

Learning Outcomes - Class 9

LEARNING OUTCOME PROTOCOL ST. COLUMBA'S (MIDDLE SECTION)

Grade Specific and Subject Specific Learning Outcomes are framed, for the entire academic year. The same is disseminated to the stakeholders through the school website, in addition to hard copies being given. While framing Learning Outcomes, the focus is always on core competencies that the child will develop while undertaking the said course. The attempt is to integrate different levels of thinking skills within a set of Learning Outcomes. The stress is on framing Learning Outcomes that are SMART- Specific, Measureable, Achievable, Realistic and Time bound.

The annual Learning Outcomes are further broken down into monthly documents, disseminated amongst teachers with grade, subject, and topic references.

Teachers then write Weekly Lesson Plans, where Learning Outcomes Specific to the chapter being taught are penned down. This not only is a grade specific and subject specific exercise but, here the individual texture of each class takes centre stage, with the teacher aiming to incorporate multiple intelligence levels and aiming for an inclusive class. The topics to be taught in the upcoming week are the focal point at this stage.

Finally , before the commencement of each class, the learning outcomes are clearly spelt out to the students by each teacher. While in the on-site classes, this was done using the boards, in the current online scenario, this is done using slides in PPTs.

	Month	Chapter	Learning Outcomes The learners will be able to:
Engl ish	April	1.-The Fun They Had 2.The Road Not Taken(poem) 3.The Lost Child 4.Descriptive Paragraph 5. Tenses 6.Reading Comprehension	1. read the lesson confidently, expand the vocabulary, analyse characters and situations, infer the theme, compare the present education system with that of 2051, enumerate the benefits of attending a regular school and critically analyse the pitfalls of increasing computerisation in education 2. recite the poem using correct pronunciation & intonation, enrich the vocabulary, identify the poetic devices, infer the theme and analyse the road as a symbol for our choices. 3. read, recall and narrate the story, expand their vocabulary, analyse the theme of the close bond that the children share with their parents. 4. compose an effective and coherent descriptive paragraph describing a person ,using suitable adjectives(to create a vivid word picture) and correct grammatical structure. 5. identify the verb and the tense in a sentence and use grammatically correct verb forms.. 6. comprehend the given passage, analyse the text, infer the theme/ideas, interpret the topic, expand their vocabulary and develop an understanding of different text genres.
	May	1.The Sound of Music (I & II)	1.read the lesson confidently, recall and narrate the story,expand their vocabulary,compare and contrast the struggle and achievements of Evelyne Glennie and Bismillah Khan ,extrapolate beyond the text and analyse how determination, perseverance and persistent effort can lead to success.

		2.Wind(poem) 3.The Adventures of Toto 4.Modals 5.Informal Letter Writing	2.read the poem confidently,identify the central idea of the poem, identify the poetic device and analyse how physical and mental strength enables one to face all challenges. 3.read, recall and narrate the story,expand their vocabulary, analyse the characters and the situations and infer the central idea of the story. 4.define modals, enumerate the commonly used modals, differentiate between modals used for possibility, obligation,and necessity and use appropriate modals in sentences. 5.write a coherent informal letter in the desired format,including all relevant details using grammatically correct sentence structures.
	July	1.-The Little Girl 2.Rain on the Roof (poem) 3. A Truly Beautiful Mind 4.In The Kingdom of Fools 5.-Diary Entry	1.read the lesson confidently, recall and narrate the story, infer the thoughts and emotions of Kezia, her father and her grandmother, expand the vocabulary and analyse how it is essential to empathise and know a person for a healthy relationship. 2.read the poem confidently, identify the central idea of the poem, identify the poetic devices, enrich the vocabulary and analyse the healing power of rain. 3.read the lesson confidently, recall and narrate the story, write a character sketch of Albert Einstein, critically examine Einstein's decisions regarding his school, life partner and world peace, expand the vocabulary and analyse the beauty of a mind that is always teeming with new ideas. 4.read, recall and narrate the story, expand their vocabulary, infer the thoughts and emotions of the characters, analyse the plot and the situations and express the dangers posed by foolish people. 5.explain the purpose of writing a diary and write a diary entry in the desired format, using a variety of accurate sentence structures within the prescribed word limit.
	August	1.-A Legend of Northland 2.-The Happy Prince 3.Story Writing 4.Reported speech 5.Reading Comprehension	1.read the poem confidently, infer the central idea of the poem, identify the poetic devices, expand the vocabulary and analyse the importance of charity, generosity and kindness that bring infinite blessings. 2.read, recall and narrate the story, expand the vocabulary, analyse the plot and situations, infer the thoughts and emotions of the characters, analyse the theme of sacrifice and judging on appearance and draw contextual connections with the theme. 3.explain the characteristics of an effective short story and create a short narrative story with an engaging plot and well defined characters , develop a coherent content using appropriate expressions and a variety of accurate grammatical structures. 4.recognise the difference between direct and indirect speech and form grammatically correct statements using reported speech 5.comprehend the given passage, analyse the text, infer the theme/ideas, interpret the topic, expand their vocabulary and develop an understanding of different text genres.

September	1.My Childhood 2.No Men Are Foreign(poem) 3.-Determiners 4.Reading Comprehension	1.read the lesson confidently, expand their vocabulary,analyse characters and situations,compare the future schools with the present ones, enumerate the benefits of attending a regular school,analyse the moral value. 2.read the poem confidently,identify the central idea of the poem, identify the poetic devices, enrich the vocabulary and analyse the theme of oneness of mankind underneath the superficial differences of colour,race,nationality,religion etc. 3.define determiners, identify determiners in a sentence, explain the purpose and function of the determiners and use them accurately in sentences. 4.comprehend the given passage, analyse the text, infer the theme/ideas, interpret the topic, expand their vocabulary and develop an understanding of different text genres.
October	1.Packing 2.Weathering the Storm at Ersama 3.Prepositions 4.Comprehension	1.read the lesson confidently, expand their vocabulary,analyse characters and situations,expand academic vocabulary,infer the theme and connect it to real life situations 2.read, recall and narrate the story, expand the vocabulary,analyse characters and situations,infer the thoughts and emotions of the characters, analyse the theme of courage, fortitude and presence of mind to tide over the trials and tribulations of life. 3.distinguish between prepositions of time and place from the other prepositions and use suitable prepositions and prepositional phrases in a sentence. 4.comprehend the given passage, analyse the text, infer the theme/ideas, interpret the topic, expand their vocabulary and develop an understanding of different text genres.
November	1.Reach for the Top(I & II) 2.On Killing a Tree(poem) 3.-The Last Leaf 4.Descriptive Paragraph-people 5. Active Passive 6.Reading Comprehension	1.read the lesson confidently, recall and narrate the story,expand their vocabulary,analyse characters and situations,compare and contrast the challenges and achievements of Santosh Yadav and Maria Sharapova and analyse how great heights can be achieved with determination, perseverance and persistent effort. 2.read the poem confidently,identify the central idea of the poem, identify the poetic devices, expand the vocabulary, explain the consequences of killing a tree and analyse the urgency to conserve our planet. 3.read, recall and narrate the story, expand the vocabulary,analyse the plot and situations,infer the thoughts and emotions of the characters, analyse the theme of selflessness and sacrifice.. 4.compose an effective and coherent descriptive paragraph describing a person ,using suitable adjectives(to create a vivid word picture) and correct grammatical structures. 5.differentiate between active and passive voice, identify the voice of the verb in a sentence and write sentences using passive voice 6.comprehend the given passage, analyse the text, infer the theme/ideas, interpret the topic, expand their vocabulary and develop an understanding of different text genres.

	Decem ber	1-The Bond of Love 2.The Snake Trying 3.A House is Not a Home 4.-Diary Entry (practice) 5.Grammar MCQ's(practice) 6.Reading Comprehensio n	1.read the lesson confidently, recall and narrate the story,expand the vocabulary,analyse characters and situations and analyse the bond of love and affection between human beings and animals. 2.read, recall and narrate the story, expand their vocabulary,analyse the plot and situations,infer the thoughts and emotions of the characters, analyse the theme of kindness towards animals. 3.read, recall and narrate the story, expand their vocabulary,analyse the plot and situations,infer the thoughts and emotions of the characters, identify and analyse the theme of adjusting in a new environment and how love and support of friends and family enables one to sail through difficult times. 4.explain the purpose of writing a diary, write a diary entry in the desired format, using a variety of accurate sentence structures within the prescribed word limit. 5.apply the rules of grammar to select the most appropriate option in order to achieve grammatically accurate sentences.. 6.comprehend the given passage, analyse the text, infer the theme/ideas, interpret the topic, expand their vocabulary and develop an understanding of different text genres.
	Januar y	1.If I Were You 2.The Beggar 3.Story Writing(practic e) 4.Grammar MCQ's-prcatice 5.Reading Comprehensio n	1.dramatise the play, recall and narrate the story,expand their vocabulary,analyse characters and situations and analyse how tactful planning , intelligence and presence of mind can help one overcome the gravest situation. 2.read, recall and narrate the story, expand their vocabulary,analyse the plot and situations,infer the thoughts and emotions of the characters, analyse how kindness and compassion can bring about reformation. 3.create a short narrative story with an engaging plot and well defined characters to, develop a coherent content using appropriate expressions and a variety of accurate grammatical structures. 4.apply the rules of grammar to select the most appropriate option to achieve grammatically accurate sentences. 5.comprehend the given passage, analyse the text, infer the theme/ideas, interpret the topic, expand their vocabulary and develop an understanding of different text genres.
	Februa ry		REVISION

Hind i	Month	Chapter	Learning Outcomes The learners will be able to:
	April	1.खुशबूरचते हैं हाथ , नए इलाके में 2.तुम कब जा ओगे अतिथी 3 .वर्ण 4 शब्द भंडार	नव निर्माण के कारण होनेवाली कठिनाइयों को समझेंगे। अगरबत्ती बनाने वालों की विडंबना समझेंगे। sdg -10 , 11 ,12 की जानका रीहोगी छात्र साहित्य की व्यंग्य विधा से परिचित होंगे एक अच्छे अतिथि की जिम्मेदारी जानेंगे। भाषा का विकास होगा। व्यवहारिकता में भाषा शब्द प्रयोग सीख पायेंगे। शब्द भंडार का विकास होगा।

			वर्णमाला शब्द संरचना का विकास
May	1.रहीम के दोहे 2.दुःख का अधिकार 3.उपसर्ग.-प्रत्यय 4 अपठित गद्यांश 5 .पत्र		भक्ति काल के साहित्य से परिचित होंगे। जीवन में करणीय और अकरणीय कार्य में अंतर जानेंगे। सामाजिक अंतर को समझेंगे। छात्र आरोह -अवरोह का ध्यान रख पठन की निपुणता प्राप्त करेंगे। भाषा का विकास होगा। व्यवहारिक कुशलता पायेंगे। शब्द संरचना का विकास होगा शब्द भंडार का विकास होगा। रचनात्मकता , कल्पना शीलता का विकास होगा। बौद्धिक क्षमता का विकास होगा। हिन्दी के व्यावहारिक और व्यवसायिक रूप से परिचित होंगे। निपुणता प्राप्त करें
July	1.धूल 2.गिल्लू 3.स्मृति 4.संदेश लेखन 5.अर्थ के अनुसार वाक्य के भेद		छात्र निराशा से लड़ना सीखेंगे। जीवन के लक्ष्य को प्राप्त करने के लिए किस प्रकार आगे बढ़े यह सीखेंगे। हरिवंशराय बच्चन के साहित्य से परिचित होंगे। वे उसे समझने समर्थ होंगे। कला समिक पठन कौशल सीखेंगे कविता पाठ करने सीखेंगे। अनुच्छेद लेखन की कला में सक्षम होंगे। स्वयं किसी व्यक्ति के बारे में सफल होंगे प्रमुख आलोचक रामविलास वर्मा के बारे में जानेंगे। जीवन की वास्तविकता से परिचित होंगे। छात्रों का भाषिक व बौद्धिक ज्ञान वर्धन होगा। पाठ -पठन द्वारा शुद्ध उच्चारण और आरोह -अवरोह का ज्ञान बढ़ेगा। देश प्रेम की भावना का विकास होगा। मुहावरों का ज्ञान बढ़ेगा। SDG -15 ,13 का ज्ञान होगा। कला समेकित पाठ पठन की कला सीखेंगे। गोधूलि का चित्र देख उसका वर्णन करना सीखेंगे। अनुच्छेद को समझकर प्रश्नों के उत्तर देने में सक्षम होगा। भाषा सम्बन्धित नियम से परिचित होंगे। वाक्य संरचना समझेंगे। व्याकरण का उचित ज्ञान होगा। अर्थ के अनुसार वाक्य के भेद सीखेंगे। पशु के प्रति सवेदनशील दृष्टीकोण बढ़ेगा। छात्र जानेंगे कि पशुओं में भी कोमल भावनाएँ होती हैं।

		छात्र बालसुलभ शरारतों से परिचित होंगे। भाषा की व्यवसायिक आवश्यकता का ज्ञान होगा छात्र गागर में सागर भरने की कला में निपुणता प्राप्त करेंगे।
August	एवरेस्ट मेरी शिखर यात्रा विज्ञापन संवाद अनौपचारिक पत्र संवाद उपसर्ग प्रत्यय अनुस्वार , अनुनासिक	छात्र महिला शक्ति से परिचित होंगे वे जानेंगे की मनुष्य धैर्य सहयोग और एकता से हर कठिनाई पर विजयप्राप्त कर सकता है। छात्रों का मानसिक व बौद्धिक विकास होगा। छात्र आरोह -अवरोह का ध्यान रख पठन की निपुणता प्राप्त करेंगे रचनात्मकता , कल्पना शीलता का विकास हो स हो बौद्धिक क्षमता का विकास होगा। हिन्दी के व्यावहारिक और व्यावसायिक रूप से परिचित होंगे। निपुणता प्राप्त करेंगे भाषा का विकास होगा। व्यवहारिक कुशलता पायेंगे। शब्द भंडार का विकास होगा। वर्णमाला शब्द संरचना का विकास
September	रैदास धर्म की आड़	छात्रों का मानसिक व बौद्धिक विकास होगा। छात्र आरोह -अवरोह का ध्यान रख गद्य व पद्य पठन की निपुणता प्राप्त करेंगे साहित्य के भक्ति काल के काव्य साहित्य की जानकारी प्राप्त करेंगे। उन्हें सगुण और निर्गुण भक्ति का ज्ञान प्राप्त होगा। काव्य शैली , अलंकार , काव्य सौंदर्य को सराहना सीखेंगे। धर्म का स्पष्ट रूप से अवगत होंगे। भारत में धर्म का वास्तविक रूप को समझेंगे। उनकी
October	एक फूल की चाह विज्ञापन संवाद अनौपचारिक पत्र संदेश लेखन	छात्र साहित्य की काव्य विधा से परिचित होंगे। उन्हें आधुनिक काल के काव्य साहित्य का परिचय मिलेगा। छुआ -छूत की समस्या व समाज में उसके द्वारा विसंगतियों से परिचित होंगे। समाज को एक नई दिशा देने में सक्षम होंगे। आज़ाद भारत के उदार दृष्टिकोण को समझेंगे। छात्र आरोह -अवरोह का ध्यान रख काव्य पठन की निपुणता प्राप्त करेंगे। छात्रों का मानसिक व बौद्धिक विकास रचनात्मकता , कल्पना शीलता का विकास हो स हो बौद्धिक क्षमता का विकास होगा। हिन्दी के व्यावहारिक और व्यावसायिक रूप से परिचित होंगे। निपुणता प्राप्त करेंगे
November	उपसर्ग ,प्रत्यय अनुस्वार , अनुनासिक विलोम ,पर्यायवाची अपठित गद्यांश	भाषा का विकास होगा। व्यवहारिक कुशलता पायेंगे। शब्द भंडार का विकास होगा। वर्णमाला शब्द संरचना का विकास हो

		संदेश लेखन	रचनात्मकता , कल्पना शीलता का विकास होगा। बौद्धिक क्षमता का विकास होगा। हिन्दी के व्यावहारिक और व्यवसायिक रूप से परिचित होंगे। निपुणता प्राप्त करेंगे
	December	अपठित गद्यांश संवाद नारालेखन शब्द -पद भिन्नार्थक वाक्य भेद	रचनात्मकता , कल्पना शीलता का विकास होगा। बौद्धिक क्षमता का विकास होगा। हिन्दी के व्यावहारिक और व्यवसायिक रूप से परिचित होंगे। निपुणता प्राप्त करेंगे भाषा का विकास होगा। व्यावहारिक कुशलता पायेंगे। शब्द भंडार का विकास होगा। वाक्य संरचना का ज्ञान होगा
	January	हामिद खां उपसर्ग -प्रत्यय अनौपचारिक पत्र अपठित लेखन नारा लेखन	छात्र आरोह -अवरोह का ध्यान रख पाठ पठन की निपुणता प्राप्त करेंगे। छात्रों का मानसिक व बौद्धिक विकास होगा। भारत की भौगोलिक सीमाओं के बारे में जानेंगे। व्यावहारिक भारत की सहिष्णुता वविवधता को समझ पायेंगे। भाषा का विकास होगा। व्यावहारिक कुशलता पायेंगे। शब्द भंडार का विकास होगा। रचनात्मकता , कल्पना शीलता का विकास होगा। बौद्धिक क्षमता का विकास होगा। हिन्दी के व्यावहारिक और व्यवसायिक रूप से परिचित होंगे। निपुणता प्राप्त करेंगे
	February	दिए जल उठे पुनः अभ्यास	भारत के गौरवशाली इतिहास से परिचित होंगे। संगठित हो कर आगे बढ़ना सीखेंगे। छात्र आरोह -अवरोह का ध्यान रख पाठ पठन की निपुणता प्राप्त करेंगे। छात्रों का मानसिक व बौद्धिक विकास होगा

Maths	Month	Chapter	Learning Outcomes The learners will be able to:
	April	1.Number system	- Recall the general form of a rational number - Differentiate rational and irrational numbers - Express real numbers in decimals and distinguish them into rational and irrational - Represent real numbers on the Number line. - simplify real numbers

		2.Euclid Geometry	● Rationalise the denominator ● Simplify real numbers using Laws of Exponents. ● Distinguish axioms and postulates ● Identify terms and definitions used by Euclid and how it helped the future mathematicians.
	May	1.Lines and Angles 2. Polynomials	● Recall the basic terms and definitions of geometry. ● Solve problems by applying suitable axioms such as linear pair,vertically opposite angles , etc. ● Find out the relation b/w the angles when pairs of parallel lines and a transversal intersect each other. ● Apply angle sum property of a triangle and exterior angle property to solve the given sums. ● Recall the terms such as variables/literals ,constants;etc ● Elicit degree of a polynomial, differentiate b/w algebraic expressions and polynomials ● Find the zeros of a polynomial ● Apply remainder theorem and factor theorem ● Use suitable identities to solve the given algebraic expressions.
	July	1.Heron's formula 2.Triangles	● Compute the area of given triangles by using formula.(equilateral/isosceles/scalene) ● Evaluate the areas of Quadrilaterals by applying Heron's formula. ● Recall the parts/elements of a triangle ● Elicit the correspondence of two given triangles. ● Apply suitable congruence condition to solve the sum by finding the matching parts ● Use isosceles triangle property and its converse to deduce the solution of the question. ● Comprehend the relation b/w unequal sides and unequal angles of a triangle : Inequalities in a triangle.
	August	1.Coordinate Geometry 2.Statistics	● Recall the terms origin, abscissa, ordinate ,etc. ● Plot points in the cartesian plane if its coordinates are given ● Identify the quadrant in which a given point lies by using the sign conventions. ● Elicit the terms such as primary data , class

		3. Quadrilaterals	interval, classmark , etc ● Represent the data in the form of a frequency distribution table ● Represent the data graphically: Bar graph, Histogram and frequency polygon ● Calculate the measures of central tendencies of ungrouped data ● Prove the sum of the angles of a quadrilateral is 360 degrees ● Apply various properties of parallelogram to solve the sums.
September	1.Quadrilaterals(contd...) 2. Revision		● Apply the midpoint theorem and its converse to deduce the problems.
October	1.Linear Equations in two variables 2.Circles		● Recall the meaning of the word linear ● Express a statement into a linear eqn in two variables. ● Find the solutions of a linear equation ● Read and represent linear equations in two variables. ● Comprehend the equations of lines parallel to the x-axis and y- axis. ● Recall the terms : interior, exterior, arc, semicircle; etc
November	1.Circles (contd...) 2. Constructions		● differentiate segment and sector of a circle ● Prove Equal chords of a circle subtend equal angles at the centre and its converse. ● Show that the perpendicular from the centre of a circle to a chord bisects the chord. ● Prove that Equal chords of a circle are equidistant from the centre. ● Prove the angle subtended by an arc at the centre is double the angle subtended by it at any point on the remaining part of the circle. ● Apply the property of a cyclic quadrilateral to solve the sums related to it. ● Use angle in a semicircle is right angle ● Recall the basic constructions ● Construct a triangle, given its base, base angle and sum of the other two sides. ● Construct a triangle, given its base, base angle and the difference of the other two sides. ● Construct a triangle, given its perimeter and its two base angles.
December	1.Areas of //gms and triangles		● Prove parallelograms on the same base and b/w the same parallels are equal in area.

			Explain the structure and function of the cell membrane. Distinguish between Hypotonic, Hypertonic & Isotonic solutions. Explain the structure and function of the cell wall. Explain that the Nucleus is considered as the brain of the cell. List and explain various parts of the nucleus. Define genes and chromosomes. Distinguish between prokaryotic & eukaryotic cells. Draw diagram of Prokaryotic & Eukaryotic Cell. Explain the structure and function of the Endoplasmic Reticulum. Distinguish between RER & SER. Explain the structure and function of Golgi Apparatus, Lysosomes, Mitochondria. Explain the structure and function of Plastids and its types. Explain the structure and function of Vacuoles. Define Cell Division. Distinguish between Meiosis and Mitosis.
	May	1.Tissue	Explain the significance of division of labour. Differentiate between the mode of living style of plants and animals. Define meristematic tissue. Explain the importance of meristematic tissue in the plant body. Tell the location of meristematic tissue in the plant body. Draw the location of meristematic tissue in the plant body. Define permanent tissue. Explain the importance of permanent tissue in the plant body. Tell the location of permanent tissue in the plant body. Draw the location of permanent tissue in the plant body. Explain the diversity in the epidermis layer. Define complex permanent tissue. Explain the importance of complex permanent tissue in the plant body. Tell the location of complex permanent tissue in the plant body. Draw the location of complex permanent tissue in the plant body. Tell different types of animal tissue. Explain epithelial tissue. Describe different types of epithelial tissue. Tell the location and function of different types of epithelial tissue. Draw diagrams of different types of epithelial tissue. Explain connective tissue. Describe different types of connective tissue Tell the location and function of different type of connective tissue Explain muscular tissue.

		Describe different types of muscular tissue. Tell the location and function of different types of muscular tissue. Draw diagrams of different types of muscular tissue. Explain nervous tissue. Draw diagrams of Neuron. Classify matter has pure and impure substances State examples of pure and impure substances Define an element Classify elements as metals and non metals. State examples of metals and non metals State physical properties of metals and non metals Learn few scientific terms such as malleability, ductility, sonority etc. Define compound and mixture Classify substances as pure/impure Distinguish between a mixture and a compound State examples of mixture and compound Classify mixtures as homogeneous and heterogeneous. Classify mixtures on basis of their particle size Study properties of solutions State examples of solution Study saturated, unsaturated and supersaturated solutions Observe the effect of temperature on these solutions Solve numerical based on mass by volume percentage of a solution. Define suspension. Tell the properties and examples of suspension. Define colloids. Tell the properties and examples of colloids.
July	1. Is Matter Around Us Pure? (Continued)	Explain the explain the process, principle and applications of different methods of separating of components of mixture 1. Separation of coloured components form blue/black ink. 2. Separation of two immiscible liquids. 3. Separation of cream from milk. 4. Separation of salt and ammonium chloride. 5. Separation of colours in black ink. 6. Separation of mixture of two miscible liquid. 7. Separation of different gases from air. 8. Separation of pure copper sulphate from impure sample. 9. Separation of impurities from water. Explain the importance of improvement of food resources Describe the dependence of humans on plants and

		2. Improvement in Food Resources animals. Differentiate between kharif and rabi crops. Explain various improved agricultural activities which includes crop variety improvement, crop production improvement, crop protection improvement. Differentiate between Micronutrients and macronutrients. List examples of micronutrients and macronutrients. Differentiate between manures and fertilizers. List examples of manures and fertilizers. Explain the importance of organic farming Describe Irrigation and various irrigation systems. Explain various Cropping Systems and patterns: Crop rotation, Mixed cropping, Inter-cropping Explain various method of protection of crop from pests, pathogens and weeds Describe the ways for Storing of grains. Explain Animal husbandry with respect to -Cattle farming -Poultry farming -Fish farming -Apiculture -Animal breeding Define Motion. Know about the objects in motion w.r.t Distance travelled and Displacement. Define Speed, Velocity and Acceleration Differentiate between Uniform and Non- uniform motion. State the examples of uniform and non-uniform motion.	
		3. Motion Define velocity.	

			Define average velocity. Derive the formula of Acceleration. Define acceleration. Describe positive, negative and zero acceleration
	August	1. Motion 2. Force and Law of Motion	Differentiate between Uniform Acceleration and Non-uniform Acceleration. Evaluate the value of velocity and acceleration. Interpret Motion through Graphs Evaluate acceleration through Velocity-time graph. Describe zero acceleration and non-uniform acceleration through Velocity-time graph. Evaluate the first of the three equations of Motion. Derive the equation graphically. Evaluate velocity, distance, time and acceleration using the three equations of motion. Describe Uniform Circular Motion. Define force. Differentiate between balanced and unbalanced force. Explain Newton's first law of motion. Explain the relation between inertia and mass. Explain Newton's second law of motion. Define momentum. Solve numerical based on momentum. Formulate second law of motion mathematically. Solve numericals based on the second law of motion.
	September	1. Force and Laws of Motion (continued)	Explain Newton's third law of motion. Relate all three laws of motions in their daily life. Justify conservation of momentum. Formulate conservation of momentum mathematically. Solve numerical based conservation of momentum.
	October	1. Gravitation	Define gravitation. Describe gravitation. Explain Universal Law of gravitation. Derive the formula of Universal Gravitation Constant 'G'. Solve numerical based on Universal Gravitation Constant. List the importance of the Universal Law of Gravitation. Explain free fall. Calculate the value of 'g'. Explain the concept of motion of an object under the

		2. Atoms and Molecules	influence of gravitation force of earth. Solve the numerical based on motion of an object under the influence of gravitation force of earth by using formulae. Define mass and weight. Differentiate between mass and weight. Calculate the weight of an object on moon. Define thrust and pressure. Justify the relation between thrust and pressure. Solve numericals based on pressure and thrust. Explain the pressure exerted by fluid. Define Buoyancy. Relate the concept of buoyancy in terms of floating and sinking. Explain Archimedes' Principle. List the applications of Archimedes' principle. Define Relative Density. Tell the formula to calculate relative density. Solve numericals based on relative density. Define law of conservation of mass. Justify the law of conservation of mass. Define the law of constant proportion. Justify the law of constant proportion. List the postulates of Daltons' Atomic Theory. Solve the numerical based on the law of conservation of mass. Describe atom. Explain the size of an atom. List the symbols of elements. Memorise the symbols used for the element. Define atomic mass unit (amu). Explain the significance of atomic mass unit. Describe molecule. Differentiate between molecule of element and molecule of compound. Define atomicity. Describe ions. Define polyatomic ions. List polyatomic ions, symbol and valency. List the name of ion, its symbol and valency. Memorise the name of ion, its symbol and valency. Write the chemical formulae of compounds.
	November	1. Atoms and Molecules (continued)	Conceptualize molecular mass and mole. Calculate the molecular mass of compounds. Calculate the formula unit mass of compounds. Define mole. Explain Avogadro constant. Solve numerical based on mole concept. Explain the diversity of living things.

		2.Diversity in Living Organisms	Describe the basis of classification. Relate classification and evolution. Explain the hierarchy of classification (Phylum/Class/Order/Family/Genus/Species) Classify living things into five kingdoms : Monera, Protista, Fungi, Plantae and Animalia. List the characteristics of the kingdoms. List the characteristics of some of the phylums of kingdom Plantae. (thallophyta, bryophyta, pteridophyta, gymnosperms and angiosperms) List the characteristics of some of the phylum of sub-kingdom Non chordate of Kingdom Animalia (Porifera,Cnidaria, Platyhemintthes,Nematoda, Annelida, Arthropoda, Mollusca, Echinodermata, Protochordata) List the characteristics of some of the phylum of sub-kingdom Chordata of Kingdom Animalia (Cyclostomata, Pisces, Amphibia, Reptilia, Aves, Mammalia) Tell the significance of Nomenclature. List convention while writing scientific names.
	December	1. Work and Energy	Define work in terms of science. Explain scientific conception of work. Derive the formula of work done by constant force. Solve numericals based on work, force and displacement. Describe energy. Tell the relation between work and energy. List different forms of energy. Describe Kinetic Energy. Derive the formula of Kinetic energy. Describe Potential Energy. Derive the formula of Potential Energy. Solve numerical based on Kinetic and Potential Energy. Justify the law of conservation of energy. Define Power. Tell the formula of power. Explain a larger unit of Power. Solve numerical based on Power. Describe the commercial unit of energy.
	January	1.Structure of Atom	Describe the structure of an atom. Tell the charge particles of an atom. Describe the charge and mass on sub-atomic particles of an atom. Explain Thomson Model of an atom.

		2.Sound Describe the Rutherford Model of an Atom. List the observation, inference and conclusion based on Rutherford Model of Atom. Explain the drawback of Rutherford Model of an atom. List the postulates of Bohr's Model of Atom. Explain the distribution of electrons in different orbits. Define valency. Explain valency. Memorise the valency of elements. Define atomic number and mass number. List the significance of atomic number and mass number. Define Isotopes and Isobars. Differentiate between isotopes and isobars. Tell the examples of isotopes and isobars. List the applications of Isotopes. Define sound. Explain the production of sound. Describe the propagation of sound. Justify that sound need of medium to travel. Explain sound waves as longitudinal waves. Differentiate between longitudinal and transverse waves. Define frequency, amplitude, time period, oscillation. Justify the relation between frequency and time period. Explain the characteristic of sound. Solve numericals based on frequency, wavelength and time period. Explain the reason for the speed of sound in different media. List the laws of reflection of sound. Explain echo. Define reverberation. Solve numerical based on echo. List the uses of multiple reflection of sound. Tell the range of hearing of sound for human beings. Differentiate between ultrasound and infrasonic sound. Tabulate various applications based on ultrasound. Describe SONAR. Explain the structure of human ear with the help of labelled diagram of ear.
	February	1. Natural Resources Explain about the classification, utilization and conservation of our resources. Describe the factors that deplete our environment. Describe air pollution, its causes and effects like acid rain, global warming, ozone layer depletion. Describe Water pollution and the different pollutants and the harmful effects Explain eutrophication. Explain biomagnification. Describe Soil pollution and the different causes, harmful effects

		2. Why do we fall ill?	Explain methods to prevent soil erosion. Describe different Biogeochemical cycles Illustrate carbon cycle, nitrogen cycle, oxygen cycle, water cycle. Tell the significance of Health. Define health. Differentiate between healthy and disease free. Tell about the pathogens that causes diseases. Explain about the basic conditions to maintain good health. Summarize balanced diet, personal hygiene, exercise and relaxation Judge the harmful effect of addictions to drugs. Tell the significance of a clean environment. Differentiate between - Acute and Chronic diseases. Explain the causes of spread of diseases. Explain organ specific and tissue specific manifestation. List the principles of prevention of diseases Explain the importance of balanced diet, immunisation, and personal hygiene.
--	--	--------------------------------------	---

SST	Month	Chapter	Learning Outcomes The learners will be able to:
	April	1 HIST-French Revolution 2. GEOG- INDIA SIZE & LOCATION ECO- The Story of Village Palampur	* Interpret the reasons for discontent among the members of the 3rd Estate * Appreciate the legacy of the Fr Rev * Interpret the importance of the location of India vis a vis trade routes * Analyze the importance of the Standard Meridian of India * Analyze the main factors of prod * Interpret the value of the Green Rev
	May	1 GEOG – Physical Features of India 2 ECO People as a Resource	* appreciate the diversity of India's landforms * understand the contribution of the landforms * interpret the significance of the human resource for a country's development * analyse the contribution of education and health to improving the quality of human resource
	July	1 GEOG-Drainage – map work 2 HIST Rise of Socialism and the Russian Revolution 3 POL SC- What is Democracy? Why Democracy	* understand the different river systems * understand the varied philosophies in Europe – radicalism, liberalism, socialism * interpret the reasons for the Bolsheviks coming to power * appreciate the legacy of the socialist revolution * interpret the merits and demerits of democracy * analyse why / how some countries though they claim to be a democracy are not following the basic

			tenets of democracy
August	1 POL SC- Constitutional Design 2 HIST- Nazism and the Rise of Hitler		*analyse the factors that contributed to the framing of the Indian Constitution *appreciate the values embedded in the Const. *interpret the reasons for the rise of Hitler and the contributing factors of the humiliation of the treaty of Versailles * analyze the Nazi philosophy
September	1ECO – Poverty as a Challenge 2GEOG - Natural Vegetation and Wildlife		* interpret the social indicators of poverty * analyze the calculation and importance of the poverty line * appreciate the PAP's * appreciate the variety of flora and fauna in India * understand the Govt efforts of conserve wildlife in India
October	1POL SC – Electoral Politics 2 POL SC - Working of Institutions		*understand the importance of elections in a democracy * interpret the importance of the Model Code of Conduct * analyze the challenges to free and fair elections in India * analyse the functioning and contribution of the institutions that make up the legislature executive and judiciary in India
November	1GEOG - Climate		* appreciate the variations in climatic conditions and the underlying factors affecting climate *appreciate how climate is a unifying bond in India
December	1. ECO - Food Security (Alt Aca Calendar)		● analyse the dimensions of food security ● interpret the working of food security systems in India ● appreciate the merits of PDS and generate awareness about the shortcomings of the system ● understand the importance of co operatives
January	1HIST – Pastoralists in the modern world(Alt Aca Calendar) 2GEOG- Population (Alt Aca Calendar)		* interpret the significance of pastoral life * understand the cyclical movement of pastoral groups and the interference of colonists * understand the demography of population * interpret the categories of working population and their contribution to the economy
February	1POL SC- Democratic Rights (Alt Academic Calendar-) Remedials		* interpret the importance of rights in a democracy * appreciate the widening scope of rights

Computer Science	Month	Chapter	Learning Outcomes The learners will be able to:
---------------------	-------	---------	--

	April	1. Python Revision	● List some key features of Python. ● Elaborate Python Compilation Process.
	May	1. Python Revision	● Identify the tokens ● Write a Python program using various tokens present in it. ● Identify the Modes of Programming available in Python
	July	1. Python Revision	● Write a Python program using various tokens present in it. ● Describe about Keywords and Literals in Python
	August	1. Internet Basics	● Define WWW and its terminology
	September	1. Internet Basics	● Explain WWW Terminology.
	October	1. Internet Basics	● Elaborate on WWW Terminology.
	November	1. Python Revision	● Identify basic Arithmetic operators in Python ● Develop Python programs with the use of Basic Arithmetic Operators
	December	1. Python Revision	● Identify all the Arithmetic operators in Python ● Develop Python programs with the use of all the Arithmetic Operators
	January	1. Python Revision	● Implement the programming skills in developing Python programs
	February	1. Python Revision 2. Internet Basics	● Recapitulate the concept of WWW and WWW Terminology ● Recapitulate the concepts of Python covered during the session.

Art	Month	Chapter	Learning Outcomes The learners will be able to:
	April	1.*Tradition Based 2-Folk Art 3- Block Painting 4- Rangoli	● The student will be able to explore Indian Folk art ● Learn to appreciate old Indian Art ● Enhance their knowledge of old Indian tradition and culture. ● Learn to use natural things for art. ● Learn the art of block printing ● Acquire knowledge of Indian floor art.
	May	1- Calligraphy 2-Collage Making	● Learn to write aesthetically. ● Enhance his knowledge of different fonts. ● Improve their handwriting. ● Improve their sketching.

		3-Doodle Art	
	July	1- Environment Based 2-Poster Making 3-Coaster making with waste material	● Be Aware of social problems by using making a poster. ● Learn the skill of poster designing ● Learn to use waste material aesthetically.
	August	1-Object Drawing 2-Pattern Design 3-Border Design 4-Submission of work done in First Term	● Enhance his observation skill. ● Improve their sketching ● Demonstrate refined observational skills ● Learn to draw creatively
	September	1-Paper Cutting 2-Mask Making	● Enhance his skills of papercraft ● Learn tribal art by making a mask. ● Create intricate designs ● Learn to use paper creatively.
	October	1- Diwali (Craft) 2- Dussehra	● The student will be able to enhance his knowledge of the Indian festival ● Learn to create art and craft related to the festival.
	November	1- Christmas Craft 2-Charcoal Shading	● The student will be able to enhance his knowledge of the Indian festival ● Learn to create art and craft related to the festival. ● Acquire knowledge of festivals. ● Learn the technique of charcoal shading
	December	1-Christmas Craft 2-Calligraphy	● The student will be able to enhance his knowledge of the Indian festival ● Learn to create art and craft related to the festival. ● Improve his Handwriting.
	January	1-Calligraphy 2- sketching in Pen	● Learn shading in pen. ● Enhance their sketching.
	February	1- Compilation of work (submission)	--

PHE	Month	Chapter	Learning Outcomes The learners will be able to:
	April	1. Importance of Physical Education 2.Marching	Develop motor ability skills Develop sense of rhythm Develop coordination ability
	May	1.Football laws	Rules and regulations of football Overall personality development

		2.Cricket Laws	Improves cardiovascular health Promotes teamwork and sharing Improve endurance and stamina Develop essential fine motor skills Improve hand-eye
	July	1.Meaning and Benefits of Yoga With Asanas 2.Asana's for stomach , liver and pancreas: A.Pawanmukta Asana B.Uttanpaada Asana C.Nauka Asana(Boat-Pose) D.Setubandha Asana E. Pada gushtnasasarpa Asana	A sense of discipline and respect for oneself and others Develop mentally, physically, emotionally, socially and psychologically Overall personality development
	August	1.Asanas which are good for back pain and strengthens backbone muscles: A.Bhujanga asana B.Dand asana C.Saulb asana D.Vipreetnauk asana E.Dhanur asana	The student will be able to demonstrate proficiency at the poses covered in class (at a basic level) The student will increase their dynamic flexibility The student will perform proper breathing techniques The student will be able to identify some of the major muscles used in any given pose The student will develop a greater sense of body self-esteem and appreciation for the art of yoga
	September	Exercises for fat loss.	The student will be able to know about the strengths and weakness in their body. They would learn how to maintain their diet and know about the nutrients. They can find a way to tone their body and workout on the weak parts.
	October	Cricket	1 To be able some of the basic rules of cricket. 2. To develop a range of skills to use in isolation and in a competitive context. 3. To use basic skills with more consistency including striking a bowled ball

		4. To develop the range of Cricket skills they can apply in a competitive context. 5. To choose and use a range of simple tactics in isolation and in a game context. 6. To consolidate existing skills and apply with consistency 7. To link together a range of skills and use in combination 8. To collaborate as a team to choose, use and adapt rules in games. 9. To recognise how some aspects of fitness apply to cricket e.g. power, flexibility and cardiovascular endurance 10. To apply with consistency standard cricket rules in a variety of different styles of games. 11. To attempt a small range of recognised shots in isolation and in competitive scenarios. 12. To use a range of tactics for attacking and defending in role of bowler, batter and fielder
November	Yoga MundakAsana ,Vakra Asana , Gomukh Asana , Ardhmatsyendrasana	The student will be able to demonstrate proficiency at the poses covered in class (at a basic level) The student will increase their dynamic flexibility The student will perform proper breathing techniques The student will be able to identify some of the major muscles used in any given pose The student will develop a greater sense of body self-esteem and appreciation for the art of yoga
December	Football Dribbling Push-pass shooting	1. To be able to show basic control skills including sending and receiving the ball. 2. To send the ball with some accuracy to maintain possession and build attacking play. 3. To implement the basic rules of football. 4. To introduce some defensive skills 5. To dribble in different directions using different parts of their feet.

			6. To Pass for distance 7. To Evaluate skills to aid improvement 8. To play effectively in a variety of positions and formations on the pitch 9. To relate a greater number of attacking and defensive tactics to game play 10. To become more skilful when performing movements at speed
	January	Basketball Dribbling , Passing Shooting	1. Understand basic basketball rules, terminology, and safety concerns. 2. Demonstrate the six basic basketball skills of running, jumping, passing, catching, dribbling, and shooting. 3. Demonstrate the ability to perform individual offensive and defensive skills and strategies. 4. Demonstrate the ability to perform team offensive and defensive skills and strategies. 5. Understand and apply the knowledge of basic rules of basketball. 6. Demonstrate proper etiquette and good sportsmanship. 7. Understand basic basketball scoring and officiating procedures. 8. Successfully participates in skill improvement and offensive game strategies. 9. Consistently responds defensively to the opponent's play. 10. Demonstrate proper etiquette and good sportsmanship. 11. Develop an awareness of community resources and opportunities related to basketball.

			12. Demonstrate an understanding of health-related fitness components: muscular strength, muscular endurance, and stress management. 13. Assess current personal fitness levels. 14. Identify the major muscle groups and their application to basketball.
	February	Cricket 5 over matches to be played between repective teams	1 To be able some of the basic rules of cricket. 2. To develop a range of skills to use in isolation and in a competitive context. 3. To use basic skills with more consistency including striking a bowled ball 4. To develop the range of Cricket skills they can apply in a competitive context. 5. To choose and use a range of simple tactics in isolation and in a game context. 6. To consolidate existing skills and apply with consistency 7. To link together a range of skills and use in combination 8. To collaborate as a team to choose, use and adapt rules in games. 9. To recognise how some aspects of fitness apply to cricket e.g. power, flexibility and cardiovascular endurance 10. To apply with consistency standard cricket rules in a variety of different styles of games. 11. To attempt a small range of recognised shots in isolation and in competitive scenarios. 12. To use a range of tactics for attacking and defending in role of bowler, batter and fielder

Learning Outcomes - Class 9 (Alternate Stream)

LEARNING OUTCOME PROTOCOL ST. COLUMBA'S (MIDDLE SECTION)

Grade Specific and Subject Specific Learning Outcomes are framed, for the entire academic year. The same is disseminated to the stakeholders through the school website, in addition to hard copies being given. While framing Learning Outcomes, the focus is always on core competencies that the child will develop while undertaking the said course. The attempt is to integrate different levels of thinking skills within a set of Learning Outcomes. The stress is on framing Learning Outcomes that are SMART- Specific, Measureable, Achievable, Realistic and Time bound.

The annual Learning Outcomes are further broken down into monthly documents, disseminated amongst teachers with grade, subject, and topic references.

Teachers then write Weekly Lesson Plans, where Learning Outcomes Specific to the chapter being taught are penned down. This not only is a grade specific and subject specific exercise but, here the individual texture of each class takes centre stage, with the teacher aiming to incorporate multiple intelligence levels and aiming for an inclusive class. The topics to be taught in the upcoming week are the focal point at this stage.

Finally , before the commencement of each class, the learning outcomes are clearly spelt out to the students by each teacher. While in the on-site classes, this was done using the boards, in the current online scenario, this is done using slides in PPTs.

Painting	Month	Chapter	Learning Outcomes The learners will be able to:
	April	1Elements of Art 2.Basic Knowledge Of tools	● learn basic Elements of art ● use Elements of Art in their composition. ● Differentiate between Shape and Form ● Choose right element for composition ● Develop a basic understanding of the tools.
	May	1-Composition using basic Elements of Art *Landscape *Seascape	● Implement elements of Art in their composition ● Enhance his sketching skills ● Improve his pencil strokes
	July	1-Understanding of tools used in Drawing and painting. 2-Still life 3-Drawing compositions	● Basic knowledge of Tools used in Art class ● Learn to use them correctly. ● Differentiate between water, poster colour. ● Differentiate between various types of brushes
	August	1- Sketching from nature and imagination 2-Still life	● Enhance his sketching. ● Improve his Strokes ● Enhance his creativity ● Improve his thinking skills ● Improve his observation
	September	1- Appreciation of Indian Art 2-Ulizards Dance	● Learn to appreciate Indian Painting ● Acquire knowledge of old Indian culture. ● Learn about the painting of renowned artists.

		3- Three girls by Amrita Sher-Gil	● Learn to appreciate the works of various artists.
	October	1-Sun Temple Konark 2-Poster Making 3-Folk Art	● learn to appreciate old Indian architecture. ● Compare old heritage with modern architect. ● Learn the poster making technique ● Aware of social awareness topics through posters ● Learn about the folk art of India. ● Differentiate between various state folk art.
	November	1-Yaksha Yaksi at R.B.i 2-Dancing Girl (Mohenjodaro) 3- Still life	● Learn to appreciate Indian heritage. ● Develop an understanding of sculpture art. ● Appreciate the works of the various artists.
	December	1- Char Minar 2- Still Life	● Learn to appreciate Indian heritage. ● Learn about Indian architecture. ● Compare old and new architecture.
	January	1- Indian folk art and painting. 2- Alpana 3-Rangoli Mandana	● Define several major eras in the history of Indian art ● Identify aesthetic traits found throughout India. ● Identify different various folk art forms of India. ● Explain medium, technique and style of folk art. ● State the design and motif used in folk art
	February	1- Still Life 2-Revision	● demonstrate still life techniques in drawing. ● Learn basic technique of drawing still life. ● Enhance his observation. ● Improve his sketching

Computer Applications	Month	Chapter	Learning Outcomes The learners will be able to:
	April	<u>Theory:</u> Chapter 1- Basics of Computers Chapter 2- Computer Systems <u>Practical:</u> Chapter 3- Types of Software-Operating System	- Acquire ability to familiarise with basics of computers. - Identify the various components of a computer and their purpose. - Understand the Input-process-output model of information processing - Explain the various applications of computer - Acquire the ability to identify various types of computers and their features. - Identify the various Input devices used in a computer system and acquire the ability to use most of them. - Ability to navigate the file system. - Familiarize themselves with the user interface of Windows Operating System.
	May	<u>Theory:</u> Chapter 2- Computer Systems (contd.) <u>Theory & Practical:</u> Chapter 3- Types of Software-Operating System(contd.) Chapter 6- Intro to Microsoft Word.	- Identify the various Output devices used in a computer system and acquire the ability to use them. - Differentiate between GUI and Command line interface - Understand the need and basic functions of Operating systems - Explain the purpose of various components of windows- desktop, icons, shortcuts, taskbar, toolbar, recycle bin and This PC and acquire comfort in using the various tools. - Acquire skills to do basic- entry, editing, formatting, saving, copying/cutting and pasting

July	<u>JULY</u> <u>Theory:</u> Chapter 2- Computer Systems(contd.) <u>Theory & Practical:</u> Chapter 7- Working with MS Word. Chapter 8- Advanced Features of Microsoft Word.	- Identify the various Storage devices used in a computer system and acquire the ability to choose between them in specific situations. - Explain the purpose of CPU and the associated devices in order to process the input to get the desired output. - Acquire skills to take up advanced text formatting and layout. - Create Posters, letters and other documents based on the Text editing and advanced features like Mail Merge.
August	<u>AUGUST</u> <u>Theory:</u> Chapter 3-Types of Software(Other than OS) Chapter-4 Computer Networks <u>Theory & Practical</u> Chapter 11- Microsoft Powerpoint	- Explain the types of softwares available. - Acquire ability to choose the most appropriate software for the variety available depending on the need. - Explain the purpose , need and types of Computer Networks available. - Understand the purpose of various components/devices used to create a network. - Acquire the ability to choose between the Wired and the wireless network. - Ability to create and edit appealing Presentations including text, Word Art, Audio and video
September	<u>SEPTEMBER</u> <u>Theory:</u> Chapter 3-Types of Software(Other than OS) Chapter-4 Computer Networks(contd.) <u>Theory & Practical:</u> Chapter 11- Microsoft Powerpoint (contd.)	- Acquire the ability to improve the performance of the computer using the various utilities available. - Acquire the ability to send and receive emails, follow email etiquette, and communicate over the internet. - Acquire the ability to create and upload videos. - Understand the purpose and acquire the skill to use Cloud computing and social networking. - Acquire the ability to add advanced features like hyperlinking, animation, transition and converting into Slide show and Package for CD.

October	<u>OCTOBER</u> <u>Theory:</u> Chapter 6 -Cyber Safety <u>Theory & Practical:</u> Chapter 11- Microsoft Powerpoint(contd.) Chapter 9- Intro to MS Excel	• Ability to safely and correctly use websites, social networks, chat sites, and email • Acquire the ability to add advanced features like converting into movie. • Acquire the ability to perform basic data manipulation using spread sheets
November	<u>NOVEMBER</u> <u>Theory</u> Chapter 6 -Cyber Safety (contd.) <u>Theory & Practical:</u> Chapter 9- Intro to MS Excel Chapter 10-Formula, functions & Chart	• Ability to ensure safety on the WWW to avoid frauds and thefts. • Acquire the ability to understand the creation of Formula and functions to get the desired results in an Excel sheet.
December	<u>DECEMBER</u> <u>Theory and Practical</u> Chapter 10-Formula, functions & Charts(contd.) Chapter 12,13- Programming in Python /Scratch	• Explain the impact of use of various functions. • Acquire the ability to create appropriate charts to depict the data • Acquire the ability to use basic programming skills to create meaningful basic elements in a program

January	<u>JANUARY</u> <u>Theory and Practical</u> Chapter 10-Formula, functions & Charts(contd.) Chapter 12,13- Programming in Python/Scratch	● Acquire the ability to convert data into desired information in spreadsheets and choose from the variety of chart types to depict the data. ● Acquire the ability to use basic programming skills to create small programs using the programming language.
February	REVISION (LMP)	Acquire the ability to perform the basic computational skills including use of OS, text editing, creating Presentations, Creating Spreadsheets to solve the problem of data accumulation and interpretation.

Home Science	Month	Chapter	Learning Outcomes The learners will be able to:
	April	Concept and scope of home science education and recent trends	After completing this unit students will be able to • Understand the concept of Home Science as a subject • Explain the Science and Arts related to home science • List the fields in home science and the career options they can pursue as wage or self-employment • Discuss the recent trends of home science education
	May	Family and values	After completing this unit students will be able to • Understand the concept of family and its importance as a fundamental unit in society • Explain the types of families

	July	Family and values FILE WORK Role of family members: collage / chart etc.	- Understand the traditional and ethical value based Indian society - Explain gender discrimination and the need for saving the girl child
	August	Human growth and development Practicals 1. Observation of physical development in a child from birth to three years 2. Observation of motor skills in a child from birth to 3 years	After completing this unit the students will be able to - Understand the concept of growth and development - Explain the principles of growth and development - Understand physical growth and development during childhood years - Discuss the characteristics of children in early and Middle childhood - Understand the physical development in adolescence - Discuss various emotional problems a teenager goes through - Explain the cognitive and social development of an adolescence
	September	Resource Management FILE WORK Create a slogan or poster for proper disposal of domestic waste.	After completing this unit students will be able to - Learn the importance of resources and their proper use - Learn different types of waste their management (disposal and use) So as to prevent pollution of all types - Learn the sustainability methods and their application in day to day life - Measures of safety and management of emergencies
	October	Resource Management	After completing this unit students will be able to

		Prepare a first aid kit and practice giving first aid for burns, cuts, bites, fractures, electric shocks (group activity)	- Learn about the need of safety at home - Become aware of the accident prone, unsafe zone at home and their risk - Study the measures of safety against hazards like burns electric shocks cuts fractures bites poisoning - Learn about the basics of first aid
	November	Fibre and fabric PRACTICAL Collection and Identification of fibre: physical characteristics and burning tests	After completing this unit students will be able to Acquire the basic knowledge about fibres, yarn and fabrics Classify the fibres in different forms Learn about differences in basic fibres Study different methods of fabric construction Appropriately select fabric for specific purpose
	December	Food nutrition and health FILE WORK Identification of fruits, vegetables, spices, oils, sugars, cereals and lentils.	After completing this unit students will be able to - Explain different foods and its various function (psychological social and physiological) - Understand meaning sources and functions of nutrients and nutritional status
	January	Food nutrition and health PRACTICAL Design educational games specific to functions or sources of nutrients. Food processing method demonstration: Germination and	- Discuss relationship of food with health and diseases - Understand the concept of malnutrition - Know about benefits and harm of various cooking methods on the nutritive values of food - Know how foods be prepared using the best suitable method and prevent loss of nutrients during processing

		Fermentation.	
	February	Reinforcement of all units 1,2,3,4,5,6 and 7 <u>Practical:</u> FILE WORK PRACTICAL VIVA	read and understand the instructions given. critically analyse the concepts • Skim for the main idea and present facts related • retain, recall and present facts pertaining to a specific concept. • Recall and apply knowledge gained pertaining to various concepts.

Elements of Business Studies	Month	Chapter	Learning Outcomes The learners will be able to:
	April	Unit 1 - Fundamentals of Business Activities (a) Characteristics of Business Activities (b) Business as an Activity – How it is different from • Profession • Employment (c) Characteristics of vocational activities	• read and understand the instructions given. • know and explain critically the term business • recapitulate the characteristics of business activities • retain, recall and present facts pertaining to a specific concept. • differentiate between the two given concepts • conduct independent/ as a group research and collate information related to a given topic • co-relate concepts related to business and real-life situations.
	May	(d) Factors affecting business • Economic • Social • Political	• read and understand the instructions given. • know and explain critically the term business • .recapitulate the characteristics of business activities • retain, recall and present facts pertaining to a specific concept. • differentiate between the two given concepts • conduct independent/ as a group research and collate information related to a given topic • co-relate concepts related to business and real-life situations.

	July	Unit 2- Operative Activities in Business (a) Industry • concept • Characteristics • Types & Nature <u>Practical:</u> Industry concept and characteristics	• Will know the various terms and definition • identify the characteristics of industry • Various categories of industry • Classify the types of industries and its business activities. • Differentiate between the types of industries • conduct independent/ as a group research and collate information related to a given topic
	August	Operative Activities in Business (b) Commerce • concept • Banking • Insurance • Transportation • Trade <u>Practical:</u> Industry Types and nature	• Will know the various terms and definition • Know the importance of banking, insurance, transportation and trade • Know the different types of banks and its function • Know the different types of insurances. • Explain the types of transportation. • Types of trades and its need in business activity
	September	Reinforcement of Unit 1 and 2 <u>Unit 1</u> Fundamentals of Business Activities <u>Unit 2</u> Operative Activities	• Reinforce and recapitulate the concepts of business activities and commerce

		in Business <u>Practical:</u> Transportation Trade	
	October	<u>Theory:</u> Unit 3 - Steps Involved in Establishing Business (a) Nature & forms of Business Organization <u>Practical:</u> <u>Art Integration</u> Forms of business On Sikkim	• List the different forms of business organisation and its meaning • Identify and explain the concept, merits and limitations of business organisation. • Distinguish between the various forms of business organisation • Factors that influence the choice of suitable form of business organisation. • Conduct independent/ as a group research and collate information related to a given topic • co-relate concepts related to business and real-life situations.
	November	<u>Theory:</u> Unit 3 – continued (b) Sole Proprietorship Meaning and Features (c) Partnership Meaning Features Types <u>Practical:</u> Commerce • Concept • Banking •	• Know the term, Identify and explain the concept, merits and limitation of sole proprietorship. • Different types of partnership on the basis of duration and liability. • Distinguish between the various forms of Sole proprietorship and Partnership read and understand the instructions given.

	December	<u>Theory:</u> Unit 4 – Fundamental Areas of Business • Finance Meaning <u>Practical:</u> Commerce • Insurance	• Know the term • Differentiate between the fundamental areas of business • co-relate concepts related to business and real-life situations.
	January	<u>Theory:</u> Unit 4: Fundamental Areas of Business-continued • Marketing Meaning • Human Resources Meaning	• Know the term • Differentiate between the fundamental areas of business • co-relate concepts related to business and real-life situations.
	February	Reinforcement of Unit: 1, 2, 3 and 4 <u>Practical:</u> Project Work	• Reinforce and recapitulate the concepts of fundamental areas of business