characteristics and applications of em waves.	WEEK 1 Understanding the working of microwave oven on the basis of electromagnetic waves. Basic principle of microwave oven is to generate microwave radiations of appropriate
	*Web links given in the side margins of the above mentioned text book *QR codes in the textbook and e-resources linked to those QR codes. *NCERT official You tube channel.	Concept of electromagnetic waves will become clear to the students. Students will understand the missing link between electricity and magnetism that leads to em waves. They will understand that time varying electric and magnetic fields produce each other. Concept of em spectrum will become clear to them. Practical: To find focal length of a concave mirror To find focal length of a convex lens	frequency in the working space of the oven where we keep the food. Energy of waves is directly transferred to water molecules in food items and it gets heated up.
August Optics	*Physics text book for class 12th part (ii) published by NCERT. -http://ncert.nic.in /textbook/textbook .htm?leph1 *Web links given in the side margins of the above mentioned text book *QR codes in the textbook and e-resources linked to those QR codes. *NCERT official You tube channel.	Laws of refraction and total internal reflection, spherically refracting surfaces. Derivation of lens maker formula and lens equation, combination of lenses. Derivation of prism formula. Principle construction working and magnifying power of simple microscope, compound microscope and astronomical telescope. Concepts of wave front, Huygens principle and derivation of laws of reflection and refraction using Huygens principle. Conditions or sustained interference pattern and young's double slit experiment. Fraunhoffer's diffraction at single slit. After completion of chapter Students will be able to make ray diagrams of image formation by optical instruments and make relevant calculations of object distance image distance etc.	WEEK 2 Understanding the concept that as the temperature of object changes , wavelength of light emitted by it also changes. Heating an iron rod so that its temp increases continuously. Note down the temperature and corresponding colour emitted. From the colour of rod tabulate the wavelengths of light emitted. Conclude that a maximum value of wavelength is emitted at a particular temperature. WEEK 3 Understanding the concept of total internal reflection. Take a two liter soda water transparent bottle. Make a hole 10 cm above the base of bottle and cover it with a cellophane tape. Fill the bottle with water and point a laser light on the hole from opposite side so that spot is obtained on a screen in the front. Now remove the cellophane tape. Note down the movement of spot with the stream of water coming out from hole.
		Student will learn the special character of light that how it forms bright and dark bands due to superposition of light waves from two coherent sources as well as from a narrow slit. Practical: To find the refractive index of	WEEK 4 Understanding the concept of diffraction by using two sharp razor blades and a laser source. Join two sharp sides of both blades so that an extremely fine slit is foemed. Allo the laser light to fall on it and check the transmitted light pattern obtained
SEPTEMBER Dual nature of matter/ Atoms and nuclei/ Semiconductor devices	*Phyics text book for class 12th part (ii) published by NCERT. -http://ncert.nic.in /textbook/textbook .htm?leph1 *Web links given in the side margins of the above mentioned text book *QR codes in the textbook and e-resources linked to those QR codes. *NCERT official You tube channel.	the material of a prism by finding angle of minimum deviation. To find the refractive index of a glass slab by using compound microscope. Plank's quantum theory of light. Experimental study of photoelectric effect. Laws of photoelectric emission and their explanation by using Einstein's equation. DE Broglie hypothesis In this section students will learn modern physics. How does light behave as particle as well as wave, similarly how do particles have wave character. Rutherford's model and bohr's model of atom. Spectrum of hydrogen atom	on a screen. Try to take photograph of the pattern. WEEK 1 Understanding the functioning of a photo cell which works on the basis of photoelectric effect. Make a note of its working. Tabulate the use of photocells in our daily life. WEEK 2 Understanding the Franck hertz experiment in which existence of discrete energy levels in an atom was directly verified in 1914.

		Mass energy relation, mass defect, nuclear fission, nuclear fusion. Students will be able to understand the structure of atom, They will know why hydrogen has line spectrum. Energy band diagrams and formation of n and p type semiconductors PN junction diode, its forward and reverse biasing, full wave and half wave rectifier. Characteristics of pn junction diode and special purpose diodes like photodiode, led, solar cell. Students will be able to differentiate between metals insulators and semi conductors. They will come to know how semiconductor devices help us in AC to DC conversion etc.	WEEK 3 The atomic energy program in India was launched around the time of independence under the leadership of Dr. Homi Jahangir Bhaba. Prepare a note on historic development of this program and tabulate various nuclear reactors functional in India today along with various research work activities carried out in those reactors.

Subject: CHEMISTRY **Class-XII**					
MONTH	**TOPIC**	**SOURCES/RESOURCES**	**LEARNING OBJECTIVES**	**LEARNING OUTCOMES**	**SUGGESTED ACTIVITIES**
MARCH	**Solutions**	**Chemistry text book for class 12 part 1, publish by NCERT**			
	Types of solution	Http://ncert.nic.in/textbook/textbookhtm?lech1	describe the different types of solutions	learners will be able to know the types of solutions	Learnerns will be suggeseted to prepeare the different type of solutions at home using sand,sugar,water,soda, lemon etc.
	Concentration of solution in different units	Weblink given in the side margin of the above mentioned text book.	Express concentration of solution in different units	learners will be able to understand the concentration of solution in different units	Numerical practice
	Henry's law and Raoults law	QR code in the textbook and	State and explain Henry's law and Raoult's law	Learners will be able to understand the Henry's law and Raoults law and its applications in life	Applications of Henry's Law in daily life
	Ideal and non ideal solutions	ersources link to those QR code	Distinguish between ideal and non ideal solutions, explain deviation of real solution from Raoults law	learners will be able to understand the difference between ideal and non ideal solutions	Learners will be able explain the behaviour of ideal and nonideal solutions graphically
	Colligative Properties	NCERT official youtube channel	describe colligative properties and correlate these with molecular masses of the solutes	learners will be able to know that what is colligative properties and how to determine the molecular mass	Worksheet
	Abnormal molecular mass	Eresources like	to understand concept of vant'Hoff factor and use it to calculate degree of dissociation/ association	Learners will be able to understand the concept of abnormal molecular mass and association ad dissociation of electrolytes	Questions for practice from NCERT
		https://nroer.govt.in/home/e- library/			
	TEST		students will be tested about knowledge		
			understanding and application and skill of the topic		
APRIL	**Electrochemistry**	**Chemistry text book for class 12 part 1, publish by NCERT**	describe an electrochemical cell and	learners will be able to understandthe differences between galvanic and electrolytic cell	Make a descriptive note about the working of electrochemical cell
	Electrochemical Cell	Http://ncert.nic.in/textbook/textbookhtm?lech1	differentiate between galvanic and electrolytic cell define standard potential of the cell		tabulate various points about EMF, electrode potential, salt bridge, SHE

	Nernst equation	Weblink given in the sidemargin of the above mentioned text book	use Nernst equations for calculating the EMF of galvanic cell, develop relation between standard potential of the cell and gives energy of reaction and its equilibrium constant	Learners will be able to understand to calculate the EMF of galvanic cell and gives energy of reaction and its equilibrium constant	using internet and other web resources try to explore application os nernst equation and solve the question under NCERT.Ex-3.2 &.3.3;& worksheet
	Electrolytic conductors conductivity and molar conductivity	QR code in the textbook	Differentiate between ionic electrolytic and electronic conductivity, Define resistivity and conductivity molar conductivity of ionic solution learn the method for measurement of conductivity and electrolytic solutions and calculation of the molar conductivity justify the variation of conductivity and molar conductivity of a solution with change in their concentration	learners will be able to know that type of conductors, to measure the conductivity of electrolytic solution and calculation of their molar conductivity,to understand the variation of conductivity and molar conductivity of a solution with change in their concentration	Ex-3.4 & 3.5,3.7 ,.3.9
	Kohlrausch's law	ersources link to those QR code	Elluciate kohlrausch's law and learn its applications	learners will be able to know about the kohlrasuch's law and its applications	Understanding the concept of kohlrausch law. Note the conducting properties of concentrate and solute solution.
	Electrolysis	NCERT official youtube channel	understand the quantitative aspect of electrolysis	Learnerswill be able to understand the quantitative aspects of electrolysis	Using E-resources try to see the working of electrlytic cell and use the concept to calculate product of electrolysis quantitatively and qualitatively
	Batteries and corrosion	daily life examples	Primary and secondary batteries , mechanism of corrosion	learners will be able to understand the different types of batteries and mechanism of corrosion	Using examples from daily life the applications of batteries and corrosion will be discussed.
	feedback test		student will be tested about knowledge		
			understanding application and skill of the topic		
	Chemical Kinetics				
	General introduction & rate of reaction	Chemistry text book for class 12 part 1, publish by NCERT	define the rate of reaction	learners will be able to know about	Observe the different type of reaction taking place in
				chemical kinetics and the rate of reaction	your surronding and making recood of slow fast and moderate reaction.(Expiry of the medicine, oxidation of food item)
	Average rate and instantaneous rate	Http://ncert.nic.in/textbook/textbookhtm?lech1	define the average and instantaneous rate of a reaction and Express it in terms of the change in concentration of either of the reactant or product with time	learners will be able to understand the average and instantaneous rate of reaction	Ncert Exercise
	Order and molecularity	Weblink given in the side margin of the above mentioned text book.	distinguish between elementary one-step and complex reaction multiple steps	learner will be able to understand the differences between elementary and complex reactions	Students will be insructed to do intext ques.
	Rate law	QR code in the textbook and ersources link to those QR code	describe the molecularity of elementary reaction and order of simple and complex	learners will be able to understand the difference between order and molecularity of reactions	
MAY	Integrated rate expression for zero and first order reaction	NCERT official youtube channel	define the rate constant and describe the dependence of the rate of reaction the concentration of reactants, drive integrated rate expression for zero and first order reaction, define half life time of reaction, correlate half life with rate constant initial concentration of one of the reactants	learners will be able to understand the concept of finding rate constant for different order of the reaction	Numerical Assignment
	Arrhenius equation and collision theory	online videos related to the topic	variation of rate of reaction with temperature and concept of orientation and activation energy factor deciding the rate of the reaction	learners will be able to understand the different factors that decide the actual rate of the reaction	Student presentation on both the theories.
	feedback test		students will be tested about knowledge understanding and application and skill of the topic		
	REVISION AND UNIT TEST 1				
JULY	**Haloalkanes and Haloarenes**				

	IUPAC nomenclature	Haloalkanes and Haloarenes Chemistry text book for class 12 part II , publish by NCERT	develop skill in writing trivial and IUPAC nomenclature of haloalkanes and haloarenes	Learners will be able to know how to write the trivial and IUPAC name of haloalkanes and haloarenes	Worksheet
	preparation of haloalkanes and haloarenes	Http://ncert.nic.in/textbook/textbookhtm?lech1	list the reaction involved in the preparation of haloalkanes and haloarenes	learners will be able to understand the method of preparation of haloalkanes and haloarenes	Revise the reaction and try to write the mechanism
	physical and chemical properties and nature of C-X Bond in haloalkanes and haloarenes	Weblink given in the side margin of the above mentioned text book	describe and explain their physical and chemical properties	learners will be able to understand the physical and chemical properties and the nature of the c-x bond in haloalkanes and haloarenes	Ex- 10.3 and worksheet
	stereochemistry of nucleophilic substitution reaction	QR code in the textbook and ersources link to those QR code	Understand the mechanism and stereo Chemistry involved in nucleophilic substitution reaction	learners will be able to know the mechanism and Chemistry involved in nucleophilic substitution reaction	3-D model representing the attack of nucleophile can be constructed by the students.
	ß-elimination reaction	NCERT official youtube channel	describe the mechanism of elimination reaction	learners will be able to understand the mechanism	Practice the mechanism
	Polyhalogenated compounds	Online videos related to the topic	different polyhalogenated compounds and their applications	leraners will be able to understand different polyhalogenated compounds	Find out the applications of these compounds in daily life.
	Alcohol,phenol and ethers				
	IUPAC nomenclature	Chemistry text book for class 12 part II , publish by NCERT	name of alcohol phenol and ether according to trivial and IUPAC system of nomenclature	learners will be able to know how to write the trivial and IUPAC name of alcohol phenol and ether	Exercise - 11.1 to 11.5
	Preparation & properties of alcohol	Http://ncert.nic.in/textbook/textbookhtm?lech1	Describe and explain the reaction involved in the preparation and properties of alcohols, phenols and ethers	learners will be able to understand the preparation and properties of alcohols	Worksheet
	Preparation & properties of phenol	Weblink given in the side margin of the above mentioned text book		learners will be able to understand the preparation and properties of phenol	Practicals related to distiguishing test between alcohol, phenol and ethers.
	Preparation & properties of ethers	NCERT official youtube channel	Describe and explain the reaction involved in the preparation and properties of alcohols, phenols and ethers	learners will be able to understand the preparation and properties of ethers and they will be able to understand the uses of alcohol phenol and ether in our life	Students will search important applications of alcohols, phenols and ethers,
	Feedback test	Online videos related to the topic	students will be tested about knowledge understanding application and skill of the topic		CLASS TEST
AUGUST	**Aldehyde, Ketones and Carboxylic acid**				
	IUPAC nomenclature	Chemistry text book for class 12 part II , publish by NCERT	write the trivial and IUPAC name of aldehydes ketones	learners will be able to know how to write the trivial and IUPAC name of aldehydes and ketones	Ex-12.1 & Worksheet
	preparation and properties of aldehyde ketones and distinguish between aldehyde and ketones	Http://ncert.nic.in/textbook/textbookhtm?lech1	describe the important method of their preparation and the reactions of aldehyde and ketones and to understand chemical reaction of these classes of compounds	learners will be able to understand the preparation and properties of aldehydes and ketones and they will be able to distinguish between aldehydes and ketones	lab activity to distinguish between aldehyde and ketones NCERT questions 12.2 to 12.4
	preparation of carboxylic acids, properties of carboxylic acids and some important members of aldehyde ketones and carboxylic acids	QR code in the textbook and ersources link to those QR code	describe and explain the reaction involved in the preparation of carboxylic acid and to understand the chemical reactions of carboxylic acids and to learn the chemistry of some commercially important members of this family of compounds	learners will be able to understand the preparation and properties of carboxylic acids and they will be able to know about some important members of aldehydes ketones and carboxylic acids	NCERT exercise 12.5, lab activity to test carboxylic acids
	Feedback test	NCERT official youtube channel	students will be tested about knowledge understanding application and skill of the topic		CLASS TEST
	Amines				
	IUPAC nomenclature	Chemistry text book for class 12 part II , publish by NCERT	write the trivial and IUPAC names of	learners will be able to know how to write the trivial and IUPAC name of amines	
	preparation and properties of amines	Http://ncert.nic.in/textbook/textbookhtm?lech1	describe the important method of preparation and basic character of amines and its reaction with electrophiles and miscellaneous reactions	learners will be able to understand the preparation and properties of	worksheet and NCERT questions 13.1 13.3 13.4 13.5
	distinguishing test of amines	NCERT official youtube channel	chemical test for primary, secondary and tertiary amines	learners will be able to perform the test to distinguish between primary secondary and tertiary	lab activity to distinguish between primary secondary and tertiary amines
	Diazonium salt		preparation and properties of diazomiun salts, coupling reaction	learners will be able to understand the preparation and properties of diazonium salts	

	Feedback test	students will be tested about knowledge understanding application and skill of the topic			
September	**Coordination compounds**				
	some important terms used in coordination compound	Chemistry text book for class 12 part 1, publish by NCERT	Know the meaning of the terms coordination entity centre at term complex,ligands coordination number, coordination polyhedron oxidation numbe,r denticity and chelation	learners will be able to know the meaning of some important terms.	Back exercise of NCERT
	nomenclature	Http://ncert.nic.in/textbook/textbookhtm?lech1	Learn the rules of nomenclature of coordination compounds write the formulae and names of the mononuclear coordination compounds	learners will be able to know how to write the IUPAC name of coordination compounds and its formulae	worksheet
	isomerism and bonding in coordination compounds that is Werner coordination theory valence bond and crystal field theory of coordination compounds	QR code in the textbook and ersources link to those QR code	Describe and predict the different type of isomerism ,understand the nature of bonding in coordination compound in terms of WCT,VBT and CFT	learners will be able to understand the nature of bonding in coordination compound in terms of WCT ,VBT and CFT and also they will be able to understand the different type of isomerism	lab activity preparation of double salt of ferrous ammonium sulphate
	Stability of coordination compound and applications of coordination	NCERT official youtube channel	Explain the stability of coordination compound and appreciate the importance and application of coordination compound	learners will be able to know the stability of the coordination compounds and application of coordination compound in our daily life	Salt analysis in practicals
	Feedback Test		Students will be tested about understanding application and skill of the topic as per CBSE recommendations		
	MID TERM EXAMS				
OCTOBER	**d-f Block**				
	General introduction and electronic configuration	Chemistry text book for class 12 part 1, publish by NCERT	justify the position of d and f block elements in the periodic table and learn the electronic configuration of d and f block elements	learners will be able to understand the general properties of the transition elements	Comprehensive study of the periodic table and its trends.
	Characteristics of d and f block elements	Http://ncert.nic.in/textbook/textbookhtm?lech1	know the general properties of the transition Element with special reference to group trends	learners will be able to understand the general properties of the f block element, lanthanide and actinide contraction also they will be able to generalize the properties of transition Element	WORKSHEET
	Lanthanides and actinides contraction	QR code in the textbook and ersources link to those QR code	describe the properties of f block elements and the cause and consequence of lanthanide and actinide contraction	learners will be able to understand the general properties of the inner transition elements	Reasoning questions based on the properties of d- f block elements to be practised.
	Feedback test		students will be tested about knowledge understanding application and skill of the topic as per CBSE recommendation		
	Biomolecules				
	carbohydrates	Http://ncert.nic.in/textbook/textbookhtm?lech1	Learn the preparation structure and properties and uses of carbohydrates	learners will be able to learn the preparation structure properties and uses of carbohydrates	NCERT exercise and intext questions
	proteins	QR code in the textbook and ersources link to those QR code	describe primary secondary and tertiary structure of proteins list their function in human body	students will be able to learn the structure of proteins and its function in human body	Revise the structure of proteins with the help of diagram
	nucleic acid	NCERT official youtube channel	differentiate between DNA and RNA	learners will be able to understand the differences between DNA and RNA and its functions in our life	online study of the double helix model of DNA
		Chemistry text book for class 12 part II , publish by NCERT	describe the double helical structure of DNA		
	Feedback test		Students will be tested about knowledge understanding application and skill of the topic as per CBSE recommendations		
NOVEMBER	**REVISION OF FULL SYLLABUS**				
DECEMBER	**FLT EXAMS**				
JANUARY	**PREBOARD EXAMS**				

SUBJECT-BIOLOGY
CLASS-XII
BOOK- NCERT, PRADEEP PUBLICATIONS OR TRUEMAN ELEMENTARY

MONTH	SOURCE/RESOURCE	LEARNING OBJECTIVES	LEARNING OUTCOMES	SUGGESTED ACTIVITIES
MARCH AND APRIL	UNIT-1 CHAPTER-2 SEXUAL REPRODUCTION IN FLOWERING PLANTS CHAPTER-3 HUMAN REPRODUCTION https://www.youtube.com/watch?v=OuxG3geqSIE https://www.youtube.com/watch	These chapters will make the students understand the concept of reproduction in plants as well as humans. With the help of these chapters students will learn the anatomy of reproductive organs and their functioning.	Significance of reproduction will be clear to students . They will learn various concepts related to reproduction. They will be able to locate atleast 6 parts of each reproductive system.	Students will be asked to observe the offsprings of two types of reproduction. To make a temporary slide of pollen germination. Slides of T.S. of ovary and testis will be shown to clear the structure of these organs .
MAY	CHAPTER-4 REPRODUCTIVE HEALTH UNIT-2 CHAPTER-1 PRINCIPLES OF INHERITANCE AND VARIATION chapter-5 MOLECULAR BASIS OF INHERITANCE	Students will be able to understand various STD's, contraceptive methods and IVF techniques. To explain the arrangement of genes and their interaction. How DNA was discovered, what is structure of DNA all these questions will be answered well after this chapter . Students will also understand the formation of proteins in our body. They will be known about the DNA fingerprinting .	Students will came to know about the importance of reproductively healthy society. They will be having an idea about self hygiene and awareness about UTI's. Understanding of Various concepts of genetics will make them curious about the genes,chromosomes etc. Students will be clear about the concept behind dna FINGERPRINTING. They will understand how DNA make its copies. The molecular basis of inheritance will be clear.	To isolate DNA from the given sample. Students will make a chart of structure of DNA, REPLICATION AND Translation.
JULY	CHAPTER-6 EVOLUTION CHAPTER- HUMAN HEALTH AND DISEASES (CONTD.)	Students will be ale to understand the origin oflife on earth. Basics of human health, immunity wil be explained for understnding the fighting capacity of our body.	Students will learn various theories of evolution and their significance Causes of different diseases and their preventive measure will be explained.	
AUGUST	UNIT-3 CHAPTER-7 HUMAN HEALTH AND DISEASES CHAPTER-9 MICROBES IN HUMAN WELFARE	The concept of immunology will be clear to students. Students will be able to understand the causes of diseases. They will also be awared about the drug abuse . What is importance of microbes in our daily life will be understood well.	How our immunity is linked with our diet, how our B AND T cells fight against pathogens these conceptds will get clear. This chapter will aware the students about health. It will motivate the students to have good health for strong immunity. students will understand the importance of microbes in day to day life. With the help of examples they will learn how various microbes helps in the formation of those products.	Students will be asked to make a list of those food sources which boosts their immunity. They will be asked to curdle the milk at home with inoculum and to observe the lactobcillus with the help of lens.
SEPTEMBER	UNIT-4 CHAPTER-10 PRINCIPLES OF BIOTECHNOLOGY CHAPTER-11 APPLICATIONS OF BIOTECHNOLOGY	To provide education that leads to comprehensive understanding of the principles of biotechnology To educate and make the students up to date with the current scientific literature, web information etc.	Students will be able to understand application of biotechnology in therapeutics, diagnosticss,genetically modified crops for agriculture,bioremediation, waste treatment and energy production.	To make a list of genetically modified plants and animalss.
OCTOBER	UNIT-5 CHAPTER- ORGANISMS AND POPULATIONS CHAPTER- ECOSYSTEM CHAPTER- BIODIVERSITY AND ITS CONSERVATION	Students will understand the distribution of biotic and abiotic factors of living things in enviroment.	students will be able to- define eclogy and related terms. They will be aware about 4 levels of study in ecology.	Poster making, class disscusion,group work

SUBJECT: MATHEMATICS
CLASS : XII

MONTH	TOPIC	SOURCES/RESOURCES	LEARNING OBJECTIVES	LEARNING OUTCOMES	SUGGESTED ACTIVITY
MARCH	Relations and Functions	Mathematics Part I (NCERT) NCERT Exemplar Problems NCERT Lab Manual	The learner : Explains the terms relation and function and is able to distinguish the two. Gains knowledge about reflexive, symmetric, transitive and equivalence relation. Understands the concept of one-one and onto functions.	The learner identifies different types of relations and functions.	* To verify that relation R in the set L of all lines in a plane, defined by R = { (l, m) : l ⍰ m} is symmetric but neither reflexive nor transitive. *To demonstrate the function which is not one-one but is onto.
APRIL	Inverse Trigonometric Functions	Mathematics Part I (NCERT) NCERT Exemplar Problems NCERT Lab Manual	The learner : Tries to find the intervals in which the various trigonometric functions are bijective Understands the concept of inverse of trigonometric functions along with principal branch using graph. Applies the knowledge to simplify given inverse trigonometric expression using suitable substitution.	The learner explores the values of different trigonometric functions.	* To draw the graph of inverse of sine function on graph using the concept of mirror reflection.
	Matrices		The learner : Understands the definition of matrix and its different types including equal matrices. Acquires knowledge of basic operations addition, subtraction, multiplication of matrices Also understands transpose of a matrix, invertible matrices .	The learner evolves the idea of matrices as a way of representing and simplifying mathematical concepts.	
	Determinants Video Link: https://www.youtube.com/watch?v=xfhzwNkMNg4		The learner : Understands the term determinant and difference in matrix and determinant. Learns the procedure of expansion of determinant and applies the concept to find area of triangle, equation of line and solve a given system of linear equations using matrix and its inverse.	The learner evaluates determinant of different square matrices and applies the concept to solve simple real life problems.	
MAY	Determinants(Contd.) Continuity and Differentiability	Mathematics Part I (NCERT) NCERT Exemplar Problems NCERT Lab Manual	The learner : Applies the knowledge about limits to understand the definition of continuity. Acquires concept clarity by using graphs of some standard functions like constant, identity modulus, signum and greatest integer functions. Understands procedures to find derivatives of inverse trigonometric functions, parametric functions, logarithmic, exponential functions.	The learner demonstrates ways to relate differentiability and continuity of a function with each other.	* To find analytically the limit of a function f(x) at x = c and also to check the continuity of the function at that point.
JULY	Continuity and Differentiability(Contd.) Application of Derivatives Video Links:	Mathematics Part I (NCERT) NCERT Exemplar Problems NCERT Lab Manual	The learner : Understands the application of derivative as rate measure and applies to simple mathematical problems related to real life situations. Acquires knowledge about increasing and decreasing functions and procedure to find	The learner applies the concept of derivative to solve real life problems based on rate measure and maximum or minimum of a function.	* To understand the concepts of local maxima, local minima and point of inflection.

	https://www.youtube.com/watch?v=rjLJIVoQxz4 https://www.youtube.com/watch?v=tWnvt-8wSeA		intervals of increase and decrease for a given function. Analyses given problem and understands the application of derivative in finding maximum and minimum of o function obtained from the given problem.		
AUGUST	Integrals	Mathematics Part II (NCERT) NCERT Exemplar Problems	The learner : Understands integration as anti-derivative of a function. Applies the knowledge about derivative to obtain integral of a function by inspection. Acquires knowledge about different methods to find integral of a given function including integration by parts and method of partial fraction Understands the concept of definite integral and applies different properties of definite integral to solve questions easily.	The learner develops the processes in Integral calculas based on the ideas of differential calculas learnt earlier.	
	Application of Integrals Video Link: https://www.youtube.com/watch?v=p1lGXkHE3MU		The learner : Applies the knowledge about conics and straight lines to obtain the area bounded in a given situation. Expresses the area to be obtained in the form of definite integral and solves to obtain the required area.	The learner applies the concept of Integral calculas to calculate the areas enclosed by curves.	
SEPTEMBER	Differential Equations	Mathematics Part II (NCERT) NCERT Exemplar Problems	The learner : Acquires knowledge about differential equation, its degree and order. Understands the difference in general and particular solution of a differential equation and learns procedure of obtaining these using variable separable form, homogeneous form and linear differential equation. Appreciates its application in real life situations.	The learner develops the concept of differential equations using the ideas of differential and integral calculas.	
OCTOBER	Vectors	Mathematics Part II (NCERT) NCERT Exemplar Problems NCERT Lab Manual	The learner : Understands the difference in scalar and vector quantities by taking examples of day to day life. Learns types of vectors and other basic concepts related to vectors. Gains knowledge about scalar and vector product of two vectors and its application.	The learner constructs the idea of vectors and their properties and relates them to earlier learnt concepts in different areas of mathematics.	*To verify that angle in a semi- circle is a right angle, using vector method.
	Three Dimensional Geometry Video Links: https://www.youtube.com/watch?v=3GZQ8iiNvDU https://www.youtube.com/watch?v=Q3hcxDoSymc		The learner : Correlates the direction cosines and direction ratios of line with unit vector along the line or a parallel vector. Develops understanding of different forms of equation of line (in cartesian and vector form). Understands concept of skew lines and shortest distance between the two lines.	The learner evolves newer concepts in three dimensional geometry from that learnt earlier, in the light of vector algebra such as direction cosines, equations of lines under different conditions.	*To measure the shortest distance between two skew lines and verify it analytically.

	Linear Programming Video Link: https://www.youtube.com/watch?v=qQFAvPF2OSI		The learner : Understands the method to find graphical solution of a set of linear inequalities. Analyses given problem, converts it in the form of linear inequalities and finds the required optimum value.	The learner formulates and solves problems related to maximization/ minimization of quantities in daily life situations using system of inequations	
	Probability		The learner : Acquires knowledge about conditional probability and independent events. Solves simple problems based on total probability and Baye's theorem. Understands the concept of random variable and tries to obtain the associated probability distribution.	The learner calculates conditional probability of an event and uses it to evolve Baye's theorem and multiplication rule of probability. Also determines mean of a probability distribution using the concept of random variable.	*To explain the computation of conditional probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice.