Class X
2025 – 26
Book List

English	**1. First Flight - Textbook in English for Class X (NCERT)** **2. Footprints Without Feet - Supplementary Reader in English for Class X (NCERT)**
Hindi	**1. क्षितिजभाग – 2 कक्षा 10 'अ' पाठ्यक्रमकेलिएहिंदीकीपाठ्यपुस्तक** **2. कृतिकाभाग-2 कक्षा 10 'अ' पाठ्यक्रमकेलिएहिंदीकीपूरकपाठ्यपुस्तक** 3. **व्याकरणसुबोधकक्षाकेलिए**
Science	**Science Textbook for Class X**
Mathematics	**Mathematics Textbook for Class X (NCERT)**
Social Science	**1. Democratic Politics – II Textbook in Political Science for Class X** **2. India and the Contemporary World – II Text book in History For Class X** **3. Understanding Economic Development Social Science Textbook for Class X** **4. Social Science Contemporary India – II Textbook in Geography for Class X**
Artificial Intelligence	**CBSE Handbook for AI Class 10**
Art & Craft	**Millennium ABCD - Any Body Can Draw**

ENGLISH

Months & Periods	Literature	Grammar	Writing	Suggested Activities
Apr. (20)	**First Flight:-** A Letter to God, Dust of Snow, Fire and Ice, Nelson Mandela- Long Walk to Freedom, A Tiger in the Zoo	**Gap Filling (Tenses + Determiners)**	**Letter to Editor**	**Poetic Devices & Poetry Analysis (2 Poems) Quirky Questionnaire-Create a questionnaire of three most important questions that you would have liked to ask Nelson Mandela during an interview and also his expected answers.**
May (24)	**First Flight:-**Two stories about flying, How to tell wild animals **Foot Prints:-**A Triumph of Surgery, The Thief's Story, The Midnight Visitor	**Reported speech**		**Characters' Analysis (1-Protagonists and 1- antagonists)**
Jul. (28)	**First Flight:-**The Ball Poem, From the Diary of Anne Frank **Foot Prints:-**A Question of Trust, Footprints without Feet	**Editing (Sub-verb agreement) Modals**	**Letter of Complaint**	**Listening Activity I(ASL)**
Aug. (28)	**First Flight:-**Amanda, The Trees, Glimpses of India **Foot Prints**:- The Making of a Scientist		**Analytic Paragraph**	**Speaking Activity (ASL) Grammar Relay Race - Dialogue making and converting them into indirect speech**

Sep. (15)	**First Flight:-**Fog, The Tale of Custard,the Dragon **Revision**			
Mid Term Examination				
Oct. (19)	**First Flight:-** Mijbil the Otter, Madam Rides the bus **Foot Prints:-** The Necklace		**Letter for Placing an Order**	**Creative Writing — Write two paragraphs about your most memorable journey and describe what made it so special.**
Nov. (23)	**First Flight:-**The Sermon at Benares, For Anne Gregory, The Proposal **Foot Prints**:- Bholi, The Book That Saved the Earth		**Letter of Enquiry**	**Listening Activity II (ASL)**
Pre - Board Examination				
Dec. (25)	**Revision**			
Pre - Board Examination				
Jan. (9)	**Revision**	**Revision**	**Revision**	
Feb. (8)	**Revision**	**Revision**	**Revision**	

Learning Objectives:

1. **Literature**
    a. **To develop greater confidence and proficiency in the use of language skills necessary for academic.**
    b. **To build competence to apply literary conventions, illustrate and justify.**
    c. **To develop curiosity and creativity through extensive reading of literature chapters.**
2. **Grammar**
    a. **To cultivate the aptitude in the students to self-edit their oral and written production.**
    b. **To develop the ability to work on integrated grammar exercises.**
    c. **To make them apply conventions using integrated grammar structures with accuracy.**
3. **Writing**
    a. **To inculcate the skill of reasoning, drawing inferences etc.**
    b. **To enable the students to learn effective organizational strategies for their writing.**
    c. **To enable the student to use appropriate cohesive devices to improve their texts.**
4. **Activities**
    a. **Listening – To develop the ability to listen to a wide range of oral texts, summarise and respond to them.**
    b. **Speaking – To develop competence to communicate confidently and effectively in spoken language in various situations.**
    c. **Reading – To develop the ability to articulate their own interpretations with an awareness and curiosity for varied perspectives.**

हिंदी

हिन्दी पाठ्यक्रम (2025-26)							
कक्षा - 10							
हिन्दी पाठ्यपुस्तक : 1- क्षितिज भाग -2 2- कृतिका भाग-2 3- व्याकरण सुबोध							
माह/कालांश	इकाई	विषयवस्तु				कला समेकित गतिविधियाँ	
		गद्य	पद्य	कृतिका	व्याकरण		
अपैल (24)		नेताजी का चश्मा	सूरदास के पद	माता का अंचल *लघु प्रश्नावली (मौखिक)	अपठित गद्यांश, अपठित पदयांश, पत्र,वाक्य विचार।	स्वतंत्रता सेनानियों पर एक परियोजना कार्य।	
मई (17)		बालगोबिन भगत *लघु प्रश्नावली (मौखिक)	राम-लक्ष्मण-परशुराम संवाद		वाच्य, अनुच्छेद लेखन, पद-परिचय (संज्ञा,सर्वनाम)।	रामकथा पर आधारित अपने अनुभव को अनुच्छेद के रूप में लिखिए।	
जुलाई (20)		लखनवी अंदाज़ *दिखावटी जीवन-शैली,क्या आज के समय की जरूरत है? (सामूहिक चर्चा)	आत्मकथ्य	साना-साना हाथ जोड़ि	पद-परिचय (विशेषण, क्रिया, अविकारी शब्द) स्ववृत्त लेखन।	प्रकृति की अलौकिक घटनाओं का वर्णन करते हुए एक चार्ट तैयार कीजिए।	

अगस्त(23)		एक कहानी यह भी	उत्साह,अट नहीं रही *फाल्गुन मास की विशेषता बताते हुए अपने विचार प्रकट कीजिए।		अलंकार, ई- मेल, विज्ञापन, संदेश-लेखन।	'अलंकार' पर P.P.T. तैयार कीजिए।		
सितंबर(14)	अर्ध - वार्षिक परीक्षा	(करवाए	गए कार्य	की	पुनरावृत्ति)	कार्य प्रपत्र		
अक्टूबर (17)		नौबत खाने में इबादत	यह दंतुरित मुस्कान, फसल *इस कविता के आधार पर आपके मन के भाव को प्रकट कीजिए।	मैं क्यों लिखता हूँ	पद-परिचय, वाच्य (अभ्यास)	विभिन्न वाद्य यंत्रों पर एक पोस्टर बनाइए।		
नवंबर (23)		संस्कृति	संगतकार		वाक्य विचार, अलंकार *प्रश्नोत्तरी विधि	'सभ्यता और संस्कृति' विषय पर वाद-विवाद का आयोजन किया जाएगा।		
दिसंबर (16)	प्रीबोर्ड परीक्षा (1)	U LIKE,	XAMIDEA	ALL IN ONE	FULL MARKS			

जनवरी (12)	प्रीबोर्ड परीक्षा (2)		पुनरावृत्ति	करवाई	जाएगी ।			
फरवरी (10)		पुनरावृत्ति		करवाई		जाएगी।		

शैक्षणिक उद्देश्य:

1- गद्य के अंतर्गत विद्यार्थी भाषा प्रयोग के परंपरागत विधाओं की जानकारी प्राप्त करते हैं।

2- लेखन में सृजनात्मकता एवं मौलिकता का विकास होता है।

3- पद्य के माध्यम से छात्र कलापक्ष एवं भावपक्ष की पूर्ण अनुभूति प्राप्त करते हैं।

4- काव्य छात्रों की कल्पना शक्ति को विकसित कर कविता लिखने के लिए प्रेरित करते हैं।

5- व्याकरण के नियमों का ज्ञान छात्रों में मौलिक वाक्य संरचना की योग्यता का विकास करता है।

6- व्याकरण से बेहतर संचारक बनने में मदद मिलती है।

MATHEMATICS

Course Structure Class–X

Units	Unit Name	Marks
I	Number systems	06
II	Algebra	20
III	Coordinate geometry	06
IV	Geometry	15
V	Trigonometry	12
VI	Mensuration	10
VII	Statistics & Probability	11
Total		80

Suggested Reference Book: Mathematics Exemplar Problems for Class X (NCERT)

Month & Periods	Units	Contents	Learning Objectives	Suggested Activities/Art Integrated Activities
April (30)	Unit II Algebra	Chapter-3: Pair of Linear Equations in Two Variables. Pair of linear equations in two variables and graphical method of their solution, consistency/inconsistency. Algebraic Conditions for number of solutions. Solutions of a pair of linear equations in two variables Algebraically – by substitution, by elimination method. Simple Situational problems.	The students will able to (i) Define the general form of a pair of linear equations in two variables. (ii) Solve the given pair of linear equations by graphical method. (iii) Determine the given pair of linear equation are consistent or inconsistent by comparing the ratios of the coefficients of the equations. (iv) Solve the given pair of linear equation by substitution method, elimination method.	LabActivity1: To verify the conditions of consistency or in consistency for a pair of linear equations in two variables by graphical method. Worksheet:1 Assignment Oral Test Art Integrated Activity :- Draw any one Painting (Using Geometric tools).

	Unit II Algebra	**Chapter-2: Polynomials Zeros of a polynomial.** **Relationship between zeros and coefficients of quadratic polynomials.**	**The students will be able to** **(i) Understand polynomials & their categories and the method to calculate their zeros.** **(ii) Find the zero or zeros of a polynomial by studying its graph.** **(iii) Verify the relationship between the zeros and the coefficients of linear, quadratic polynomials.**	**Worksheet :2** **Assignment Oral Test**
	Unit - I Number Systems	**Chapter-1: Real Numbers Fundamental Theorem of Arithmetic- statements after reviewing work done earlier and illustrating and motivating through examples, Proofs of irrationality of √2, √3, √5.**	**The Students will be able to** **(i) Describe the fundamental theorem of Arithmetic and apply to calculate the H.C.F and L.C.M of nos.** **(ii) Prove that √2, √3 & √5are irrational nos.**	**Crossword puzzle** **Worksheet:3**
May (22)	**Unit-II Algebra**	**Chapter-4: Quadratic Equations Standard form of a quadratic Equation $ax^2+bx+c=0$, $(a\neq0)$.** **Solutions of quadratic equations (only real roots) by Factorization and by using quadratic formula. Relationship between**	**The students will be able to** **(i) Check if the given equation is a quadratic equation.** **(ii) Represent a given situation in the form of quadratic equation.** **(iii) Find the roots of**	**Worksheet:4** **Crossword puzzle** **Oral Test Assignment**

	Unit II Algebra	discriminate and nature of roots. Situational problems based on quadratic equations related to day to day activities to be incorporated. Chapter-5: Arithmetic Progressions Motivation for studying Arithmetic Progression, Derivation of the nth term and sum of the first n terms of A.P. and their application in solving daily life problems.	quadratic equation by factorization & using the quadratic formula. (iv) Find the nature of roots of quadratic equation. The Students will be able to (i) Identify if a given series of numbers form an arithmetic progression (A.P.) (ii) Identify the first term and common difference of the given AP (iii) Find then th term of an AP and the sum of the first n terms of an AP.	Lab activity 2: Find if the given sequence is an A.P. or not. Worksheet :5 Oral Test
July (25)	Unit-VII Statistics and Probability	Chapter-13: Statistics Mean, median and mode of grouped data (bimodal situation to be avoided).	The students will be able to (i) Calculate the mean of grouped data using the direct method, the assumed mean method & the step deviation method. (ii) Calculate the mode of	Assignment Oral Test Class Activity: Find the mean of given data. Worksheet: 6

			the grouped data. (iii) Find the median of grouped data.	
	Unit- VII	**Chapter-14: Probability Classical definition of probability. Simple problems on finding the probability of an event.**	**The students will be able to** **(i) Calculate the probability of an event comes. Describe the various terms such as equally likely outcomes, elementary event, complement of an event, sure event and impossible event.**	**Model/Project Work** **Class Activity:** **Find the probability of given data.** **Worksheet:7** **Oral Test**
Aug. (26)	**Unit IV Geometry**	**Chapter-6: Triangles Definitions, examples, counter examples of similar triangles.** **1. (Prove) If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio.**	**The students will be able to** **(i) Define the term similar figures.** **(ii) Explain the condition of similarity for triangles.** **(iii) Prove the basic proportionality theorem, Pythagoras theorem and converse of Pythagoras theorem.**	**Class Activity: Similarity of two Triangles.** **Worksheet :8** **Oral Test**

		2. **(Motivate) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side.** 3. **(Motivate) If in two, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar.** 4. **(Motivate) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar.** 5. **(Motivate) If one angle of the triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar.**	(iv) **Prove the AA Similarity criterion, AAA similarity criterion, SSS similarity criterion and SAS similarity criterion.** (v) **Prove the AA similarity criterion, AAA similarity criterion, SSS similarity criterion & SAS similarity criterion.**	**Assignment**

Sep. (12)	**Unit-V Trigonometry**	**Chapter 8: Introduction to Trigonometry** **Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined), motivate the ratios whichever are defined at 0º and 90º .** **Values of the trigonometric ratios of 30º,45º and 60 º. Relationships between the ratios.** **Proofs and applications of the identity sin 2A+cos 2A=1.** **Only simple Identities to be given.**	**The students will be able to** **(i) Define trigonometry & trigonometry ratios of an acute angle of a Right triangle.** **(ii) Calculate the trigonometric ratios of an angle if one of the ratios is known.** **(iii) Find the values of the trigonometric ratios0°,30°,45°,60º and90°.**	**Worksheet :9** **Oral Test** **Lab Activity 3:** **To verify identity sin 2ɵ + cos2ɵ =1** **Assignment**
Revision of all Chapters from April to September **Half- yearly Examination**				
Oct. (20)	**Unit V Trigonometry**	**Chapter-9 Some applications of Trigonometry** **Heights and Distances: Angle of Elevation and Angle of Depression.** **Simple Problems on heights and distances. Problems should**	**The students will be able to** **(i) Explain the terms – line of right angle of elevation and angle of depression.** **(ii) Calculate heights and distances using trigonometric ratios.**	**Assignment** **Oral Test** **Worksheet :10**

		not involve more than two right triangles. Angles of elevation / depression should be only 30◦, 45◦, 60◦		Class Activity: Find the heights and distance of given data.
	Unit - III Coordinate Geometry	Chapter-7: Coordinate Geometry Review: Concepts of a co-ordinate geometry, Graphs of linear equations. Distance formula, Section Formula (internal division).	The students will be able to (i) Derive the distance formula to find the distance between any two points whose coordinates are given. (ii) Calculate the distance between the two points whose coordinates are given. (iii) Derive the section formula. Find the coordinates of the point that divides a line segment joining two points of known coordinates internally in given ratio.	Lab Activity 4: Centroid of a triangle. Model / Project Work Oral Test Assignment Worksheet:11
Nov. (25)	Unit - VI Mensuration	Chapter-11: Area Related to Circles Area of sectors and segments of a circle. Problems based on areas	The Students will be able to (i) Recall the terms sector, angle of a sector and segment in relation of a circle.	Worksheet :12 Oral Test

		and perimeter/ circumference of the above said plane figures. (In calculating area of segment of a circle, problems should be restricted to central angle of 60°, 90° and 120°only).	(ii) Calculate the area of a sector of a circle. (iii) Recall the terms major arc and minor arc of a circle. (iv) Calculate the length of an arc of a sector of a circle, area of a segment and the area of combinations of a plane figures.	Assignment
	Unit - VI Mensuration	Chapter-12: Surface areas and Volumes Surfaces are as and volumes of combination of any two of the following: cubes, cuboids, spheres, hemispheres and right circular cylinders/cone.	The students will be able to (i) Calculate the surface areas & volumes of the combination of solids. (ii) Explain that when a solid is converted to another solid or multiple solids either of the same or different shapes, the surface area changes but the volume remains constant.	Worksheet: 13 Assignment Oral Test
	Unit IV Geometry	Chapter-10: Circles Tangent to a circle at point of contact. 1. (Prove) The tangent at any	The students will be able to (i) Define the terms tangent & secant in relation to a circle.	Lab Activity 5: The lengths of tangents drawn from

		point of a circle is perpendicular to the radius through the point of contact. 2. (Prove) The lengths of tangents drawn from an external point to a circle are equal.	(ii) Prove that the tangent at any point of a circle is perpendicular to the radius through the point of contact. (iii) Prove that the lengths of a tangent drawn from an external point to a circle are equal. (iv) Calculate the length of a tangent drawn from a point outside a circle.	an external Point to a circle are equal. Worksheet:14 Oral Test Assignment
Dec. (15)	Revision of all chapters from April to November Pre-Board-I			
Jan. (10)	Revision of all chapters from April to November Pre-Board-II			
Feb. (10)	Revision of all chapters from April to November			

SCIENCE

PHYSICS

Month	Period	Unit	Contents	Learning Objectives	Suggested Activities
Apr.	16	Light Reflection and Refraction	Reflection of light by curved surfaces, images formed by spherical mirrors, centre of curvature, principal axis, principal focus, focal length, mirror formula (Derivation not required)	To make the learners understand- • The phenomenon of reflection. • Spherical mirrors, terms related to spherical mirrors and their applications in daily life.	• Activity 9.1(NCERT) • Find the image distance for varying object distance in case of concave mirror and draw corresponding ray diagrams to show nature of image formed.
May	15	Light Reflection and Refraction	Refraction, Laws of refraction, refractive index, Refraction of light by spherical lens, image formed by spherical lens, lens formula (Derivation not required), Magnification, Power of a lens.	To make the learners understand- • The phenomenon of refraction. • Spherical lenses and their types, applications of lenses.	• Crossword puzzle on Light- reflection and refraction. • Activity 9.7 (NCERT) • Activity 9.8 (NCERT) • Activity 9.9 (NCERT) • Activity 9.10 (NCERT)
Jul.	15	The Human Eye and the Colorful world	Functioning of a lens in human eye, Defects of vision and their corrections, applications of spherical mirrors and lenses.	• To make the learners understand the function of human eye along with its structure.	• Diagrams related to optical phenomenon • Activity 10.1 (NCERT) • Activity 10.2 (NCERT)

			Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life (excluding color of the sun at sunrise and sunset), Atmospheric Refraction	• To make them understand dispersion and scattering. • To make the learners understand the function of human eye along with types of defects	
Aug.	16	Electricity	Electric Current, potential difference and electric current Ohm's Law, Resistance, Resistivity, Factors on which the resistance of a conductor depends. Heating effect to electric current and its application in daily life. Electric Power. Interrelation between P, V, I and R.	To make the learners understand the concept of electricity, resistance, resistivity and the parameters affecting it and heating effect of current.	• Write a Slogan on "Ways to reduce Carbon footprints" and hence discuss the ways to save electricity. • Activity 11.1 (NCERT) • Activity 11.2 (NCERT) • Activity 11.3 (NCERT)
Sep.	07	Revision for Mid- Term Examination			
Sep.	Mid-Term Examination				
Oct.	14	Effects of Current	Series Combinations of resistors, parallel Combinations of resistors and their applications in the daily life	To make them understand the numerical calculations based on electricity	• Activity 11.4 (NCERT) • Activity 11.5 (NCERT) • Activity 11.6 (NCERT)

Nov.	**16**	**Magnetic effects of current**	**Magnetic Field, Field lines, field due to a current carrying conductor, field due to a current carrying coil or solenoid. Force on current carrying conductor, Fleming's Left - Hand Rule** **Direct Current, Alternating current: frequency of AC, Advantages of AC over DC. Domestic electric Circuits**	• **To make the learners aware of the difference between electricity and magnetism.** • **To make the learners understand different rules of magnetism.** • **To make the learners know about domestic electric circuit and types of electric circuit.**	• **To plot magnetic field lines around bar magnet. Activity 12.3 (NCERT)** • **Activity12.2 (NCERT)** • **Activity12.7 (NCERT)**
Dec.	**10**		**Revision/Pre-Board1**		
Jan.	**06**		**Revision/Pre-Board2**		

CHEMISTRY

Month	Period	Unit	Contents	Learning Objectives	Suggested Activities
Apr.	16	Chemical reactions and equations	Chemical Reactions, Chemical equation, Balanced Chemical equation, implication of a balanced chemical equation, types of chemical equation, combination decomposition, displacement, double displacement, precipitation, neutralization, oxidation, and reduction.	After studying this unit, students will be able to: - Explain different type of chemical reactions. - Balance chemical equations - Demonstrate different types of reactions. - Differentiate between corrosion and rancidity.	• To analyze the characteristics of a chemical reaction (Activity 1.1, 1.2, 1.3-NCERT) • Heating of lead nitrate crystals to enhance the knowledge of decomposition reaction (Activity 1.6-NCERT)
May	11	Acids, Bases, and Salts	Acids, Bases, and Salts: their definition in terms of furnishing of H+ and OH- ions. General properties, examples and uses, Concept of pH scale (Definition related to logarithm not required).	After studying this unit, students will be able to: - Define acid, base and salt. - Explain different types of acid and bases. - Explain pH and pH scale.	• To test the nature of organic samples using following indicators : red and blue litmus, Phenolphthalein, methyl orange • (Activity 2.1-NCERT)
July	6	Acids, Bases and Salts	Importance of pH in everyday life, preparation and uses of sodium hydroxide, Bleaching	After studying this unit, students will be able to: - Explain preparation of different type of salts and	• Heating of Copper sulphate crystals to learn about water of crystallization

			powder. Baking soda, washing soda and Plaster of Paris	their properties.	(Activity 2.15- NCERT)
	11	Metals and Non- metals	Metals and Non-metals: Properties of metals and non- metals, Reactivity series.	After studying this unit students will be able to: - Define metal and non-metals - Explain properties of metals and non-metals.	• To test the nature of metallic and non-metallic oxides (Activity 3.8 – NCERT)
Aug.	16	Metals and Non- metals in continuation	Formation and properties of ionic components, Basic metallurgical process, Corrosion, and its prevention.	After studying this unit students will be able to: - Learn the properties of ionic compounds. - Explain extraction of metals. - Explain corrosions, and its prevention.	• To know more about the properties of ionic compounds. (Activity 3.13- NCERT)
Sep.	07	Revision for Mid-Term Examination			
Sep.	Mid-Term Examination				
Oct.	14	Carbon and its compounds	Carbon Compounds: Covalent bonding in carbon compounds. Versatile nature of carbon, homologous series. Nomenclature of carbon	After studying this unit, students will be able to: - Explain bonding in Carbon. - Draw electron dot structure of different organic compounds.	• Make a mind map for all the functional groups.

			compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkanes, and alkynes)	**- Write the nomenclature of organic compounds.**	
Nov.	**16**	**Carbon and its compounds in continuation**	**Difference between saturated hydrocarbons and unsaturated hydrocarbons. Chemical properties of carbon compounds (combustion, oxidation, addition, and substitution reaction). Ethanol and Ethanoic acid (only properties and uses); soaps and detergents.**	**After studying this unit, students will be able to:** **- Compare the properties of ethanol and Ethanoic acid.** **- Explain different reaction of ethanol and ethanoic acid.**	• **To observe the nature of the flame. (Activity 4.3- NCERT)** • **To detect the formation of ester. (Activity 4.8- NCERT)**
Dec.	**10**	**Revision / Pre-Board Examination 1**			
Jan.	**06**	**Revision / Pre-Board Examination 2**			

BIOLOGY

Month	Period	Unit	Contents	Learning objectives	Suggested Activities
April	16	Life processes	Basic concepts of Nutrition and Respiration	Students will be able to learn • Photosynthesis-raw materials, site, conditions, and mechanism • Human digestion • Human respiration	• To prove water is necessary for photosynthesis. • (Activity 5.1-NCERT) • To show the effect of saliva on starch. (Activity 5.3-NCERT)
May	15	Life processes	Basic concept of transport and excretion	• Transportation in human beings, structure of heart • Transport in plants-xylem and phloem • Human excretion • Excretion in Plants • Human endocrine System-Glands and hormones.	• Suggested activity by CBSE on Sikkim and Lakshadweep Island.
Jul.	15	Control and coordination	Control and coordination in animals: Nervous system, voluntary, involuntary and reflex action, human brain. Coordination in	Students will be able to understand • Structure of Neuron. • Types of Neuron. • Types of action-reflex action. • Structure and function of brain • Nastic and Tropic movements. • Phytohormones-Auxin,	• Hormones and their functions (Activity 6.4 -NCERT)

			plants, movements in plants, introduction of plant hormones, Hormonal system in animals.	Gibberellin, cytokinin, ABA	
August	16	How to organisms reproduce	Reproduction: reproduction in animals and plants, asexual reproduction, vegetative propagation. Sexual reproduction in flowering plants, reproduction in human beings, reproductive health, needs and methods of family planning, Planning safe sex, Childbearing and women's health	Students will be able to learn • Type of asexual reproduction. • Vegetative propagation methods • parts of a flower • Human male and female reproductive system. • Contraceptive methods.	• To observe the spirogyra collected from water bodies. (Activity 7.4 - NCERT)
Sep.	7	Revision for Mid Term Examination			
	Mid Term Examination				

Oct.	**14**	**Heredity**	**Heredity: Heredity and variations, Mendel's Contribution-Laws for inheritance of traits, Sex determination: Brief introduction.**	**Students will be able to learn about** • **Introduction of heredity and variation.** • **Mono-hybrid and di-hybrid cross.** • **Law of Dominance, Segregation & Independent assortment.** • **Sex-determination in humans.** • **Acquired and inherited traits.**	• **Pictorial Chart on Mendel's law of** • **inheritance.** • **Determination of dog coat colors.** • **(Activity NCERT)**
Nov.	**16**	**Our Environment**	**Our environment: Eco system, food chain and webs, environmental problems, Ozone depletion, Waste production and their solutions, Biodegradable and non-biodegradable substances.**	**Students will be able to learn:** • **Types of ecosystems & it's** • **components** • **Food chain and Food web** • **Environmental problems- waste management, depletion of ozone layer.**	• **Newspaper reports about Pesticides. (Activity 13.3 - NCERT)**
Dec.	**10**	**Revision / preboard 1**			
Jan.	**6**	**Revision/ preboard 2**			

List of Experiments

1. **A. Finding the pH of the following samples by using pH paper/universal indicator**

(i) Dilute Hydrochloric Acid (ii) Dilute NaOH solution (iii) Dilute Ethanoic Acid solution

(iv) Lemon juice (v) Water (vi) Dilute Hydrogen Carbonate solution

B. Studying the properties of acids and bases (HCl & NaOH) based on their reaction with:

a) Litmus solution (Blue/Red) b) Zinc metal c) Solid sodium carbonate

2. **Performing and observing the following reactions and classifying them into:**

A. Combination reaction B. Decomposition reaction C. Displacement reaction D. Double displacement reaction

(i) Action of water on quicklime (ii) Action of heat on ferrous sulphate crystals

(iii) Iron nails kept in copper sulphate solution (iv) Reaction between sodium sulphate and barium chloride solutions

3. **Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions:**

i) $ZnSO_4(aq)$ ii) $FeSO_4(aq)$ iii) $CuSO_4(aq)$ iv) $Al_2(SO_4)_3(aq)$

Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity based on the above result.

4. **Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plotting a graph between V and I.**

5. **Determination of the equivalent resistance of two resistors when connected in series and parallel.**

6. **Preparing a temporary mount of a leaf peel to show stomata.**

7. **Experimentally show that carbon dioxide is given out during respiration.**

8. **Study of the following properties of acetic acid (ethanoic acid)**

i) Odour ii) solubility in water iii) effect on litmus iv) reaction with Sodium Hydrogen Carbonate

9. **Study of the comparative cleaning capacity of a sample of soap in soft and hard water.**

10. **Determination of the focal length of i) concave mirror ii) convex lens by obtaining the image of a distant object.**

11. **Tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. Measure the angle of incidence, angle of refraction, angle of emergence and interpret the result.**

12. **Studying (a) binary fission in Amoeba (b) budding in yeast and Hydra with the help of prepared slides.**

13. **Tracing the path of the rays of light through a glass prism.**

Identification of the different parts of an embryo of a dicot seed (Pea, gram, or red kidney bean).

SOCIAL SCIENCE

Months/ periods	Units	Content	Learning Objectives	Subject Enrichment
Apr. (22)	Pol. Sc.	The Power Sharing • Case study of Belgium and Sri Lanka • Why Power Sharing is desirable • Forms of Power Sharing.	Familiarize students with the centrality of power sharing in a democracy.	Read relevant newspaper articles / clippings on power sharing and present the findings in the form of flow chart.
	Economics	Development • What are Development promises to Different people? • Different goals Income and other goal • National Income Comparing Different Countries/ State Public Facilities • Sustainable Development	Understanding the importance of quality of life and sustainable developmental	Debate on 'different people have different developmental goal'
	Geography	Resources and Development • Development and resources • Resources planning in India	To understand the importance of conservation of resources.	Atlas map work Page no. 7 Page no. 11

May (17)	**History**	**The Rise of Nationalism in Europe** • **The French Revolution and the idea of the Nation State** • **The Making of Nationalism in Europe** • **The Age of Revolutions:1830-48** • **The making of Germany and Italy** • **Visualizing the Nation** • **Nationalism and Imperialism**	**Understand the way the idea of Nationalism emerged and Led to the formation of nation state in Europe and elsewhere.**	**Atlas** **Map-work** **Page no. 13** **Page no. 15** **Page no. 17**
	Pol. Sc.	**Federalism** • **What is Federalism?** • **What makes India a Federal Country?** • **How is Federalism practiced?** • **Decentralization in India.**		**Class discussion on distribution of powers between Union and State government.**
	Geography	• **Land and Soil Resources** **Forest & wildlife**	**To understand the need of resources & different measures to conserve them.**	

Jul. (22)	**Economics**	**Sectors of Indian Economy** • **Comparing three sectors** • **Division of Sectors as Organized and** • **Unorganized Sectors in terms of Ownership.** • **Public & Private Sectors**	**Reason out the government investment in different sectors of economy**	**Comparative analysis of 3 sectors on the basis of employment opportunity.**
	Geography	**Water Resources**	**Comprehend the importance of water as a resource and to develop awareness towards its conservation.**	**Atlas** **Page no. 19**
August (23)	**History**	**Nationalism in India** • **The First World War** • **Different Strands within the movement** • **Towards Civil Disobedience**	**Analyze the nature of the diverse social movements of the time.**	**Atlas** **Page no. 35** **Page no. 41**
	Geography	**Agriculture**	**Explain the importance of agriculture in national economy**	**Atlas** **Page no. 27** **Page no. 29** **Page no. 31**

	Economics	**Money & Credit** • **Medium of exchange** • **Terms of credit** • **Public and private sector**	**Create awareness about the role of financial institutional from the point of view of day to day life**	**Project on how to fill a cheque**
	Pol. Sc.	**Gender, Religion and Caste** • **Gender & politics** • **Religion, communalism and politics** • **Caste and politics**	**Develop a gender perspective on politics**	**Discussion on what role does gender, religion and caste play in a democracy**
Sep. (10)	**History**	**The Making of a Global World** • **The pre-modern world** • **The 19th Century (1815-1914)** • **The Inter War Economy**	**Analyze the Implication of Globalization for local economy.**	**Inter disciplinary project**
		Revision work		
		Mid Term Examination		
Oct. (19)	**Geography**	**Mineral & Energy Resources**	**To identify different types of minerals and feel the need for their judicious utilization.**	**Use of flow chart to differentiate between the convectional and non convectional energy.**
	Economics	**Globalization and The Indian Economy** • **Globalization And Its Impact** • **Challenges and Factors that Enabled Globalization.**		**Inter Disciplinary Project**

	History	**The Age of Industrialization** • **Industrialization in India** • **Industrialization in Britain**	**To explain industrialization in the colonies in references to textile industries.**	**To be assessed in the periodic assessment**
	Pol. Sci.	**Political Parties** • **Need of political parties** • **How many parties should we have?** • **National/ state parties**	**Understand and analyze the challenges posed by communication to Indian democracy**	
Nov. (22)	**History**	**Print Culture and The Modern World** • **the first printed books** • **print comes to Europe** • **the reading mania** • **new forms of publications**	**Discuss the link between print culture and circulation of ideas.**	**Use of Venn diagram to compare the advantages of hand written books and printed books**
	Pol. Sc.	**Outcomes of Democracy** • **How do we assess democracy outcomes?** • **Political outcomes Economic Inequalities**	**Analyze party system in democracies.**	
	Geography	**Manufacturing Industries** • **Iron and steel industries** • **Cotton industries**	**Infer the relation between availiability of raw material and location of the industries.**	**Atlas** **Page no. 51** **Page no. 53** **Page no.55**

Dec. (23)	**Geography**	**Lifelines of National Economy** • **Means of transport** • **Means of Communication in international trade and tourism**	**To explain the importance of transport and communication**	**Atlas** **Page no. 58** **Page no. 59**
	Pre Board Exams-I			
Jan.	**Pre Board Exams-II**			
Feb.	**Annual Examination**			
Mar.				

ARTIFICIAL INTELLIGENCE

Month (no. of periods)	Unit	Content (Artificial Intelligence-kips)	Learning objectives	Activity
March (9)	**Subject Specific Skills** **Unit-01 Revisiting AI Project Cycle & Ethical Frameworks for AI**			
	Unit-01 Revisiting AI Project Cycle & Ethical Frameworks for AI	• AI Project Cycle • Introduction to AI Domains • Ethical Frameworks for AI	• To understand the different stages of the AI Project Cycle • To understand the concept of Artificial Intelligence (AI) domains and the illustrations of practical applications within each AI domain. • To learn about the ethical framework for AI and its category.	• Frameworks, Ethical Framework and need of Ethical Frameworks for AI. Activity: My Goodness https://www.my-goodness.net/
	Employability Skills **Unit -1**			

	Ch-01 **Communication Skills – II**	• **Methods of communication** • **Communication cycle** • **Meaning & importance of feedback, descriptive feedback** • **Specific & non-specific feedback**	• **To learn about different methods & types of communication & it's importance** • **To learn about the significance of a feedback**	• **With the help of chart paper, glue stick, & screenshots from news articles make a collage of different types of expressions**
April (12)	**Subject Specific Skills** **UNIT-2 Advanced Concepts of Modelling in AI**			
	Unit-2 **Advanced Concepts of Modelling in AI**	• **Revisiting AI, ML, DL** • **Modelling** • **Artificial Neural Networks**	• **To understand AI, ML and DL** • **To familiarize with supervised, unsupervised and reinforcement learning based approach** • **Understand subcategories of supervised, unsupervised and deep learning models** • **understand Neural Networks** • **To understand how AI makes a decision**	• **Categories of Machine learning based models: Supervised Learning (https://teachable machine. withgoogle.com/)**
	Employability Skills **Unit -1**			

	Ch-01 **Communication Skills – II**	• **Barriers in communication** • **Overcoming barriers** • **Types of factors** • **Principles of effective communication** • **7 cs of communication**	• **To learn about communication barrier & steps to overcome barriers** • **To learn about 7 cs of communication**	• **Write about your observations of different places how they take feedback from the customers**
May (12)	**Subject specific kills** **Unit-3 Evaluating Models**			
	Unit-3 **Evaluating Models**	• **Importance of Model Evaluation** • **Splitting the training set data for Evaluation** • **Accuracy and Error** • **Evaluation metrics for classification** • **Ethical concerns around model evaluation**	• **To understand the role of evaluation in the development and implementation of AI systems.** • **To understand Train-test split method for evaluating the performance of a machine learning algorithm.** • **To understand accuracy and errors for effectively evaluating and improving AI models.**	• **Build the confusion matrix from scratch** • **Calculate the accuracy of the classifier model**

	Employability Skills Unit -1			
	Ch-01 **Communication Skills – II**	• **Writing skills – Sentence, Phrase, kinds of Sentences, Parts of Sentences** • **Parts of speech, Articles, Construction of a Paragraph**	• **To learn about perspective & factors affecting perspective** • **To learn about the writing skills**	• **Demonstration & practice of writing sentences & paragraphs on topics related to the subject**
July (12)	**Subject Specific Skills Unit-4 Statistical Data**			
	Unit-4 **Statistical Data**	• **Introduction & No code AI tool** • **Statistical Data: Use Case Walk through** • **Orange Data Mining tool**	• **To define the concept of Statistical Data and understand its applications in various fields.** • **To define No-Code and Low Code AI.** • **To Identify the differences between Code and No-Code AI concerning Statistical Data** • **To perform data exploration, modelling and evaluation with Orange data mining.**	• **Case study using Orange data mining (Palmer Penguins). Link: https://drive.google.com/ drive/u/0/folders/ 1fmcRVbilTyUhmU v4DWT1BFsaCoQ2BmF**
	Employability Skills Unit -2			

	Ch-02 **Self Management Skills – II**	• **Stress management techniques- physical exercise, yoga, meditation** • **Ability to work independently**	• **To learn about various stress management techniques** • **To learn about the importance of working independently, self-motivation & self-awareness**	• **Make an elaborate chart indicating different sources of stress in the modern times**
August (12)	**Subject Specific Skills** **Unit-5 Computer Vision**			
	Unit-5 **Computer Vision (Theory)**	• **Introduction** • **Concepts of Computer Vision**	• **To define the concept of Computer Vision and understand its applications in various fields.** • **To understand the basic concepts of image representation, feature extraction, object detection, and segmentation.**	**Game- Emoji Scavenger Hunt: https://emojiscavenger hunt.withgoogle .com/ RGB Calculator: https://www.w3schools.com /colors/colors_rgb.asp Create your own pixel art: www.piskelapp.com**

	Employability Skills **Unit -3**			
	Ch-03 **Basic ICT Skills – III**	• **Distinguish between different operating systems** • **Working with files & folders** • **Basic skills for care & maintenance of a computer**	• **To learn the difference between different OS.** • **To be able to work using file explorer** • **To be aware of the threats that affect the computer system and utility tools for windows**	• **Check how many software are installed on your computer in the lab – write their names in your notebooks**
September (6)	**Subject Specific Skills** **Unit-5 Computer Vision**			
	Unit-5 **Computer Vision (Practical)**	• **No-Code AI Tools** • **Image Features & Convolution Operator** • **Convolution Neural Network**	• **To demonstrate proficiency in using no- code AI tools for computer vision projects** • **To understand the basic architecture of a CNN and its applications in computer vision and image recognition.**	**Introduction to Lobe: https://www.lobe.ai/** **Build a real-world Classification Model: Coral Bleaching (Use Case Walkthrough) Link: development and dataset: https://drive.google.com**

				/drive/ folders/1ppJ4d-8yOFJ2G22rHH pjNrK0ejdIAe5Q
	Employability Skills Unit -4			
	Ch-04 **Entrepreneurial Skills – II**	• **Characteristics of a successful entrepreneur** • **Role & significance of entrepreneurs** • **Entrepreneurship as a career option**	• **To learn about characteristics of a successful entrepreneur, the significance of an entrepreneur, how entrepreneurship can be a career option**	• **Collect information & related data for a business & prepare a plan in team for setting up the business.**
	Subject specific skills Unit-6 Natural Language Processing			

October (12)	**Unit-06** Natural Language Processing (Theory)	• Introduction • Applications of Natural Language Processing • Stages of Natural Language Processing (NLP) • Chatbots • Concepts of Natural Language Processing: Text Processing	• To comprehend the complexities of natural languages. and elaborate on the need for NLP techniques. • To explore the various applications of NLP in everyday life • To understand the concept of chatbot and the differences between smartbots and script bots. • Learn about the Text Normalization technique used in NLP and the popular NLP model - Bag-of-Words	Keyword Extraction: https://cloud.google.com/ natural-language Activity: Play with chatbots Elizabot - https://www.masswerk.at/elizabot/ Mitsuki - https://www.kuki.ai/ Cleverbot - https://www.cleverbot.com/ Singtel – https://www.singtel.com/personal/support
	Employability Skills **Unit -5**			
	Ch-05 Green Skills – II	• Importance, problems & solutions related to sustainable development	• To learn about importance, problems & solutions related to sustainable development	• Diagrammatic representation of problems related to sustainable development.

November (12)	**Subject Specific Skills Unit-6 Natural Language Processing**			
	Unit-06 Natural Language Processing (Practical)	• Natural Language Processing: Use Case Walkthrough	• To explore the sentiment analysis process using real-life datasets with the Orange Data Mining tool.	• Case Walkthrough – Steps involved in project development Link to steps and dataset: https://drive.google.com/drive/u/2/folders/1geFLXx V5890kfcakMfEg_KsH1LPcS_Iz
	Subject Specific Skills Unit-7 Advance Python			
	Unit-07 Advance Python	• Recap	• To understand to work with Jupyter Notebook, creating virtual environments, installing Python Packages. • To Able to write basic Python programs using fundamental concepts such as variables, data types, operators, and control structures. • To be able to use Python built-in functions and libraries.	• Practical Work

November	**4**	**1.Human body proportion** **2. Sketching**	**Students will learn Proportion drawing and sketching**
December	**4**	**1. Calligraphy** **2. Story Board**	**Students will learn card making** **logo designing and learn Story board drawing.**
January	**4**	**Submission of all work done in this session**	**……**

ART & CRAFT

Month	Period	Topic/Content	Learning Objectives
April	2	1. Elements of Art 2. Proportion	Students will learn elements of Art- Line, Space, colours, texture & proportions
May	2	Colour Theory	Revision of Primary and Secondary colours
July	4	1. Perspective Drawing	Students will learn different types of perspectives
August	4	1. Still life drawing 2. Portrait Drawing 3. Shading with pencil shade	Students will Learn still life drawing and shade with pencil shade, Oil pastel, water colour, and water proof ink and also learn portrait drawing.
September		---------Half yearly Exam-----	
October	4	1. Caricature Drawing 2. Nature Study 3. Landscape	Students will learn cartoon drawing and nature drawing

MUSIC

Month	Periods	Content
March	7	Sargam-5 Ekgun and Dugun with harmonium, prayer song (Teri Panah page- 71) Baisakhi song, Mother's day song
April - May	8	National song notation with harmonium, prayer (Oo Palanhare page - 61) patriotic song, Raksha bandhan song
July - August	8	Sargam (6-10) with harmonium, Raag Khamaaj(Swar Lipi), prayer song (Ae Malik tere Bande hum page-63) Janmashtami, Dussehra song
September - October	8	National song (notation), prayer song (Jaise Sooraj ki garmi se), folk song, diwali special song, Christmas carol
November - December	8	Patriotic song, Mahashivratri, Holi song
	7	Sargam-5 Ekgun and Dugun with harmonium, prayer song (Teri Panah page- 71) Baisakhi song, Mother's day song

Learning Objectives:

1. To learn to play sargam on harmonium.
2. To learn prayers, national anthem and patriotic songs.
3. To learn devotional and folk songs.

GUITAR

Month	Period	Content
April and May	7	Introduction to guitar Anatomy of guitar Beginner scale Beginner strumming Prayer song- Count your blessings Pg. no. 46
July and Aug	8	Fundamental guitar skill Prayer song – Power of love Pg. No. 44
Sept-Oct-Nov	12	The twelve half steps and basic notation
Dec – Jan- Feb	11	Scales: Constructions and fingerings Chords: Building easy triads and power chords. Christmas songs -0 Hallelujah and prayer song – We should not be moved –pg no 234

Learning Objectives :

1. **To learn how to hold a guitar and learn open strings.**
2. **To understand hand positions.**
3. **To learn how to strum up and down.**

SITAR

Month	Period	Content
April & May	7	Introduction Scale: Sargam and meend learning Sargam practice dogun & chargun,1 Prayer Song, rag Yaman
July & Aug	8	Different Strings Exercise, Rag Yaman 1 Patriotic Song & 1 devotional Song
Sep & Oct	8	Different Strings Exercise,1 devotional Song & Shiv vandana
Nov & Dec	8	Different Strings Exercise, 1 Prayer Song & 1 Patriotic Song Saraswati vandana

Learning Objectives:

- To understand hand positions
- To learn to play sargam and its stroke
- To learn to play rag, patriotic song & devotional song

TABLA

Month	Period	Content
April and May	7	Teen tal 16 matra vilambit Madhya leh Beginner bbol of table dha dhin dhin dha Beginer technique of teen tal
July and Aug	8	Kayda no 1
Sept-Oct-Nov	12	Kayda number 2 vilambit leh
Dec – Jan- Feb	10	Teen talk daadra kegerwa tihai tukdaa

Learning objectives :

1. To understand hand positions
2. To learn how to play hastasadhan
3. To learn to play different taals.