

ANNUAL PEDAGOGICAL PLAN CLASS XI (SCIENCE)

SUBJECT:- ENGLISH

Month	Sources & Resources	Learning Outcomes	Learning Objectives	Suggested Activities
April The Portrait of a Lady [H]	Text Book,Assignment -Possible questions of the chapter https://diksha.gov.in/play/content/do_313001837595246592166 NCERT Book	Make the students identify the genre to which the story belongs.To strengthen family bonds.To enable them to comprehend the cultural background of the story.	Make the students identify the genre to which the story belongs. To strengthen family bonds To enable them to comprehend the cultural background of the story.	Online- 1.Group Discussion on-Growing distance between the young and the older generation. Active involvement of parents.
Speech and Classified advertisement Writing	Online sharing of model writing short and long compositions and speeches of renowned personalities. https://youtu.be/7xUTguLaaXI	To enable the students to apply the correct format while writing a short or long writing composition. To make the students comprehend why a writing composition is written and the style and procedure	To enable the students to apply the correct format while writing a short or long writing composition. To make the students comprehend why a writing composition is written and the style and procedure.	speech competition
The Summer of the Beautiful White Horse [Sn]	https://diksha.gov.in/play/content/do_313002452157562880165 NCERT Book	The learners would be able to apply the literal, interpretative and critical level in analyzing a short story. They would be able to determine the tone of the story. They would be able to comprehend the irony hidden in the story.	To enhance familiarizing with specific background information of the author. To facilitate an attitude to become honest and trustworthy in thought and action, responsible, cooperative, understanding and tolerance, respect for national identities in relation to other people – democratic citizenship	Research on the Armenian genocide.PPT- (a group presentation comprising all range of learners).
May A Photograph [H]	Audio-Visual (visual representation of the poem) https://diksha.gov.in/play/content/do_31306535594273177619836 https://diksha.gov.in/play/content/do_3129961081459671041138 NCERT Book	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.They would be able to draw a comparative study between human life and nature.	To prepare the students for poetic forms and adept them with the figures of speech, rhyme and rhythm. To read and recognize the purpose of economy of words and the hidden pathos and nuances of the lines, correlating them with author's background and personal experiences- to build up didactics, empathy and sympathy with the loss of the speaker.	Group discussion -Time and tide wait for none. Collage making of old pictures of family members.
The Address (SN)	Audio-Visual (visual representation of the poem) https://diksha.gov.in/play/content/do_31306535594273177619836 https://diksha.gov.in/play/content/do_3129961081459671041138 NCERT Book	The students will be able to learn the values like courage, empathy, sensitivity. To learn from past experiences and move ahead in life.	To enhance familiarizing with specific background information of the author. To facilitate an attitude to become honest and trustworthy in thought and action, responsible, cooperative, understanding and tolerance, respect for national identities in relation to other people – democratic citizenship	Group discussion -Time and tide wait for none. Collage making of old pictures of family members.
We're Not Afraid to Die [H]	https://diksha.gov.in/play/content/do_3129961081726976001139 Sharing of Audio -visual presentation of the chapters	The learners would be able to enhance their problem-solving skills.They would be able to inculcate the values of determination and will power.The students would be able to grasp the theme and meaning of the prose. Their critical and creative thinking skills would be enhanced.Their vocabulary would be enriched.	To allow a problem solving: identifying the problem; considering the options; weighing the pros and cons of each option; reaching a decision. To facilitate making connections between similar situations in different storylines/life experiences. To help learners distinguish different perspectives; analysing them; drawing conclusion/s.	Online group discussion on- courage, optimism, impact of wars
The Laburnum Top	PPT of the poem-about poet, theme of the poem, literary devices https://youtu.be/EE1KDtDOc48 NCERT Book	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.	To make the students understand the beauty of natural world. To prepare the students for poetic forms and adept them with the figures of speech, rhyme and rhythm	Discussion on Different species of birds.
July Comprehension Passages	PPT on how to solve comprehension passages https://www.cbsetuts.com/cbse-class-11-english-passages-comprehension-discursive-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 of sample Reading Comprehension passage
The Voice of the Rain [H]	PPT of the poem-about poet, theme of the poem, literary devices. https://diksha.gov.in/play/content/do_313001837798703104156 NCERT Book	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.	To recognize the purpose of economy of words and the nuances of the lines that highlights the cyclic nature of rain and appreciates the diligence and divine quality of the speaker.	Discussion on Different phenomenon of the nature

Poster Making	Sample posters Assignment https://www.cbsetuts.com/cbse-class-11-english-writing-grammar-posters/ NCERT Book	Comprehend an effective Poster making as a tool of Visual Communication. Focus on the message to be delivered.Keep the sequence well ordered	To express ideas aesthetically and relevantly with definition in purpose, expressions, grammar usage, format usage, relevant vocabulary	Discussion on how to write catchy slogans
August Tenses	Story of Tenses' family will be narrated PPT highlighting rules. https://diksha.gov.in/play/content/do_31255425218240512022873	The learners would be able to identify tenses and use them appropriately. Sentence construction skills would be strengthened	To establish a clear understanding of Tenses. To enable the learners to identify the types of Tenses and use them in sentences	Discussion of assignment of tenses
Discovering Tut [H]	PPT providing the synopsis https://diksha.gov.in/play/content/do_313001837677142016169 NCERT Book	The students would be able to grasp the theme and meaning of the prose.Their critical and creative thinking skills would be enhanced.Their vocabulary would be enriched.	To enhance familiarizing with specific background information of author/ book excerpt / history of Tutankhamun. To guide the students to relate the characteristics of literature to larger cultural and human values.	Collect the details about the culture of mummification
The Adventure(H)	Sharing of presentation about author, plot, theme, visuals, story line https://diksha.gov.in/play/content/do_313002452258299904195 NCERT Book	They will be able to analyse the values and thought process of the story.Positive values and attitudes would be inculcated in the students.	To guide the students to relate the characteristics of literature to larger historical and human values. To facilitate making connections between similar situations in different storylines/life experiences. To appreciate the timeless significance of the issue of marriage institution, role of English and gender stereotyping.	List the idioms used in the chapter and frame your own sentences
Sentence Reordering	Assignment of Sentence Reordering. PPT on how to solve sentence reordering exercises https://www.learncbse.in/english-main-course-book-mcb-cbse-class-10-writing-with-grammar-sentence-reordering/	They will be able to participate in the class discussion actively. They will be able to identify errors and frame grammatically correct sentences	To be able to comprehend and use grammatical organization for quantifying and sentence completion	Reorder the jumbled sentences.
READING SKILLS-Note Making	PPT demonstrating the technique and art of note making. https://library.leeds.ac.uk/info/1401/academic_skills/85/note_making	The learners would be able to differentiate between annotation, outline notes, column notes, mind maps and summary notes from a text.They would be able to use the note taking suggestions to develop good notes based on classroom discussions	To summarize information from different written text, reconstructing arguments and accounts in a coherent presentation. To express spontaneously, concisely and precisely, differentiating finer shades of significance even in the most complex situations. To express ideas with extra information and complexity, fluently and without difficulty in sentence construction.	Coder Making activity for note making
Childhood [H]-	Audi-visual demonstration of the poem https://youtu.be/HN3T1hyF2GE NCERT Book	The students would be able to grasp the theme and meaning of the poem.Their vocabulary would be strengthened.The students will be able to understand realities of human life	To read and recognize the purpose of human loss and the hidden pathos and nuances of the lines, correlating them with personal experiences- to build up didactics, empathy and sympathy with the loss of the speaker and the final resigned acceptance and optimism. To understand human life, death as eternal truth of life.	Discussion on -Innocence of childhood
father To Son (H)	Audi-visual demonstration of the poem https://youtu.be/HN3T1hyF2GE NCERT Book	The students would be able to grasp the theme and meaning of the poem.Their vocabulary would be strengthened.The students will be able to understand realities of human life	To read and recognise the father and son relationship.	Deeper meaning behind the poem will be discussed. Extra questions will be assigned.
Silk Road [H]-	PPT covering all important points of the chapter.Assignment to check students understanding. NCERT Book	The students will be able to sense the difficulties faced during KORA.They will get to know about human nature and Himalayan wildlife.	To enhance familiarizing with specific background information of author's experience. To make the students aware about Indian History. To make the students aware about KORA and its importance. To enhance their understanding about a travelogue.	Students will share their experiences of visiting holy places. And describe their learnings.

Mother's Day-	https://diksha.gov.in/play/content/do_3130024523200512001123 Audio video demonstration	To facilitate making connections between similar situations in different storylines/life experiences. To help learners distinguish different perspectives; analyzing them; drawing conclusion/s. They would be able to comprehend the role of a mother and inculcate values of respect and obedience.	To facilitate making connections between similar situations in different storylines/life experiences through the genre of drama. Understanding the importance of mother.	Role play by the students
Determiners-	Audio visual PPT	The learners would be able to identify determiners and use them appropriately.	To establish a clear understanding of determiners - to enable the learners to identify the types of determiners and use them in sentences.	Determiners` quiz
Debate-	newspaper /TV Debates -written pieces on various subjects - displaying debates of various writers. Practice of debate writing https://www.learnbse.in/debate-writing-class-12/	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. The interpreting and evaluative skills would be strengthened.	To enhance familiarizing with specific background information of author / book excerpt / history -To express ideas fluently and spontaneously without difficulty in expressions, grammar usage, format usage, relevant vocabulary.	Debate competition
Birth-	https://youtu.be/HK-g52pqS68	The learners would unfold their logical thinking skills.They will develop a Never Give Up attitude.	To allow a problem solving: identifying the problem; considering the options; weighing the pros and cons of each option; reaching an empathetic decision with the protagonist. To facilitate making connections between similar situations in different storylines/life experiences.	Discussion on characters of the chapter. Speech on Never Give Up
The Tale of Melon City	Video Clipping, Power Point Presentation https://diksha.gov.in/play/content/do_313002452289224704168 NCERT Book	The students would be able to express their understanding through discussions. They would skim and scan the words according to their meaning. They would enhance their reading as well as writing skills	To enhance familiarizing with specific background information of author/ book excerpt / history To facilitate making connections between similar situations in different storylines/life experiences.	Debate on - Is it right to teach same subjects to all the students with different interests?

SUBJECT:- CHEMISTRY

MONTH	TOPIC	SOURCES/ RESOURCES	LEARNING OBJECTIVES	LEARNING OUTCOMES
April	Unit I: Basic Concepts of Chemistry	Chemistry textbook for class 11 by NCERT		
	General Introduction : Importance and Scope	https://ncert.nic.in/textbook.php?kech1=1-6	Highlighting the importance of chemistry in daily life	Learners will be able to know about importance of chemistry in explaining the phenomena in their <u>day to day life</u>
	Nature of matter, laws of chemical combination,	https://www.youtube.com/watch?v=fXJmJ2Bx8Qs	Recapitulation of chemical classification of matter and the laws associated with compound formation	Learners will be able to appreciate the diverse nature of compounds and the universal laws that are associated with the compound <u>formation</u>
	Dalton's atomic theory: concept of elements, atoms and molecules		Explanation of concept of atoms, elements and molecules and their types	Learners will be able to differentiate between atom and molecule as well as different types of molecules
	Atomic and molecular masses, mole concept and molar mass,		Introduction to mole concept and interconversion of mole to number of particles, mass of substance and volume of gas at STP.	Learners will be able to know about mole as well as its relation to mass, number of particles and volume of gas at STP
	percentage composition,		Explanation and mathematical calculations related to percentage composition of a compound	Learners will be able to calculate the percentage composition of elements in a compound
	empirical and molecular formula	https://www.youtube.com/watch?v=wMRyMrEkYoM&t=38s	Introduction to the concepts of empirical and molecular formula and make the learners understand the calculations involved in determining these formulae for a particular compound	Learners will be able to calculate the empirical and molecular formula for a compound using its percentage composition

	chemical reactions, stoichiometry and calculations based on stoichiometry	https://www.youtube.com/watch?v=guuo5P9p-XU	Balancing a chemical equation and analyzing it with emphasis on amount of product formed and concept of limiting reagent	Learners will be able to understand the significance of balanced chemical equation and its importance in predicting the amount of product formed with given amount of reactants
	Concentration terms : Molality, Molarity, mass percent, volume percent and mole fraction		Expressing concentration of solution in different terms.	Learners will be introduced to different concentration terms for solutions and will be able to interconvert between them.
May	Unit II: Structure of atom	https://ncert.nic.in/textbook.php?kech1=2-6		
	Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars.		Recapitulation of different subatomic particles and their discovery. Introduction to the concept of isotopes and isobars	Learners will be able to explain various properties of the subatomic particles and the experiments that led to their discovery. Further, they will be able to differentiate between isobars and isotopes.
	Thomson's model and its limitations. Rutherford's model and its limitations,	https://www.youtube.com/watch?v=v48u8hjQNBu	Discussion of historical developments leading to proposal of different models of atom	Learners will be able to understand the achievements and shortcomings of various models
	dual nature of light, Planck's quantum theory, Black body radiation and photoelectric effect,	https://www.youtube.com/watch?v=SgXW4foFGpw	Introduction to dual nature of light and proofs of its particle nature i.e. black body radiation and photoelectric effect	Learners will be introduced to particle as well as wave nature of light and will be able to solve numericals based on photoelectric effect
	Bohr's model and its limitations, concept of shells and subshells	https://www.youtube.com/watch?v=S1LDJUu4nko	Explanation of various postulates of Bohr's model of atom and their applications with the aid of numerical problems.	Learners will get to know the achievements of the Bohr's model and will be able to explain and solve the numericals for hydrogen and hydrogen like species
	PERIODIC TESTS			
	dual nature of matter, de Broglie's relationship, Heisenberg uncertainty principle,	https://www.youtube.com/watch?v=TQKELOE9eY4	Explanation of concepts and experimental proofs that support de Broglie's hypothesis and Heisenberg's uncertainty principle	Learners will be able to understand the concept and solve the numericals based on them
June	SUMMER BREAK			
	concept of orbitals, quantum numbers, shapes of s, p and d orbitals,		Introduction to the concept of orbital, its types and explanation of different quantum numbers that define an orbital	Learners will get the concept of orbitals and quantum numbers and will be able to draw the shapes and write the quantum numbers for the electrons involved.
	Rules for filling electrons in orbitals - Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of atoms, stability of half-filled and completely filled orbitals		Explanation of Pauli's exclusion principle, Aufbau principle and Hund's rule for filling up electrons in different orbitals.	Learners will be able to write the electronic configurations for different atoms and explain the exceptional configurations of atoms like Cr and Cu
July	Unit III: Classification of Elements and Periodicity in Properties	https://ncert.nic.in/textbook.php?kech1=3-6		
	Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table	https://www.youtube.com/watch?v=ogpWoB4m-Ns	Introduction to periodic table, its history and basis for classification in Mendeleev's and modern periodic table	Learners will be able to understand the need for classification and various developments that lead to the modern periodic table
	periodic trends in properties of elements -atomic radii, ionic radii, inert gas radii,		Details of atomic and ionic radii and their variation in period and group	Learners will be able to explain the variation of atomic radii across the periodic table

	ionization enthalpy and electron gain enthalpy		Introduction to ionization enthalpy and electron gain enthalpy and explanation of concepts that cause their variation in periodic manner	Learners will be able to explain the differences in ionization enthalpy and electron gain enthalpy and how these properties vary across group and period
	electronegativity, valency. Nomenclature of elements with atomic number greater than 100.		Describe electronegativity and its effect on valency. Rules for naming elements with atomic number more than 100.	Learners will be able to explain the concept of electronegativity and hence, the valencies of different elements
	Unit IV : Chemical Bonding and Molecular Structure	https://ncert.nic.in/textbook.php?kech1=4-6		
	Valence electrons, ionic bond, covalent bond, bond parameters		Introduction to different bond types and their properties	Learners will be able to differentiate between different bond types.
	Lewis structure, polarity of covalent bond, and Fajan's rule	https://www.youtube.com/watch?v=cluXl7o6mAw	Writing Lewis structure for different compounds and explanation of ionic and covalent character in different bond types	Learners will be able to write the Lewis dot structures for different compounds and explain how covalent compounds exhibit polar character while ionic compounds have covalent nature
August	VSEPR theory and geometry of covalent molecules		Postulates of VSEPR and description of geometries based on this	Learners will be able to draw the structures of different covalent compounds on the basis of VSEPR
	valence bond theory and Concept of hybridization involving s,p and d orbitals and sigma, pi bonds	https://www.youtube.com/watch?v=J8GLj_armbA	Postulates of valence bond theory and description of geometries based on the concept of hybridization of orbitals	Learners will be able to explain the structures of different covalent compounds on the basis of hybridization of central atom
	Concept of resonance		Introduction to resonance in covalent compounds	Learners will be able to write resonating structures of different compounds
	molecular orbital theory of homonuclear diatomic molecules		Introduction to molecular orbital theory and writing molecular orbital diagrams for homonuclear diatomic molecules	Learners will be able to draw molecular orbital diagrams, calculate bond order and determine bond length, bond enthalpy and magnetic character
	Hydrogen bond		Hydrogen bond, its types and its effect on physical properties of compounds	Learners will know about intermolecular and intramolecular hydrogen bonding
	Unit VIII: Organic Chemistry -Some Basic Principles and Techniques	https://ncert.nic.in/textbook.php?kech2=2-3		
	General introduction, classification and IUPAC nomenclature of organic compounds		Introduction to Organic compounds and rules for naming them	Learners will be able to classify different types of organic compounds and name them
	Electronic displacements in a covalent bond: inductive effect, electromeric effect	https://www.youtube.com/watch?v=-JrFIB3DYzk	Explanation of Inductive effect, its types and implications on carbon-carbon bonds. Electromeric effect with its types and implication of organic reactions.	Learners will get to know the mentioned concepts and will be able to apply to them in predicting the chemical nature of organic compounds
September	resonance and hyper conjugation		Details of resonance and hyperconjugation, contributing structures and their stability	Learners will be able to explain the existence of resonance in organic compounds and will be able to explain the stability of benzene and its derivatives on basis of resonance
	Homolytic and heterolytic fission of a covalent bond		Explanation of bond fission in organic compounds and conditions leading to them	Learners will be able to differentiate between fission types and predict which bond fission will occur for a particular compound.

	free radicals, carbocations, carbanions,		Describe various reaction intermediates, types and their stability order	Learners will be able to distinguish between the intermediates and will be able to explain their stability order for different compounds.
	electrophiles and nucleophiles, types of organic reactions		Explanation of concept of electrophiles and nucleophiles and hence, classification of various organic reactions.	Learners will be able to classify reagents as electrophiles, nucleophiles and various types of chemical reactions.
	methods of purification, qualitative and quantitative analysis.	https://www.youtube.com/watch?v=blc2hr6e5RI	Description of various methods and calculations involved in qualitative and quantitative estimation of organic compounds with different functional groups.	Learners will be able to know about various techniques involved in detecting various elements and groups in a compound
REVISION and MID TERM EXAMS				
October	Unit V : Chemical Thermodynamics	https://ncert.nic.in/textbook.php?kech1=5-6		
	Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions.		Introduction to thermodynamic terms.	Learners will be able to get an idea about these terms and will be able to quote some examples
	First law of thermodynamics -internal energy and enthalpy, heat capacity and specific heat,		Explanation of concepts of internal energy, enthalpy, heat capacity and specific heat	Learners will be able to distinguish between these terms as well as their applications
	measurement of ΔU and ΔH ,		Experimental measurement of enthalpy and internal energy change using calorimetry	Learners will be able to know about the method as well as calculations involved in determining ΔU and ΔH
	Hess's law of constant heat summation, enthalpy of combustion and formation, enthalpy of bond dissociation, atomization, sublimation, phase transition, ionization, solution and dilution.		Introduction to concepts and numericals based on Hess's law	Learners will be able to calculate various types of enthalpy changes associated with reactions using Hess's law
	Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function,		Basic idea of entropy and its property and hence, explanation of second law	Learners will be able to explain the concept of entropy and quote its examples from daily life.
	Gibb's energy change for spontaneous and non- spontaneous processes, criteria for equilibrium.		Criteria of spontaneity of the reaction and its relation to equilibrium	Learners will be able to know that spontaneity is governed by both entropy and enthalpy
	Third law of thermodynamics (brief introduction)		Introduction to third law of thermodynamics	Learners will be get o know about third law of thermodynamics
November	Unit VI : Equilibrium	https://ncert.nic.in/textbook.php?kech1=6-6		
	Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant,		Introduction to concept of equilibrium and equilibrium constant	Learners will be able to know about equilibrium and quote examples for same
	factors affecting equilibrium - Le Chatelier's principle,	https://www.youtube.com/watch?v=rwn4UwFZ46o	Concept and applications of Le Chatelier's principle	learners will be able to predict various effects on equilibrium on the basis of Le Chatelier principle
	ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids,		Introduction to concept of electrolytes and its types, along with equilibrium involved in weak electrolytes	Learners will be able to classify strong and weak electrolytes and will be explain equilibrium condition
	acid strength, concept of pH,		Basic concepts of comparing the acidic strength of different acids and numerically calculating the pH	Learners will be able to rate the acids on the basis of their pH as well as groups present in their structure
	hydrolysis of salts (elementary idea), buffer solution, Henderson Equation		Introduction to hydrolysis of salts and their application as buffers	Learners will be able to know how different salts hydrolyze as well as which ones can form buffers
	solubility product, common ion effect (with illustrative examples)	https://www.youtube.com/shorts/4MkEPZH7WmE	Introduction to sparingly soluble salts and common ion effect	Learners will be able to define common ion effect and explain it for dissociation of sparingly soluble salts and weak electrolytes

	Unit VII : Redox Reactions	https://ncert.nic.in/textbook.php?kech2=1-3		
	Concept of oxidation and reduction, redox reactions		Introduction to different concepts of redox reactions	Learners will be able to explain concept of redox reaction and determine oxidizing and reducing agents
	Oxidation number		Explanation of concept of oxidation number	Learners will be able to calculate oxidation numbers of elements in different compounds
	Balancing of redox reactions (oxidation number and ion-electron method)		Explanation on steps involved in balancing redox reactions under different conditions	Learners will be able to balance redox reactions by either method
	Applications of redox reactions	https://www.youtube.com/watch?v=C26pH8kC_Wk	Explanation of redox reactions in daily life with emphasis on galvanic cell and Electrochemical series	Learners will be able to explain the galvanic cell and its half cell reactions, will be able to calculate standard EMF of the cell
December	Unit IX : Hydrocarbons	https://ncert.nic.in/textbook.php?kech2=3-3		
	Aliphatic Hydrocarbons: Alkanes - Nomenclature, isomerism, conformation (ethane only),	Conformations of ethane will be shown using ball and stick models	Introduction of Alkanes and isomerism shown by them. Discussion of conformational isomerism in alkanes	Learners will be able to identify alkanes from formula and write its different isomers as well as staggered and eclipsed conformation of ethane
	physical properties and chemical reactions including halogenation, combustion and pyrolysis.		Halogenation, combustion and pyrolysis of alkanes will be discussed	Learners will be able to complete the reactions as well as will be able to give reagents that are required to convert given alkane to its derivative
	Mechanism of free radical halogenation		Explanation of various steps of free radical halogenation	Learners will be able to understand the electron movements and bond cleavages that occur during free radical halogenation
	Alkenes - Nomenclature, the structure of double bond (ethene), geometrical isomerism	Geometrical isomers will be shown using ball and stick models	Introduction to structure of double bond and then alkenes along with geometrical isomerism	Learners will be able to identify alkenes from formula and write its different geometrical isomers
	physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides		Physical properties and addition reactions of alkenes will be discussed	Learners will be able to know the reactions of alkenes and will be able to predict the products formed under given set of conditions.
	ozonolysis reaction and oxidation,		Oxidation and ozonolysis of alkenes will be explained.	Learners will be able to carry out ozonolysis theoretically and identify the intermediates and products formed
	Mechanism of electrophilic addition (Markovnikov's addition and peroxide effect)		Markovnikov's and Anti-markovnikov's rules will be discussed with insight to their mechanisms	Learners will get to know the mechanisms and will be able to reproduce the same for different alkenes
	Alkynes - Nomenclature, the structure of triple bond (ethyne)		Introduction to alkynes, its naming and structural parameters will be discussed.	Learners will be able to name different alkynes and will be able to explain the structure of triple bond.
	physical properties, methods of preparation of alkynes and acidic character of alkynes,		Various methods of synthesizing alkynes will be discussed. The concepts backing the acidic nature will be explained.	Learners will be able to differentiate between the chemical nature of alkyne from other two families as well as will be able to arrange different terminal alkynes on the basis of acidity

	addition reaction of alkynes i.e. addition of hydrogen, halogens, hydrogen halides and water		Physical properties and addition reactions of alkynes will be discussed	Learners will be able to know the reactions of alkenes and will be able to predict the products formed under given set of conditions.
	Aromatic Hydrocarbons: Introduction, IUPAC nomenclature, Concept of Aromaticity	https://www.youtube.com/watch?v=ieSylxEm-iE	Introduction to Aromaticity, its conditions and naming of benzene derivatives	Learners will be able to predict whether a compound is aromatic or not on the basis of its structure
	Resonance in benzene and its derivatives		Writing resonating structures and resonance hybrid for different benzene derivatives	Learners will be able to write different resonating structures by considering +R and -R effect of the substituent
	mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation.	https://www.youtube.com/watch?v=-C5GCyDpD6E	Discussion of various steps involved in mechanism of electrophilic aromatic substitution of benzene	Learners will be able to write the mechanism and predict the major product of the reaction.
	directive influence of the functional group in monosubstituted benzene	https://www.youtube.com/watch?v=rIR9t3ylypE	To enable the learners to decide the order in which the substituents must be added for a polysubstituted benzene	Learners will be able to write reagents that must be added to get a polysubstituted benzene derivative
	Carcinogenicity and toxicity		Toxic nature of aromatic hydrocarbons will be discussed	Learners will be able to explain the reason for toxic behaviour of aromatic compounds

SUBJECT:- PHYSICS

Month	Sources & Resources	Learning Outcomes	Learning Objectives	Activity
April Units and Measurements	The following list of resources is suggestive. *Physics text book for class 11th part 1 published by NCERT. *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. *Physics text book for class 11th part 1 published by NCERT.	Mathematical tools which are necessary for the better understanding of concepts of physics- * Binomial Theorem * Differentiation * Integration * Trigonometry * Logarithm Physics-scope and excitement; nature of physical laws; Physics, technology and society. Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Length, mass and time measurements; accuracy and precision of measuring instruments; errors in measurement; significant figures. Dimensions of physical quantities, dimensional analysis and its applications.		To promote the interest among students we can follow the method of learning by doing. Under this Solving complex calculation by logarithm can be made clear by comparing the calculations with calculator. So that student can understand the importance of logarithm. WEEK-3 Collect information about use of physics in our daily life (at least 10 examples) Activity: The concept of error can be made clear with Learning by Doing. Instrumental error (Vernier calliper, screw gauge etc.) can be explained with first-hand experience.

<p>MAY Kinematics</p>	<p>The following list of resources is suggestive.*Physics text book for class 11th part 1 published by NCERT. *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.*Physics text book for class 11th part 1 published by NCERT.</p>	<p>Chapter–3: Motion in a Straight-Line Elementary concepts of differentiation and integration for describing motion, uniform and non- uniform motion, average speed and instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs.Relations for uniformly accelerated motion (graphical treatment)</p>		<p>Activity: Students may ask to draw the distance -time graph, velocity – time graph and acceleration -time graph for one of their Journey.(This will enhance their observatory skill, analysis and interpretation)</p>
<p>JULY Kinematics</p>	<p>The following list of resources is suggestive.*Physics text book for class 11th part 1 published by NCERT. *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.*Physics text book for class 11th part 1 published by NCERT.</p>	<p>Motion in a Plane, Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, relative velocity, Unit vector; resolution of a vector in a plane rectangular components, Scalar and Vector product of vectors.Motion in a plane, cases of uniform velocity and uniform acceleration-projectile motion, uniform circular motion</p>		<p>WEEK-2 Activity: Students may ask to make a chart showing different types of vectors and the physical quantities belongs to them. (This activity will enhance their observatory skill) WEEK-3 Activity: For better understanding of scalar(distance) and vector(displacement) quantities students may ask to find all possible differences while they travel from one place to another. (data-based analyses)</p>
<p>AUGUST Laws of Motion</p>	<p>The following list of resources is suggestive.*Physics text book for class 11th part 1 published by NCERT. *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.*Physics text book for class 11th part 1 published by NCERT.</p>	<p>Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion.(recapitulation only),Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction,lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).</p>		<p>WEEK 1 Activity:For the concept of impulse teacher may cites following examples.While sneezing person exert large force on surrounding- an example of impulse. Hitting a cricket ball with bat To break piles of tiles by karate player etc. Activity: - To understand the concept of friction, teacher may ask the student to clean the glass with dry paper and then with wet paper. Analyse the difference and factors on which friction depends. Activity: - To clarify the factors on which friction depends, students are asked to experience the force required while pushing or pulling a round object like two wheelers.</p>
<p>work, energy & power</p>		<p>Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power.Notion of potential energy, potential energy of a spring, conservative forces: conservation of mechanical energy (kinetic and potential energies); non-conservative forces: motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.</p>		<p>Activity: -To understand work-energy theorem place a brick gently on a box (probably it will not spoil) now raise the brick to certain height and then leave it to fall on object. Give reasons to your observation.</p>

Motion of System of Particles and Rigid Body		Centre of mass of a two- particle system, momentum conservation and centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications.the material of a prism by finding angle of minimum deviation. To find the refractive index of a glass slab by using compound microscope.		
SEPTEMBER Motion of System of Particles and Rigid Body (continued)	The following list of resources is suggestive.*Physics text book for class 11th part 1 published by NCERT. *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.*Physics text book for class 11th part 1 published by NCERT.	Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion,comparison of linear and rotational motions.Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects		WEEK 1 :-Understanding the concept of center of mass of square plate, linear uniform rod. The centre of mass of a body or a system of bodies is the point which moves as though all of the mass were concentrated there and all external forces were applied to it. Hence, a point at which the entire mass of the body or system of bodies is supposed to be concentrated is known as the centre of mass.If a system consists of more than one particle (or bodies) and net external force on the system in a particular direction is zero with centre of mass at rest. Then, the centre of mass will not move along that direction. Even though some particles of the system may move along that direction. WEEK 2 To understand the concept of pure rotational and rolling motion-rotation of fan, rotation of steering. Rotation of helicopter blades. WEEK 3 To understand the concept of rolling motion- movement of bicycle and vehicles. Direction of force of
OCTOBER Gravitation	The following list of resources is suggestive.*Physics text book for class 11th part 1 published by NCERT. *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.*Physics text book for class 11th part 1 published by NCERT.	Universal law of gravitation. Acceleration due to gravity (recapitulation only) and its variation with altitude and depth.Gravitational potential energy and gravitational potential, escape velocity, orbital velocity of a satellite, Geo-		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.

<p>Properties of bulk matter</p>		<p>Mechanical Properties of Solids Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise. Chapter-11: Thermal Properties of Matter Heat, temperature, (recapitulation only) thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity. Heat transfer-conduction, convection and radiation (recapitulation only), thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law, Greenhouse effect</p>		<p>WEEK 1 :-Understanding the concept of center of mass of square plate, linear uniform rod. The centre of mass of a body or a system of bodies is the point which moves as though all of the mass were concentrated there and all external forces were applied to Make a note of its working. Tabulate the use hydraulic lift in our daily life. Week 2: Understanding the concept of Bernoulli's theorem. Make a note of necessary mathematical calculations and collecting the information about the take-off of aeroplane. Spinning of ball, Influence of tornado etc. Week 3:- To collect data about good absorber and reflector of heat and their utility in our day to day life. Different mode of transferring heat.</p>
<p>November Thermodyn- amics)</p>	<p>The following list of resources is suggestive.*Physics text book for class 11th part 1 published by NCERT. *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.*Physics text book for class 11th part 1 published by NCERT.</p>	<p>the material of a prism by finding angle of minimum deviation.To find the refractive index of a glass slab by using compound microscope.Thermal equilibrium and definition of temperature (zeroth law of thermodynamics), heat, work and internal energy. First law of thermodynamics, isothermal and adiabatic processes.Second law of thermodynamics: reversible and irreversible processes</p>		<p>WEEK 1 Understanding the functioning of a Thermodynamic variables and explaining the following facts. Ice cubes in a drink absorb heat from the drink making the drink cooler. If we forget to drink it, after some time, it again attains room temperature by absorbing the atmospheric heat. All this happens as per the first and second law of thermodynamics. WEEK 2 Understanding the concept of rate of loss of heat (by using Newton's law of cooling) 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.</p>

<p style="text-align: center;">Kinetic Theory</p>		<p>Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equipartition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.</p>		<p>WEEK 1 Understanding the concept of pressure exerted by gas in three dimensions.</p> <p>WEEK 2 To study the impact of temperature on rms velocity and ultimately on pressure exerted by gas, by choosing appropriate example. Why food take less time to cook in pressure cooker? Impact of pressure on melting point</p> <p>WEEK 3 To find the acceleration due to gravity by finding time period of Simple Pendulum.</p>
<p>December Oscillations and Waves</p>	<p>The following list of resources is suggestive. *Physics text book for class 11th part 1 published by NCERT. *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. *Physics text book for class 11th part 1 published by NCERT.</p>	<p>Periodic motion - time period, frequency, displacement as a function of time, periodic functions. Simple harmonic motion (S.H.M) and its equation; phase; oscillations of a loaded spring restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period. Free, forced and damped oscillations (qualitative ideas only), resonance.</p>		
<p style="text-align: center;">Waves</p>		<p>Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, Beats</p>		<p>WEEK 1 To understand the propagation of sound wave in different type of material - understanding the factors on which speed of sound depends.</p> <p>WEEK 2 To study the concept of Resonance by using Sonometer and draw graph between resonant frequency and length of the string.</p> <p>WEEK 3 To study about the professional and ordinary wind instrument like flute and trumpet and understand the concept of missing frequencies.</p>

SUBJECT:- MATHEMATICS

Topic	Sources/ Resources	Learning Objectives	Learning Outcomes	Suggested Activities
Sequence and Series SETS	Mathematics (NCERT) NCERT EXAMPLAR PROBLEMS NCERT LAB ACTIVITIES	To understand *sequence and its application. *A.P.- general term,sum and their applications. *G.P.-general term,sum and their applications. *infinite G.P. and its applications.	Learners must be able to apply the knowledge to solve practical problems. Learners will be having clarity of concept of set, subset and various	<ul style="list-style-type: none"> To demonstrate that the Arithmetic mean of two different positive numbers is always greater than the Geometric mean. To Find the number of subsets of a given set and verify that if a set has n number of elements , then the total number of subsets To represent set theoretic operations using Venn Diagrams.
	Video Link: https://youtu.be/PoL7u0XAUkc	* Definition of Set and its types * Properties of sets * Intervals and their use		
STATISTICS PROBABILITY	Mathematics (NCERT),NCERT LAB ACTIVITIES NCERT EXAMPLAR PROBLEMS	To understand *method to find: range,mean deviation about mean and median,standard deviation,variance *random experiment and sample space, different types of events to solve system of linear inequations in one and two variables and practical problems also.	Learners must appreciate the application of Statistics in analysis of data and planning based on the information. Learners must be able to find sample space for a given random experiment and recognize different types of events.	To write the sample space, when a coin is tossed once, two times, three times, four times
RELATIONS AND FUNCTIONS	MATHEMATICS (NCERT) NCERT EXAMPLAR PROBLEMS,NCERT LAB ACTIVITIES	To understand Cartesian product of sets and their diagrammatic representation,Relation , Function their Domain and Range	Learners will be able to distinguish between relation and function and also learn to draw the graphs of distinct functions.	*To distinguish between a Relation and a Function.
Trigonometric Functions	Video Links: https://youtu.be/FJEEML0i-yg https://youtu.be/593w799sBms https://youtu.be/OjHgoZOdRKM	To know * Relation between system of angles * Trigonometric functions, their domains,ranges and graphs. * T- functions of Allied angles * T-ratios of compound angles * Transformation formulae and their application * T- ratios of multiple and sub-multiple and angles	Learner must be able to understand and apply the different formulae learnt.	. To plot the graphs of sin x, sin 2x, 2sinx and sin2x, using same coordinate axes.
COMPLEX NUMBERS LINEAR INEQUALITIES	Mathematics (NCERT) NCERT EXAMPLAR PROBLEMS, MATHEMATICS LAB ACTIVITIES Video Links: https://youtu.be/hqr1DtXXHpY , https://youtu.be/bmsapLZM2Uo ,	To understand *imaginary numbers and their use. *Complex numbers and their algebra. *conjugate of complex numbers and its properties. *additive and multiplicative inverses. *modules of a complex number and its properties. intervals and inequations. *general rules for solving inequations algebraically.	Learners must be able to appreciate the introduction of this system of numbers. Various operations on complex numbers , they must be able to apply. Learners must be able to frame linear inequalities for the given situation	

	https://youtu.be/T647CGsuOVU			
Permutations and Combinations		To understand *factorials and their uses. *fundamental principles of counting and their applications. *different formulae of permutations and combinations.	Learners must be able to distinguish the words permutations and combinations. It will be helpful in solving questions based on Probability.	
BINOMIAL THEOREM	MATHEMATICS (NCERT) , NCERT EXAMPLAR PROBLEMS, MATHEMATICS LAB ACTIVITIES	TO Understand *Expansion of nth power $(a+b)^n$,General Term To construct a Pascal Triangle and to write binomial expansion for a given positive integral exponent.	Learners will be able to expand any power with the help of Binomial Theorem.	To construct a Pascal's Triangle and to write binomial expression for a given positive integral exponents.
STRAIGHT LINES	MATHEMATICS (NCERT) , NCERT EXAMPLAR PROBLEMS, MATHEMATICS LAB ACTIVITIES Video Link : https://youtu.be/BekcPu_3Bqw	To understand *to find equation of straight lines under different conditions with their applications. *to find angle between two lines. *translation of axes and family of lines. *to find the conditions that the two lines are-parallel,coincident,perpendicular. *to find the point of intersection of two lines. *to find the distance of a point from a line.	Students must be able to obtain equation of line in different forms	
CONIC SECTION	E - resources ncert.nic.in - publications-PDF(I - XII) ncert.nic.in - publications- Exemplar problems	To understand *equation of circle,parabola,ellipse,hyperbola and their subsidiary results.	*Students will be able to find equations of circle, parabola, ellipse and hyperbola and also learn to find the focus, centre, vertices, length of Latus Rectum of different conics. * Students must be able to apply the knowledge to solve practical problems.	An Alternative method to construct a parabola.
THREE DIMENSIONAL GEOMETRY	MATHEMATICS (NCERT) , NCERT EXAMPLAR PROBLEMS, MATHEMATICS LAB ACTIVITIES https://youtu.be/yPysmMXI_Is	To understand *rectangular axes and coordinate planes along with convention of signs. *the distance formula, section formula and their applications. *the centroid of a triangle.	* Learners will be able to find distance between two points and also find the co-ordinates of point of division by section formula. This basic knowledge will be helpful in understanding other concepts in higher studies.	
LIMITS and DERIVATIVES	MATHEMATICS (NCERT) , NCERT EXAMPLAR PROBLEMS, MATHEMATICS LAB ACTIVITIES https://youtu.be/N2PpRnFqngY	To understand *the limit of a function. *to evaluate the limits of various functions. *to evaluate derivatives of algebraic and trigonometric functions.	* Learners must be able to understand the application of this concept in calculus.	*

SUBJECT:- BIOLOGY

MONTH	SOURCE/RESOURCE	LEARNING OBJECTIVES	LEARNING OUTCOMES	SUGGESTED ACTIVITIES
APRIL	CHAPTER-THE LIVING WORLD CHAPTER-2 BIOLOGICAL CLASSIFICATION CHAPTER-PLANT KINGDOM	Students will be known about the importance of taxonomy and systematics. They will be able to place organisms into different categories They will be able to decide which groups an animal belongs to based on such traits. Students will learn about different classes of plant kingdom.	Students will understand the basis of classification and its application. Structure of various lower plants, their evolution with respect to modern day plants will be understood well.	To prepare a herbarium. To prepare a chart showing diversity in organisms. Lab activities- to demonstrate the various contrasting features of organisms on the basis of the specimens provided.
MAY	CHAPTER-ANIMAL KINGDOM CHAPTER-MORPHOLOGY OF FLOWERING PLANTS	study of various organisms on the basis of various characters, categorisation of chordates and non chordates, learning the scientific names. What is morphology and how we can use it for categorising the plants will be clear to students. Structure and types of various vegetative and reproductive parts of plants will be understood.The role of different organs will be studied well.	They will be able to compare the various phylums on the basis of their contrasting features. Students will be having an idea of various parts of a plant and their importance and modifications .	Charts of modifications of roots, stems and leaves will be shown to students. As well as students will be asked to collect different types of leaves from their surrounding and to compare their morphology.
JULY	CHAPTER-ANATOMY OF FLOWERING PLANTS CHAPTER-STRUCTURAL ORGANISATION IN ANIMALS(ONLY FROG) CHAPTER-CELL THE UNIT OF LIFE	These chapters will help the students to understand the different tissues, cells, anatomy of plants. They will learn about the cell theory and functioning of different organelles. Detailed morphology, anatomy and physiology of frog will be explained.	Students will be able to draw and memorise the different tissues and their role . They will be able to understand how different organelles in a cell work and how their functioning is coordinated.	slides of dicot and monocot roots will be shown . Temporary slide of plant cell will be made . Frog will be explained with the help of available specimen of frog.
AUGUST	CHAPTER-BIOMOLECULES CHAPTER-CELL CYCLE AND CELL DIVISION	Which type of biomolecules are there and what is their significance will be clear to students. How biomolecules are arranged? What is the structure of these biomolecules? Which type of changes are seen in a cell during cell division? How cell division initiates and cell is divided? These curiosity arising questions will be answered very well.	Structure of various biomolecules will be explained. Learning of all the important components of cell will be there. Importance of various phases of cell division, how chromosomes get separated and how they are passed on to daughter cells will be clear.	Various phases of cell division will be shown through slides. Experiments regarding the presence of biomolecules in given samples will be conducted.
SEPTEMBER	CHAPTER- PHOTOSYNTHESIS IN HIGHER PLANTS CHAPTER- RESPIRATION IN PLANTS	What are action and absorption spectras? Which pigments are responsible for photosynthesis? Where do it occurs? How the products of photosynthesis are used in respiration? All these questions will be answered step by step. These questions will create interest in students and they will try to understand these concepts in depth. all this will clear their doubts regarding photosynthesis and respiration in plants.	Clarity of concept of photosynthesis and its applications. Learning of respiration and its uses in various attributes.	To make a chart showing differences between light and dark reactions. To demonstrate the role of various plant hormones.
OCTOBER	CHAPTER- PLANT GROWTH AND DEVELOPMENT	How growth is different from development and role of phytohormones will be clear to students.	Students will be clear of functioning of each phytohormone. In a comparison chart from different hormones will be taught in the class	Make a table of role of different hormones
NOVEMBER	CHAPTER-BREATHING AND EXCHANGE OF GASES CHAPTER-BODY FLUIDS AND CIRCULATION CHAPTER- EXCRETORY PRODUCTS AND THEIR ELIMINATION	To make students aware about the coordination of our vital organs.	MECHANISM OF BREATHING, CIRCULATION AND CIRCULATION WILL BE STUDIED.	to calculate the total lung capacity in an organism. To calculate the pulse rate and breathing rate
DECEMBER	CHAPTER-LOCOMOTION AND MOVEMENT CHAPTER-NEURAL CONTROL AND CO-ORDINATION CHAPTER- CHEMICAL CONTROL AND INTEGRATION	Student will understand the mechanism of movement of muscles and their connection with bones. They will have an idea about the different joints of body. How hormones are involved in metabolism and how they control and coordinate various activities of body will be clear.	How various functions are correlated and are so-ordinated by our neural and endocrine system. All these concepts will be clear to students.	To make slide filament theory's model.