	MAPPING OF GRADE 10 MATHEMATICS TOPICS WITH NCERT LEARNING OUTCOMES (2021-22)			
MONTH	**Chapter**	**Content Area/Concept**	**Learning Objectives**	**Learning Outcome**
APRIL	**1. Real Numbers**	Euclid's Division	Apply Euclid Division Algorithm and obtain HCF of two positive integers in the context of the given problem	Generalises properties of numbers and relations among them studied earlier, to evolve results, such as, Euclid's division algorithm, fundamental theorem of arithmetic in order to apply them to solve problems related to real life contexts
			Apply Euclid Division Algorithm and prove results of positive integers in the form of ax+b where a and b are constants	
		Fundamental Theorem of Arithmetic	Use the Fundamental Theorem of Arithmetic and calculate HCF and LCM of the given numbers in the context of the given problem	
		Irrational Numbers	Recall the properties of irrational number and prove that whether the sum /difference	
			/product /quotient of two numbers is irrational or not	
			Apply theorems of irrational number and prove whether a given number is irrational or not	

		Decimal Representation of Irrational Numbers	Apply theorems of rational numbers and find out about the nature of their decimal representation and their factors	
MAY	**2. Polynomials**	Geometrical meaning of Zeroes of a Polynomial	Recall degree of polynomial and find the number of zeroes of polynomial	Uses algebraic and graphical method of finding zeroes of a polynomial in order to establish a relationship between them
			Analyse the graph of the polynomials and find the number of zeroes of polynomial	
		Relationship between Zeroes and Coefficients of a Polynomial	Compute zeroes of the polynomials and verify the relationship between zeroes and the coefficients	
			Compute the sum and product of zeroes of the polynomial and find the quadratic polynomial	
		Division Algorithm for Polynomials	Divide the two given polynomials and verify the division algorithm	
			Divide the given polynomial with its known zero and find all the other zeroes of that polynomial	
JUNE	**3. Pair of Linear equations in two variables**	Introduction and Properties of Linear equations and non- linear equations	State the properties of linear equation and classify the given equations as linear or non-	Uses graphical and other methods in order to finds solutions of pairs of linear equations in two variables

			linear	
		Graphical Method of Solution of a Pair of Linear Equations	Interpret the concepts of linear equations and represent any given situation algebraically and graphically	
			Plot the lines corresponding to the given two linear equations and comment on the nature	
			/behaviour of the lines representing the linear equations	
		Algebraic method for	Use different algebraic methods and solve a pair	
		solving Linear Equations	of linear equations	
			Use the most appropriate algebraic method and solve the given pair of linear equations	
			Use the concepts of pair of linear equations in two variables and represent any given situation algebraically and find its solution	
			Calculate the ratio of coefficients of linear equations and discuss the nature of pair of linear equations	

		Equations Reducible to a Pair of Linear Equations in Two Variables	Rewrite the given equations (using substitution method) which are reducible to a pair of linear equations and find the solution of those equations	
JULY	**4. Quadratic Equations**	Introduction to Quadratic Equations	In the form of Quadratic Equation represent the given situation algebraically	Demonstrates knowledge of application of various strategies and find roots and determine the nature of roots of a given equation
			Rewrite the given equations in the standard form and check whether they are quadratic or not	
		Factorization Method	Solve quadratic equations through factorization and find its roots	
			Solve quadratic equations through middle term splitting and find its roots	
		Completing Square Method	Solve quadratic equations by completing the square and find its roots	
		Solving a Quadratic	Use the quadratic formula and find the roots of	
		Equation	quadratic equation	
		Roots of a Quadratic Equation	Substitute the value of the roots of a given quadratic equation and verify them.	

		Nature of Roots	Examine the discriminant of quadratic equation and find out the nature of its roots	
			Describe the nature of the roots of a quadratic equation and determine that whether a given situation is possible or not	
AUGUST	**5. Arithmetic Progression**	Introduction to Arithmetic Progressions-	Produce patterns and observe that succeeding terms are obtained by adding a fixed number to the preceding terms.	Develops strategies in order to apply the concept of AP to daily life situations
			Distinguish between finite and infinite AP and determine the nature and write the last term of the given AP	
		nth term of AP	Calculate the nth term of a given AP and find its terms and their nature	
		nth term of AP Sum of an AP	Calculate the nth term of a given AP and solve real-life word problems	
			Calculate the sum of a given AP and get the solution of real-life word problems	
		Sum of an AP Last term of an AP	Calculate the sum of a given AP and solve contextual problems	

			Calculate the last term of the given AP and find solution real-life word problems	
		Last term of an AP	Use appropriate formula to calculate the last term of the given AP	
AUGUST	**6. Triangles**	Similar figures	Distinguish between congruency and similarity and understand the concept of similar figures	Uses reasoning in order to differentiate between congruent and similar figures
			Compute the angles and ratio of sides of polygons and determine their similarity	Uses different geometric criteria established earlier such as basic proportionality theorem etc. in order to establish properties for similarity of two triangles
		Similarity of triangles	Compute the angles and ratio of sides of triangles and determine their similarity	
			Apply basic proportionality theorem and its converse and determine the ratio of sides in the given triangle(s)	
		Criteria for similarity of Triangles	Apply various criteria of similarity and prove whether given triangles are similar or not	
			Show similarity of triangles and solve real life problems	

		Areas of Similar Triangles	Compute the square of the ratio of the corresponding sides of triangles and find the area of similar triangles	
			Compute the area of similar triangles and find the relation between their sides, medians, mid points of the triangles	
		Pythagoras Theorem	Apply the theorem that if a perpendicular is drawn from the vertex of the right angle of a right triangle to the hypotenuse then triangles on both sides of the perpendicular are similar to	
			the whole triangle and prove Pythagoras Theorem.	
			Prove Pythagoras theorem and its converse and solve real life problems	
			Apply Pythagoras theorem and its converse and determine that whether a given triangle is a right-angled triangle or not	

SEPTEMBER	**7. Co-ordinate Geometry**	Basics of Graphs	Identify x and y coordinate and plot points on the graph	Derives formulae to establish relations for geometrical shapes in the context of a coordinate plane, such as finding the distance between two given points, in order to determine coordinates of a point between any two given points, to find area of a triangle etc.
		Distance Formula	Apply and derive distance formula and determine the distance between two coordinates on the graph	
			Apply distance formula and solve various mathematical and real-life problems graphically	
		Section Formula	Apply and derive section formula and divide the line segment in a given ratio	
			Apply distance and section formula and determine the vertices /diagonals /mid points of given geometrical shapes	
		Area of a Triangle	Apply and derive the formula of area of triangle geometrically and determine the area of quadrilateral /triangle	
SEPTEMBER	**8. Introduction to Trigonometry**	Trigonometric Ratios	Describe trigonometry and study the relationship between side and angle of a triangle	Determines all trigonometric ratios with respect to a given acute angle (of a right triangle) in order to use them in solving
			Define and distinguish various trigonometric	

			ratios and describe and verify sine, cosine, tangent, cosecant, secant, cotangent of an angle	problems in daily life contexts like finding heights of different structures or distances from them
			Use given trigonometric ratio(s) and find and verify other trigonometric ratios /angles of the triangle	
		Trigonometric Ratios of Some Specific Angles	Compute the trigonometric ratio 0o,30 o,45o,60o	
			and 90o and use these for different angles	
		Trigonometric Ratios of Complementary Angles	Compute the trigonometric ratio of complimentary angles and apply the values in solving contextual problems	
		Trigonometric Identities	Compute and apply trigonometric identities and simplify and solve mathematical problems	
SEPTEMBER	**9. Some applications of Trigonometry**	Heights and Distances	Identify line of sight and determine angle of elevation and angle of depression	Determines all trigonometric ratios with respect to a given acute angle (of a right triangle) in order to use them in solving problems in daily life contexts like finding heights of different structures or distances from them.
			Apply trigonometric ratios (of specific angles) and determine heights and distances of	

			the objects in the real-life context.	
OCTOBER	**10. Circles**	Tangent to a Circle	Draw, identify and differentiate between secant and tangent of a circle and prove and apply various theorems related to circles	-
		Number of Tangents from a Point on a Circle	Prove and apply theorems related to tangent of a circle and determine number of tangents from the given point(s)	
			Prove and apply theorem related to tangent of a	
			circle and determine length of the tangent	
OCTOBER	**11. Constructions**	Division of a Line Segment	List and execute steps of construction and divide a line segment in a given ratio	Examines each step and reasons out each step, in order to:
		Construction of a similar triangle	List and execute steps of construction and construct a similar triangle as per a given scale factor	A) Construct a triangle similar to a given triangle as per a given scale factor.
		Construction of Tangents to a Circle	List and execute steps of construction and construct tangent(s) to a given circle	B) Construct a pair of tangents from an external point to a circle and justify procedures

NOVEMBER	**12. Areas related to circles**	Perimeter and Area of a Circle — A Review	Describe the relationship between circumference and diameter of a circle and define Π	-
			Apply the concepts of circumference and area of and solve in for various circular objects in real life	
		Areas of Sector and Segment of a Circle	Describe sector and segment of a circle and differentiate between the two	
			Describe minor and major sector of a circle and differentiate between the two	
			Describe minor and major segment of a circle and differentiate between the two	
			Apply the formula of area of sector and segment of a circle, and compute the area of a specified region	
			Calculate the length of an arc of a circle and comment whether it is the major arc or minor	
			arc	
		Areas of	Calculate the area of various combinations of	

		Combinations of Plane Figures	plane figures and apply the concepts of circles, quadrilaterals and triangles	
NOVEMBER	**13. Surface areas and volumes**	Surface Area of a Combination of Solids	Apply formulae of surface area of different 3D solids and derive the surface area of combination of these solid objects	Visualizes objects in surrounding as a combination of different solids like cylinder and a cone, cylinder and a hemisphere, combination of different cubes etc.in order to find their surface areas and volumes
		Volume of a	Apply formulae of volume of different 3D solids and derive the volume of the combination of these solid objects	
		Combination of Solids		
		Conversion of Solid from One Shape to Another	Combine different solid shapes to create a new solid form	
		Frustum of a Cone	Apply the formula of surface area of a cone and derive the total surface area of the frustum	
			Apply the formula of volume of a cone and derive the volume of the frustum	
		Applications of surface areas and volumes	Use concepts of surface areas and volumes for variety of 3-D objects and apply them into real life situations	
DECEMBER	**14. Statistics**	Mean of Grouped Data	Apply direct method and calculate the mean of the grouped data	Calculates mean, median and mode in order to apply them to real life contexts

			Apply assumed mean method and calculate the mean for a grouped data	
		Mode of Grouped	Compute the mean and mode of the given data	
		Data	and interpret these two measures of central tendency	
		Median of Grouped Data	Apply formula for the median of a given grouped data and calculate missing values of frequency	
		Mean, median and mode	Differentiate between mean, median and mode with examples and use most effective measure of central tendency in various cases	
		Graphical Representation of Cumulative Frequency Distribution	Derive the co-ordinates to plot a graph and represent the two ogives	
			Graph both ogives for the data obtained and determine the median of the given grouped data	
DECEMBER	**15. Probability**	Probability — A Theoretical Approach	Differentiate between Empirical Probability and Theoretical Probability and find the two for a variety of cases	Calculates and determine the probability of a given event

			Calculate the probability of given events in an experiment and comment whether they are Complementary Events /Sure Events	
			/Impossible Events	
			Represent using organized lists, tables, or tree diagrams and list the sample space for compound events	
			Calculate the probability of various events and rank them from most to least probable events.	
JANUARY		REVISION		
FEBRUARY		REVISION		
MARCH		FINAL EXAM		

ANNUAL PEDAGOGICAL PLAN – CLASS X **SUBJECT : PHYSICS**

Month	Topics	Methodology /activities	Learning objectives	Working days
April	Electricity * introduction to electric current *electric potential and potential difference *circuit diagram *Ohm's law *factors on which resistance of a conductor depends	Giving an example deduce the definition of an electric circuit *show them the devices like key,battery, resistor, voltmeter and ammeter etc and explain the role of each of them in an electric circuit *demonstration for the variation of V with I *explanation * small video * asking appropriate question *discussion	the students will be able to *define an electric circuit , electric current electric potential resistance resistivity * read ammeter and voltmeter* *deduce Ohm's law experimentally. *Solve numerical problem related to current ,potential differential,resistance. *distinguish between resistance and resistivity. * relate how resistance varies with length area of cross section and nature of material of the conductor *identify the various components of the electric circuit *appreciate the role of various devices in an electric circuit *draw a circuit diagram *make electric circuit	4
May	* resistance of system of resistors *heating effect of electric current * electric power	* demonstration of series and parallel combination of resistance *discussion on students observation *appropriate questioning *explanation *questioning *deduction *problem solving	*role of resistor in a circuit * role of fuse in a domestic circuit *joules law of heating effect of electric current. *relation between the commercial unit and SI unit of electricity. *electrical energy consumed in a domestic circuit(calculate the bill of electricity consumed in a household)	4

June	Magnetic effects of electric current *magnetic field *field lines* field due to the current carrying conductor *field due to the current carrying coil and solenoid *force on a current carrying conductor *Fleming's left hand rule	*small video or demonstration and deductive approach for various activities. * deflection of compass needle on passing an electric circuit through a metallic conductor. * aligning of iron filings near the bar magnet. * field lines around a bar magnet. * magnetic field lines of a field produced by a current carrying straight conductor ,circular loop and solenoid. *discussion *appropriate questioning *explanation	students will understand. * properties of magnet * the relation of electric current and magnetism. *Direction of force in magnetic and electric field	4
July	*electric motor. *electromagnetic induction. *electric generator. *domestic electric circuit	* explanation of various component of electric motor and electric generator. * explanation of electric motor using a small video *Explanation of induction of electric current by changing the magnetic field. *A video related to the production of current in a generator. * schematic diagram of common domestic circuit	*Students will understand the principle of an electric motor,electric generator. * factors related to the production of magnetism and current. *Various sources for direct current and alternating current. *Safety measures used in electric circuits and appliances. *Precautions to avoid the overloading	8

		*Discussion on students observation. *Asking questions.		
August	Sources of energy. Fossil fuels. Thermal power plant .Hydro power plant. Biomass. Wind energy. Solar energy Tidal energy Wave energy Ocean Thermal Energy Geothermal energy Nuclear energy Environmental consequences	Collection of data for the various types of energy. *A model to demonstrate the process of thermoelectric production. *Schematic view of a hydropower plant and biogas plant. *Explanation of various types of energy. *Discussion of the various types of energy. *Students to be divided into groups and name the groups according to the sources of energy. Each group will explain completely about that source of energy. *Deduction	Student will understand the importance of source of energy. *Criteria to consider to categorise something as a good fuel. *How various types of energy is produced. *Advantages and limitation of various types of energy. *Designing using low cost material. *Steps to reduce energy consumption	8
September	Light- reflection and refraction. Reflection of light. Spherical Mirrors. Representation of image formed by spherical mirror using ray diagram. Uses of concave mirror and convex mirror.	Recapitulation of laws of reflection of light. Explanation and the demonstration of various types of mirror using spoon. Explanation of various terms related to Mirror. Teacher will illustrate how to draw a ray diagram.	Student will understand how the light reflect in different types of mirror. Type of mirror to be used . Learn different terms related to mirror Student will learn to calculate the image distance, object distance. And magnification.	8

	Mirror formula and magnification	Explain the rules to follow to draw the ray diagram. Discussion. Deduction. Questioning. Problem solving		
October	Refraction . Refraction through a rectangular glass slab. The refractive index. Refraction by spherical lens. Image formation in lens using ray diagram. Lens formula and magnification. Power of a lens	Demonstration of refraction . Explanation of various optical phenomena in nature. Demonstration of refraction of light through a rectangular glass slab. Explanation of the rules to follow to draw a ray diagram in a lens. Illustrate how to draw a ray diagram through a lens. Discussion. Questioning. Problem solving for refractive index and the lens. Magnification. Explanation of power of the lens. Calculation of power of a lens and the power of combination of two or more lenses.	Students will understand various phenomena taking place in nature. What type of lens to be used . Students can calculate the power of a lens	8
November	Human eye and	Explanation of various	Student will know the	8

	the colourful world. The human eye. Power of accommodation. Defect of vision and their correction. Refraction of light through a prism. Dispersion of white light by a glass prism.	parts of eye using a diagram or a model. Discussion on power of accommodation. Questioning about various defects of eye. Explaining the defect and correction using ray diagram. Explaining and demonstrate the refraction of light through a prism and cause of dispersion. The teacher will illustrate how to draw the ray through a prism	importance of each part of the eyes and its function. Why a person can see near object as well as far object. Why defect is caused and the reason behind it. What happens when a Ray of light passes through the prism.	
December	Atmospheric refraction and scattering of light	Asking appropriate question related to the rainbow formation. Demonstration Explaining the formation of rainbow,. Asking question about twinkling of stars,. Advance sunrise and delayed sunset. And and explain them with the help of a diagram. Explaining tyndall effect and why the colour of clear sky is blue and the colour of sunrise and sunset is red.	Student will understand the reason for the formation of rainbow, conditions that has to be followed to form rainbow. The phenomenon behind twinkling of star. The scientific reason behind the colours.	4
January	Revision			

ANNUAL PEDAGOGICAL PLAN – CLASS X **SUBJECT : CHEMISTRY**

Month	Topic	Methodology /activity	Learning outcome	Working days
April	Chapter -1 chemical reactions and equations. •chemical changes. •features of chemical changes. .•Equation for chemical reaction. • writing word equations. •writing symbol equations . •Balancing ofchemical equations •How to make chemical equation more informative • .Information conveyed by a balanced chemical equation . •Information not conveyed by chemical equations	•Lecture and demonstration method •PPT •use of whiteboard for writing chemical equations. •Interactive application •explanation method	Students will be able to •understand what is meant by a chemical reaction •construct balanced chemical equations to represent reactions. •construct chemical equation •students are able to write word equation & equation •illustrate information conveyed by chemical equation.	4 periods
May	Chapter -1st chemical reactions and equations. •Types of chemical reactions •combination reaction •Decomposition reaction •Displacement reaction • Double displacement reactions. .•oxidation reduction reaction	•Presentation method • lecture and demonstration method. •Using whiteboard to explain different reactions •Discussion forum activity	•Students will be able to identify different types of reaction. •How is rust formed on the surface of iron objects. •identify the substance oxidized and the substance reduced in the reaction.	4 periods

	•Redox reaction •combustion reaction •corrosion and rancidity			
June	Chapter- 2 Acids bases and salt •Definition of acids and bases. •Properties of acids . •Strong and weak acids . •uses of mineral acids in industry .•properties of bases . •strong and weak bases . •Dilution of acid and base solution •How do acids and bases mutually react. •Practical application of neutralization.	Lecture and demonstration method. •showing citrus fruit to explain the presence of acid. •showing vinegar to explain acid. •showing and tasting baking soda to explain base. PPT	Students will be able to- •Understand the strength of an acid (or base) as determined by the percent of ionization in solution. •Identify strong and weak acids and bases. •Define acids and and bases .•Investigate the reaction of non - oxidizing acids with metals ,carbonates and hydrogen carbonates and bases . •Discuss the strength of acids and alkalis on the basis of their completeness of ionization. •Illustrate dilution of acids.	8 periods
July	Chapter,- 2 acids bases and salt. •The pH scale •universal indicator paper for PHvalue •Importance of PH in daily life •Definition of salt •Classification of salt. •classification based on chemical formula. •classification based on PH value •.classification based	Lecture and demonstration method •PPT •showing common salt •Presentation method	Students will be able to • Explain importance of PH in daily life. •Classify different kind of salt. •Identify formula of salt. • identify the acid and the base present in	8 periods

	on family of salt •preparation of salt •chemicals from common salt washing soda ,caustic soda baking soda ,bleaching powder, plaster of paris ,hydrated salt		the salt. •write chemical equations for the preparation of salt. •Detect the water of crystallization present in salt	
August	Chapter -3 metals and non-metals. Metals ,physical properties of metals ,non-metals ,physical properties of non-metals ,chemical properties of metals ,chemical properties of non-metals, How do metals react with non-metals? ,properties of ionic compound ,occurrence of metals, extraction of metals, refining of metals ,corrosion	Lecture and demonstration method •presentation method •PPT •showing some metals like iron silver ,copper to explain the properties of metals. ,•activity to show rusting process on iron objects	Students will be able to •Demonstrate metals and non-metals •Compare properties of both metals and non-metals. •Identify metals and non-metals from the given samples • Tabulate the reactivity series of metals. •Correlate valency and type of bond formed. • Draw schematic diagrams for ionic compounds. •Demonstrate properties of ionic compounds. •Compile the metals and soluble salts from earth's crust and sea water •Compare minerals and ores. • Identify various steps in the extraction of metals.	8 Periods

			•Choose different separating techniques for the ores.•Apply conceptual and experimental knowledge of metals in daily life.• Demonstrate the activity performed to show corrosion.• Identify the factors responsible for corrosion.•various methods to prevent corrosion.	
September	Chapter -4 carbon and its compounds. •Bonding in carbon - covalent bond • properties of covalent compounds •allotropic form of carbon •carbon an essential •constituents of all organic compound •versatile nature of carbon . •catenation •organic compounds •closed chain compounds •functional groups •Homologous series.	Online lecture and discussion forum activity. PPT Activities related to the topics. Discussion forum Interaction application	Students will be able to •define the term tetravalence and catenation. •list the physical properties of carbon. •state why is carbon a special element. •define the allotropy •list main allotropes of carbon and distinguish between the properties of allotropes •predict what happens when carbon dioxide with common elements •identify different functional group.	8 -periods
October	Chapter- 4 carbon and its compound •Nomenclature of open chain compound	Online lecture and discussion forum activity	– students will be able to •write IUPAC names	7 periods

	and important families of organic compounds •chemical properties of carbon compounds •some important organic compounds - ethanol , ethanoic acid soaps and synthetic detergents.	Mini lecture Interaction application PPT	of different organic. compounds •Explain uses of ethanol and acetic acid. •Identify chemical nature of soap and detergent •Discuss difference between soap and detergent	
November	Chapter 5 periodic classification of elements. •Dobereiner's Triads •Newlands law of Octaves •Mendeleev periodic table •defect in Mendeleev periodic table •modern periodic law.	Discussion method Explanation method Mini online lecture PPT	Students will be able to •Understand about the importance of classification of elements •State the Dobereiner's law of classification •Understant the Dobereiner's traid its advantages and disadvantages •State the Newland's Octave law •Understand the Newland law of classification, its advantages and disadvantages •Understand the Mendeleev's periodic classification . •Understand the properties of Mendeleev's periodic table, its merits and	7 periods

			demerits. •State the modern periodic law	
December	Chapter 5 periodic classification of element •Modern Periodic table •Advantage of the modern periodic table . •some trends in modern Periodic table like -ectronegativity metallic and non-metallic properties of elements, atomic size, valency	Online lecture and discussion forum activity Interactive application Discussion method Explanation method PPT	Students will be able to •Understand the properties of modern periodic table, its merits and demerits. •discuss the variation of atomic size in groups and periods •Explain the variation of electronegativity in periods and groups.	7 -periods
January	Revision of all chapters			

MONTH	UNIT/TOPIC	METHODOLGY/ ACTIVITIES	LEARNING OUTCOMES	WORKING DAYS
JUNE	1.LIFE PROCESSES	GOOGLE CLASSROOM PPT PRESENTATION LECTURE METHOD TEST GOOGLE	AFTER READING THIS CHAPTER STUDENTS WILL BE ABLE TO ANSWER- WHAT PROCESS WOULD YOU CONSIDER ESSENTIAL FOR MAINTAINING LIFE?	13
	2.LIFE PROCESSES(CONT)	GOOGLE CLASSROOM PPT PRESENTATION LECTURE METHOD TEST GOOGLE	THE STUDENTS WILL BE ABLE TO EXPRESS THE MODES OF REPRODUCTION SEXUAL REPRODUCTION IN PLANTS ASEXUAL REPRODUCTION	13
JULY	CONTROL AND CO-ORDINATION IN PLANTS	GOOGLE CLASSROOM PPT PRESENTATION QUIZ LECTURE METHOD	THE STUDENTS WILL BE ABLE TO TELL ABOUT PLANT HORMONES DIFFERENT KIND OF ANIMAL HORMONES AND THEIR FUNCTION	15
	CONTROL AND CO-ORDINATION IN ANIMALS	GOOGLE CLASSROOM QUIZ PPT PRESENTATION	THE STUDENTS WILL BE ABLE TO ANSWER DIFFERENT TYPES OF PLANT MOVEMENTS PHOTORESPIRATION	23
AUGUST	HOW DO ORGANISM REPRODUCE?	GOOGLE CLASSROOM LECTURE METHOD BOARD MARKER METHOD PPT PRESENTATION	THE STUDENT S WILL BE ABLE TO EXPRESS-WHAT IS THE DIFFERENT TYPES OF REPRODUCTION WHAT HAPPEN IF THE EGG IS NOT FERTILIZED? SEXUAL REPRODUCTION	20
		ART INTEGRATED PROJECT AND MID TERM		
SEPTEMBE	HEREDITY AND EVOLUTION	GOOGLE CLASSROOM LECTURE METHOD PPT PRESENTATION BOARD MARKER METHOD LECTURE METHOD	STUDENTS WILL BE ABLE TO ANSWER- WHY MENDEL CHOSEN PEA PLANT? HOW EVOLUTION OCCUR? WHAT IS THE IMPORTANCE OF VARIATION DIFFERENT THEORIES ON EVOLUTION HOW FOOD CHAIN MAINTAINED ENVIRONMENT?	20
OCTOBER	OUR ENVIRONMENT	PPT PRESENTATION BOARD MARKER METHOD	WHY DECOMPOSERS ARE VERY IMPORTANT IN ENVIRONMENT?	

NOVEMBEI	MANAGEMENT OF NATURAL RESOURSES	PPT PRESENTATION BOARD MARKER METHOD GOOGLE CLASSROOM	STUDENTS WILL BE ABLE TO EXPLAIN WHY CONSERVATION OF NATURAL RESOURSES IS NECESSARY? WHAT IS SUSTAINABLE DEVELOPMENT	

DECEMBER	REVISION AND PRE BOARD 1

JANUARY	REVISION AND PRE BOARD 3

Class X, Social Science, Session 2021-22, Annual Pedagogical plan

Month	Topic	Method/Activity	Learning Outcome	Working Days
April	Political Science-Power Sharing	Through flowchart, map of Belgium & SriLanka, explanation through relevant examples. Taking feedback of students	Will learn the meaning of power sharing'. power sharing among legislature,executive and judiciary, need for power sharing,various forms of power sharing	7 days
	Economics - Development	Explanation through examples,case studies,thought provoking questions,activities: like debate. Take feedback of students	Students will understand that people have different perspectives of development	7 days
June	History – Nationalism in India	Explanation based on student past experience,for facts images from movie Gandhi,small video from movie Gandhi	Will learn what is satyagraha.why non-cooperation,different starnds , how different communities saw civil disobedience movt. sense of collective belongingness	10 days
	Political science -Federalism	Through questions based on past experience, explanation through examples, through tables .through questions	Vertical division of power sharing is the major form of power sharing in modern times	7 days
July	Geography – Resource and Development	Activity , for classification of resources ,flowchart, activity to find distinction among different types of resources ,images of different resources, through thought provoking questions will conclude how resources are very important.	Students will easily identify different resources, classify them, can segregate and find resemblance. will know the imp of resources and sustainability of resources	10 days
	Economics-Sectors of Economy	Elaborating the ideas, also students can be familiarized with concepts like Gross domestic product,	Students will understand the sectoral classification and will learn to relate them to their daily life	10 days

		Employment etc Taking feedback through questions		
August	Geography-Agriculture	Explanation through flowchart the types of farming,map pointing,images of different types of crops,non food crops,solving the puzzle	Students will know the types of farmimg, where practiced, cropping pattern,Reforms introduced by the Govt	12 days
	Mineral Resource	Explanation and elaboration of the features and characteristics of minerals and non metals through interdisciplinary subject{science} based on past experience	Will know the study of minerals by Geographers and Geologists.conservation of minerals and Energy resources.	12 days
	Economics – Money and Credit	Explanation of how different forms of money were used at different times ,how modern forms of money linked to banking system	Students will learn how new forms of money are spreading with computerization.	10 days
September	Political science- Gender religion , caste	Will look 3 kinds of social differences based on gender , caste and religion	Students will understand whether the different expressions are healthy or otherwise in a democracy	7 days
	History – The age of industrialisation	Explanation and elaboration will focus on developments that can be seen as symbolizing modernity	Students will understand about globalisation, industrialization, urbanization.	12 days
October	Geography-Manufacturing Industries	Stimulating awareness by asking questions already know,through debate , how it contributes to national economy.thought stimulating questions ; what factors may be required for the location of any industry	Will learn meaning and classification of industries, also will learn how to make sustainable development and to reduce pollution	12 days
	Political science-	Elaborate explanation of the nature and	Will learn the need of political parties,how many	12 days

	political parties	working of different political parties, activity on different symbols of parties,activities on slogans of different political parties	political partie needed,national parties and State parties	
November	History- Print Culture	Will explain to make realize how print developed earlier and modern period is unimaginable without print	Will learn about first printed books,how print comes to Europe ,India and the world of print	15 days
	Geography- Lifelines of Indian Economy	Flow chart on means of transport,map pointing,images of border roads,questions on previous learning, feedback questions	Will learn about roadways, waterways , air ways, location of sea ports and airports	7 days
December	Political Science- Outcomes of Democracy	By asking reasonable questions ,proceed to see actual outcomes of democracy through feedback questions	Will understand accountable, responsive, legitimate govt	7 days
	Economics – Globalisation and the Indian Economy	Thought stimulating questions,activity on different brands, different logos of goods, different Mncs.	Will understand Globalisation ,integration of markets,Liberalisation,Impact of Globalisation on India	12 days
January	History – Nationalism in Europe	Questions from General to specific ; based on How did the modern nation come into being .How did people begin to see themselves as one nation	Students will understand age of revolutions, Making of Germany and Italy ,Nationalism and Imperialism.	12 days

वार्षिक- शिक्षा-शास्त्र योजना 2021-2022
विषय- हिन्दी
कक्षा- दसवीं

माह	पाठसंख्यावपाठ का नाम	वधा	भाषाई कौशल व धयां	सीखने के परिणाम व जीवन मूल्य	कार्य दिवस
अप्रैल/मई 2021	पाठ1 - पद सूरदास पाठ1 - नेताजी का चश्मा पाठ2- बालगोबिन भगत व्याकरण -वाक्य भेद रचना के आधार पर, अनुच्छेद व पत्र लेखन।	काव्य कहानी रेखा चत्र	शुद्ध उच्चारण के साथ सस्वर वाचन, शब्दार्थ बताना, अभ्यास कार्य कराना। व्याख्यान कौशल, सरलता से कठिनता की ओर। भाषा की शुद्धता का ज्ञान कराना गद्यांश व काव्यांश से मध्यांतर मौ खक प्रश्न पूछना वाक्य की परिभाषा और रचना के आधार पर भेद बताना, अनुच्छेद लेखन व पत्र तथा पत्र के प्रकारके चरणबद्ध तरीके समझाना।	गो पयों का कृष्ण के प्रति प्रेम और वरह वेदना समझना उद्धव के ज्ञान योग को समझना। देशभक्तों का सम्मान तथा देशभक्ति की भावना जागृत करना। कल्पना शक्ति व सृजन क्षमता का वकास करना कौतूहल व जिज्ञासा का वकास करना। नए वाक्यकी रचना की उत्सुकता।	13/13
जून 2021	पाठ 2-राम लक्ष्मण परशुराम संवाद व्याकरण- पद परिचय संदेश लेखन	काव्य	शुद्ध उच्चारण के साथ काव्य का सस्वर वाचन कराना। कठिन शब्दों के अर्थ बताना अभ्यास कार्य करवाना। काव्यांश से मध्यांतर प्रश्न पूछ कर छात्रों का मूल्यांकन करना। कम शब्दों में संदेश लखना समझाना।	रामचरितमानस से सीता स्वयंवर प्रसंग समझाना। राम से वनम्रता का धैर्य का गुण सीखना। छंद,लय, तुकऔर अलंकार को समझना। छात्रों में भाव जगत का वस्तार करना। पद के व्याकर णकपरिचय को कम से समझना। लेखन कौशल का वकास रचनात्मकता के साथ।	15

वार्षिक- शिक्षा-शास्त्र योजना 2021-2022
विषय- हिन्दी
कक्षा- दसवीं

जुलाई **2021**	पाठ 3-लखनवी अंदाज पाठ 5- उत्साह,अट नहीं रही है कृतिका- पाठ 1- माता का अंचल	व्यंग्य रचना काव्य उपन्यास अंश	पाठ के अलग-अलग अनुच्छेदों को शुद्ध उच्चारण के साथ आदर्श वाचन कराना। अभ्यास कार्य,कठिन शब्दों का अर्थ लखाना व मध्यांतर मौ खक प्रश्न पूछना। क वता का शुद्ध उच्चारण के साथ सस्वर वाचन। कठिन शब्दों के अर्थ लखाना। कृतिका के पाठ का आदर्श वाचन कराना। गद्यांश,काव्यांश से मध्यांतर प्रश्न पूछना। आव धक परीक्षा प्रथम	कल्पना शक्ति का वकास, भा षक कुशलता एवं चंतन क्षमता का वकास, सांकेतिक भाषा समझने की शक्ति का वकास। हिंदी की समृद्ध लोक संस्कृतिका वकास, ग्रामीण अंचल की सहजता, माता-पता के स्नेह, बच्चों के खेल,लोक गीत आदि को समझना।	**26**
अगस्त **2021**	पाठ 4- मानवीय करुणा की दिव्य चमक व्याकरण वाक्य और रस अपठित गद्यांश, काव्यांश	संस्मरण	पाठ का शुद्ध उच्चारण के साथ आदर्श वाचन। कठिन शब्दों के अर्थ समझाना, रचना और अ भव्यक्ति, मध्यांतर प्रश्नों से छात्रों का मूल्यांकन करना। वाच्य की परिभाषा, प्रकार, वाच्य परिवर्तन समझाना। रस की परिभाषा, प्रकार और उदाहरण समझाना। अपठित बोध हल करना समझाना।	स्मृतियों से बनने वाले संस्मरण के महत्व को समझना। फादर बुल्के का योगदान समझते हुए मानवीय करुणा जैसे गुण को समझना। अर्थ ग्रहण करने की योग्यता का वकास करना। स्मृति क्षमता का वकास करना। ता र्कक शक्ति का वकास करना।	**23**

वार्षिक- शिक्षा-शास्त्र योजना 2021-2022
विषय- हिन्दी
कक्षा- दसवीं

सतंबर **2021**	पाठ**6-** यह दंतुरित मुस्कान, फसल कृतिका पाठ 2- जॉर्ज पंचम की नाक वज्ञापन लेखन	काव्य कहानी	शुद्ध उच्चारण के साथ क वता का सस्वर वाचन।कठिन शब्दों का अर्थ समझाना। रचना और अ भव्यक्ति के साथ मध्यांतर मौ खक प्रश्नपूछना। कृतिका के पाठ का आदर्श वाचन कराना। व्याख्यान कौशल से पाठ को समझाना मध्यांतर प्रश्न पूछना। वज्ञापन बनाने के प्रारूप को समझना वसी मत शब्दों में वज्ञापन को आकर्षक बनाने की कला को समझना। <u>आव धकपरीक्षा द् वतीय</u>	छोटे बच्चे की मनोहारी मुस्कान के प्रभाव को समझना, सुंदरता व कोमलता के भावों को समझना, मुस्कान में छिपे जीवन संदेश को समझना कृ ष संस्कृति को समझना सत्ता से जुड़े लोगों की गुलाम मान सकता व वदेशी आकर्षण को समझना। रचनात्मकता व कल्पना शक्ति का वकास।	**24**
अक्टूबर **2021**	पाठ 5- एक कहानी यह भी पाठ7-छाया मत छूना व्याकरण- वाक्य भेद संदेश लेखन	आत्मकथ्य काव्य	पाठ के अलग-अलग अनुच्छेदों का शुद्ध उच्चारण के साथ आदर्श वाचन। अभ्यास कार्य,कठिन शब्दों के अर्थ लखाना। काव्यकासस्वर शब्द वाचन। कठिन शब्दों के अर्थ, रचना और अ भव्यक्ति।गद्यव काव्य से मध्यांतर प्रश्न पूछना छात्रों का मूल्यांकन करना। वाक्य भेद समझाते हुए वाक्य परिवर्तन समझाना, आ श्रत उपवाक्य भी समझाना। संदेश लेखन की वशेषताएं समझाते हुए उ चत प्रारूप में लखना सखाना।	हिंदी साहित्य की वधाओं का ज्ञान। आत्मकथा शैली का ज्ञान। कशोर जीवन में मन पर पड़ने वाले भावों को समझना। आजादी के लए उत्साह, ओज व संगठन क्षमता के तरीके समझना। अतीत की स्मृतियों को भूल वर्तमान में जीना सीखना, भ वष्य को वरण करना। काव्य सौंदर्य बोध का वकास। सृजन शक्ति का वकास। सं क्षप्त व	**23**

वार्षिक- शिक्षा-शास्त्र योजना 2021-2022
विषय- हिन्दी
कक्षा- दसवीं

				तथ्यपरक लेखन क्षमता का वकास।	
नवंबर **2021**	पाठ7-नौबत खाने में इबादत कृतिका पाठ 3-साना साना हाथ जोड़ि	व्यक्ति- चत्र यात्रा- वर्णन	शुद्ध उच्चारण के साथ आदर्श वाचन। व्याख्यान कौशल के साथ शब्दार्थ लखाना, रचना और अ भव्यक्ति, भाषा अध्ययन के साथ-साथ मध्यांतर मौ खक प्रश्न पूछना, छात्रों का मूल्यांकन करना। यात्रा वर्णन को सरलता से कठिनताकी ओर ले जाते हुए समझाना, हिमालय के पल-पल बदलते सौंदर्य, दुर्गम रास्तों के निर्माण, जलवायु, वहां की संस्कृति को समझाते हुए मध्यांतर प्रश्न पूछना।	पाठ की मूल वशेषता को समझना लक्ष्य को पाने के लए साधना, लगन,रु च आदि गुणों का वकास। भाषा शैली को समझना, शुद्ध भाषा का ज्ञान,मात्राओं का ज्ञान होना। यात्रा के अनुभवों को शब्दबद्ध करना सीखना, भन्न-भन्न भाषा व संस्कृति का ज्ञान होना। उत्सुकता, आश्चर्य के भाव जागना।	**20**
दिसंबर **2021**	पाठ 8- कन्यादान पाठ 9-संगतकार व्याकरण- वाच्य अनुच्छेद एवं पत्र लेखन	काव्य काव्य	काव्यका शुद्ध उच्चारण के साथ सस्वर वाचन।अभ्यास कार्य और कठिन शब्दों के अर्थ लखाना,रचना और अ भव्यक्ति पाठेतरस क्रयता के साथ-साथ मध्यांतर मौ खक प्रश्न पूछ कर छात्रों का मूल्यांकन करना। वाच्य, भेद सहित समझाकर वाच्य परिवर्तन समझाना। कसी वषय पर संक्षेप में वचार व्यक्त कर अनुच्छेद लेखन समझाना। पत्र लेखन के सभी चरणों	क वता के कथ्य को समझना। मां द्वारा बेटी को दी जाने वाली शक्षा को समझना। स्त्रीजीवन की कठिनाई को समझना,समाज में स्त्रियों के लए की गई व्यवस्था को समझना। समाज व इतिहास केअनेक सफल नायकों के साथ देने वाले संगतकारों का महत्व समझना। कल्पना शक्ति,	**26**

वार्षिक- शिक्षा-शास्त्र योजना 2021-2022
विषय- हिन्दी
कक्षा- दसवीं

			को क्रमबद्ध तरीके से समझाना। पाठ्यक्रम समाप्त आव धक परीक्षा तृतीय	सृजन क्षमता और लेखन क्षमता का वकासकरना।	
जनवरी **2022**	संपूर्ण पाठ्यक्रम		संपूर्ण पाठ्यक्रम की पुनरावृति ल खत एवं मौ खक प्रश्न कराते हुए करवाई जाएगी। प्री बोर्ड परीक्षा		
फ़रवरी **2022**	संपूर्ण पाठ्यक्रम		वा षक परीक्षा के लए संपूर्ण पाठ्यक्रम की पुनरावृ त्त कराते हुए तैयारी कराई जाएगी।		

ANNUAL PEDAGOGICAL PLAN – CLASS X **SUBJECT : SANSKRIT**

MONTH	TOPIC	METHODOLOGY/ ACITIVITIES	LEARNING OUTCOMES	WORKING DAYS
अप्रैल	प्रथमः पाठः- शुचिपर्यावलणम् । व्याकरण- प्रत्यय ।	पर्यावरणम् कृते जनजागरणम्। वृक्षारोपणम् कार्य महत्तवम्। प्रत्यय महत्वम्एवम् भेद ज्ञानम् ।	पर्यावरणम् कृते प्रेम प्रदूषण निवारणार्थ, संरक्षणार्थक कार्य। प्रत्यय संयोगे शब्द रचनाअभ्यासः तदभव , तत्सम शब्दानाम् परिचयः।	
मई	द्वितीयः पाठः- बुद्धि बलवतीसदा । व्याकरण - उपसर्ग ।	स्त्री बुद्धि कौशलःमहत्वः, कथा सार अभ्यासः ।	उपसर्गप्रयोगे शब्द रचनाअभ्यासः शुकसप्ततिः कथा सार ।	
जून	तृतीयः पाठः- व्यायामः सदा पथ्य। । व्याकरण- संधि, धातुरुप, शब्दरचना ।	वर्तमान समये व्यायामः ,योगाः महत्वम्। शल्यचिकित्सा याः प्राधान्यः अस्ति । शरीर माधम् खलु धर्मसाधनम् ।	गद्यांश संधि महत्वम् । स्वर व्यंजन वण ज्ञानम् । धातुरुपाणि शब्द रुपाणि अभ्यासः ।	
जुलाई	चतुर्थः पाठः- शिशु लालनम् । पंचमः पाठः- जननी तुल्य वत्सला PT - 1	सस्वर लव कुश कथा वाचन। पितृ प्रेमः जीवनै अति आवश्यकः। मानवीय मूल्यः पराकाष्ठा। जीवने संतति प्रति समानप्रेमः एवम् निरबलः संतति प्रति। श अतिश्य प्रेम ।	रामायण कथा ज्ञानम् । गौ मातृत्व चर्चा । गोमाता सुरभि इन्द् संवाद अभ्यासः। संवाद कला अभिनय ज्ञानम् ।	
अगस्त	षष्ठःपाठः- सुभाषितानि । सप्तमः पाठः- सौहार्द प्रकृतेः शोभा । व्याकरण- वाच्य ।	श्लोक वाचन अभ्यासः । मननात् त्रायते इति मंत्रः अर्थः।	वाचन कौशल अभ्यासः । उद्धमस्य महत्तवम् ।	

		सौहार्दपूर्ण जीवने महत्वम्। प्रकृतिसुरक्षा, वन्य जीव प्रति स्नेहः, प्रकृति सौदर्यीकरण कृते कार्यः।	श्लोक अन्वयः अभ्यासः । नाट्य कला अभ्यासः प्रकृति दर्शनम् ।	
सितम्बर	परीक्षा, PT-2 पुनरावृत्ति ।	परीक्षा ।	परीक्षा कार्यः ।	
अक्टूबर	अष्टमः पाठः- विचित्रः साक्षी । नवमः पाठः- सूक्तयः । दशमः पाठः- भूकम्प विभीषिका।	न्यायो भवति प्रमाणाधीनः। सव सत्य ज्ञात्वा साक्ष्य प्रतुतवान् । असंभव कार्याणि अपि सरलतया कुवन्ति। सदाचारः, विद्याधनम्, मधुरावाकः, विद्वासः जीवने महत्वम् । प्राकृतिक आपदा ज्ञानम् सुरक्षा एवम् उपायः।।	साहित्यकार बंकिमचन्द्र चटर्जी जीवन परिचयः । सत्यखसत निर्णय हेतु साक्ष्य महत्वपूर्णः । न्यायालयः निर्णयः सवॉमान्य ।	
नवम्बर	एकादशः पाठः- प्राणेभ्यो अपि प्रिय सुहृदय । दादशः पाठः- अन्योक्तः । व्याकरण- समास ।	परोपकारःश्रेष्ठ धर्मः । ऐतिहासिक पात्र परिचयः। कवि परिचयः। प्रशंसा निंदा माध्मेन जीवने संदेशः।	सस्वर वाचन कौशल । पर्यावरण संतुलन कृते प्रयासः । आपदा काले सहयोग कृते तत्परः।	
दिसम्बर	पत्र लेखनम्, चित्र से वाक्य रचना, वाक्य संशोधन, अपठित अंश का अभ्यास । PT-3	ऋषिकुल परम्परयांज्ञान प्राप्तेः। परिप्रश्न एकम्अन्यतम् साधनम् शिक्षा मार्गे।	चाणक्य विद्वता परिचयः । वाचन कौशल विकासः राजहंस, कोकिलः, मेध, मालाकार, सरोवरः, चातकेन, माध्मेन	

			सत्कर्म कृते संदेशः। ।	
जनवरी **2022**	पुनरावृत्ति/ प्री-बोर्ड परीक्षा ।।	व्याकरणम् कौशलः अभ्यासः ।	व्याकरणम्- कौशलः अभ्यासः	
फरवरी	पुनरावृति, परीक्षा,			