

# BHARTIYA VIDYA MANDIR SENIOR SECONDARY SCHOOL

2025-2026

CURRICULUM PATHWAY

CLASS

**KITCHLU NAGAR, LUDHIANA. PHONE:** 0161-2301523, 2303400

<b>EVALUATIO</b>	ON AND PROMOTION SYSTEM
	Classes IX and X
The instructions of the Boa	ard will be followed strictly in these classes :
The student must get 33 for promotion to the next	% marks in each subject in aggregate to qualify himself/herself at higher class.
2. Final result will compris	e the marks of
Annual Examination	- 80 marks
Internal Assessment	- 20 marks
Aggregate	- 100 marks
	nprises Periodic Tests, Portfolio, Multiple Assessment and Subject bject to the guideliness of CBSE).

## **CLASS-X**

## **SUBJECT: ENGLISH LANGUAGE AND LITERATURE (Code No. 184)**

Sections		Weightage
A	Reading Skills	20 Marks
В	Writing Skills and Grammar	20 Marks
С	Language through Literature	40 Marks

## Section-A (Reading Skills)

#### I. Reading Comprehension through Unseen Passage

(20 Marks)

1. Discursive passage of 400-450 words.

(10 marks)

2. Case-based factual passage (with visual input-statistical data/chart etc.) of 200-250 words.

(10 marks)

#### (Total length of two passages to be 600-700 words)

Multiple Choice Questions / Objective Type Questions / Very Short Answer Questions (to be answered in 30-40 words) will be asked to assess comprehension, interpretation, analysis, inference, evaluation and vocabulary.

#### Section-B (Writing Skills and Grammar)

II. Grammar (10 Marks)

- Determiners
- Tenses
- Modals
- Subject verb concord
- Reported speech
  - \* Commands and Requests
  - \* Statements
  - \* Questions
- 3. The courses at the secondary level seek to cement high professional grasp of grammatic items and levels of accuracy. Accurate use of spelling, punctuation and grammar will be assessed through Gap Filling / Editing / Transformation exercises. Ten out of twelve questions will have to be attempted.

III. Writing Skills (10 marks)

- 4. Writing a Formal Letter based on a given situation, in 100-120 words. One out of two questions is to be answered. (5 marks)
- 5. Writing an Analytical Paragraph in 100-120 words on a given Map/ Chart/ Graph/ Cue/s. One out of two questions is to be answered. (5 marks)

#### Section-C

#### Language through Literature

40 Marks

#### IV. Reference to the Context

(5+5=10 Marks)

- 6. One extract out of two, from Drama / Prose.
- 7. One extract out of two, from poetry.

Multiple Choice Questions / Objective Type Questions will be asked to assess interpretation, analysis, inference, evaluation, appreciation and vocabulary.

(CLASS-X)/3

#### **IV. Short & Long Answer Questions**

- 8. Four out of Five Short Answer Type Questions to be answered in 40-50 words from the book FIRST FLIGHT to assess interpretation, analysis, inference and evaluation. (4×3=12 marks)
- 9. Two out of Three Short Answer Type Questions to be answered in 40-50 words from the book FOOTPRINTS WITHOUT FEET to assess interpretation, analysis, inference and evaluation. (3×2=6 marks)
- 10. One out of two Long Answer Type Questions from FIRST FLIGHT to be answered in about 100-120 words to assess creativity, imagination and extrapolation beyond the text and across the text. This can also be a passage-based question taken from a situation / plot from the text.
  (6 marks)
- 11. One out of two Long Answer Type Questions from FOOTPRINTS WITHOUT FEET, on theme or plot involving interpretation, extrapolation beyond the text and inference or character sketch to be answered in about 100-120 words.

  (6 marks)

## Prescribed Books: Published by NCERT, New Delhi

#### 1. FIRST FLIGHT

#### A. Prose:

- 1. A Letter to God
- 2. Nelson mandela Long Walk to Freedom
- 3. Stories About Flying
- 4. From the Diary of Anne Frank
- 5. Glimpses of India
- 6. Mijbil the Otter
- 7. Madam Rides the Bus
- 8. The Sermon at Benares
- 9. The Proposal (Play)

#### **B. Poems:**

- 1. Dust of Snow
- 2. Fire and Ice
- 3. A Tiger in the Zoo
- 4. How to Tell Wild Animals
- 5. The Ball Poem
- 6. Amanda!
- 7. The Trees
- 8. Fog
- 9. The Tale of Custard the Dragon
- 10. For Anne Gregory

#### 2. FOOTPRINTS WITHOUT FEET

- 1. A Triumph of Surgery
- 2. The Thief's Story
- 3. The Midnight Visitor
- 4. A Question of Trust
- 5. Footprints Without Feet
- 6. The Making of a Scientist
- 7. The Necklace
- 8. Bholi
- 9. The Book that Saved the Earth

#### 3. WORDS AND EXPRESSIONS – II (WORKBOOK FOR CLASS X) – Units 1 to 4 and Units 7 to 11.

	TERM-I				
Name of the Chapter	Learning Outcomes	Life Skills	Activity		
FIRST FLIGHT (Prose)  1. A Letter to God	To make students understand the importance of faith.	Making connections	Write a letter to God to express love for God in words in the form of a meditative practice.		
2. Nelson Mandela – Long Walk to Freedom	• To make students learn that individuals can challenge unjust systems and creates fairer societies.	Focus and self control	mediative practice.		
3. Stories About Flying	To enable the students to learn about self- confidence and courage and to face one's fears bravely and boldly.	Critical thinking	Creative Writing: Write a Diary entry from the perspective of the baby seagull, describing feelings and experiences during your first flight.		
4. From the Diary of Anne Frank	• To enable students to aware that how a writing becomes a powerful testament to resilience, hope and the impact of historical events on individual lives.	Handling challenges in a witty way	Discussion and Reflection		
5. Glimpses of India	To make the students understand the traditional profession of baking in Goa and its cultural significance and to discover the historical connections and independent spirit of the people of coorg.	Cultural connection	Role Play and Story Telling		
6. Mijbil the Otter	• To develop understanding that pets should be treated as family members and there should be an emotional connection between a pet and his master.	Compassion and Curiosity	Role Play		

FIRST FLIGHT (Poems)			
1. Dust of Snow	• To make the students aware how even small, unexpected moments of beauty in nature can profoundly impact a person's perception of life.	Appreciation of small things.	
2. Fire and Ice	• To make the students explore how passion, lust, hatred and judgement can lead to self-harm and potentially destroy the world.	Empathy and Compassion	Debate on the topic: "Will the world end in fire or ice?"
3. A Tiger in the Zoo	To enable the students to understand that all animals can be happy only in their natural habitat.	Empathy	Discussion about the symbolism of the tiger and its confinement.
4. How To Tell Wild Animals	To develop an ability to observe an identify characteristics of various wild animals.	Environmental     Awareness	Descriptive paragraph describing the appearance, behaviour and unique characteristics of their chosen animal, following
5. The Ball Poem	• Reflecting on the inevitability of loss and importance of resilience and moving forward.	Coping with emotions	the style of the poem.
6. Amanda	• To enable the students understand and enjoy the theme and also be specific in reflection, expression and individual opinion.	Critical thinking	
7. The Trees	• To enable the students understand the importance of trees and need to preserve them.	Environmental     Awareness	Class discussion about the different interpretation of the poem – The Trees
FOOTPRINTS WITHOUT FEET			
1. A Triumph of Surgery	To develop the habits of reading for information and pleasure, to learn reading critically and to	Critical thinking	

	1	1	1
2. The Thief's Story	<ul> <li>develop the confidence to ask and answer questions.</li> <li>To enable the students how a person can motivate others to change his nature and to enable them to understand</li> </ul>	Empathy and Compassion	Students will be asked to write a diary entry on behalf of the thief sharing his feelings for Anil.
3. The Mid-night Visitor	<ul> <li>importance of education.</li> <li>To enable the students to think quickly and act wisely and calmly in the situation of danger and surprise.</li> </ul>	Problem-Solving skills	Students will be encouraged to share their any experience where they have a take quick decision to solve their problem in the form of a Descriptive Paragraph on a situation.
4. A Question of Trust	To enable the students aware that one should not trust anyone without discovering out about any person.	Critical thinking	
5. Footprints Without Feet	<ul> <li>any person.</li> <li>To develop positive attitude towards the language, to enable them to discriminate the good from the evil and to develop moral values in the students.</li> </ul>	Self-awareness	Role play enacting the moment when Griffin becomes visible in the store.
6. The Making of a Scientist	To make the students understand the process of becoming a scientist and acquiring life skills.	Critical thinking	Students will be encouraged to record their findings in their notebooks or journals on physical characteristics of butterflies.
	TER	M-II	
FIRST FLIGHT (Prose) 7. Madam Rides the Bus	• To encourage the curiosity of students, observing realities and to enable them to be responsible and independent.	Empathy and understanding	Group Discussion

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# CLASS-X

# **SUBJECT: DANCE**

	Торіс	Learning Outcomes	Life Skills Value
APRIL	Difference between Folk and Classical dance.	Theoretical work	Knowledge about Culture
MAY	Thaat in teen taal and Kavit in teen taal (Kathak).	Footbwork on beat	Knowledge about Indian Classical dance
JUNE	Summer Vacations	_	_
JULY	Introduction to all classical dances and knowledge of Jhaptaal.	Footwork on Mathematics counting	Knowledge of Classical dance
AUGUST	Patriotic dance	Songs about Patriotism	Unity in Diversity
SEPTEMBER	Semi classical dance and Paran in teen taal. (Kathak)	Hands and body movements	Healthy fitness
OCTOBER	Tribal Dance	Footwork on beat	Culture of different states
NOVEMBER	Tatkaar, Basic Todas, Tehai in Teen Taal	Basic footwork beats on counting	Healthy foot work
DECEMBER	Folk Dances of Punjab	Giddha / Bhangra	Cultural Values
JANUARY	Folk dances of Himachal Pradesh (Introduction, Historical background, Costumes, Music and Props)	Stage Performance	Knowledge to Culture of Himachal
FEBRUARY	Revise All Syllabus	_	

# CLASS-X

# **SUBJECT: MUSIC VOCAL**

	Торіс	Life Skill / Values	Learning Outcomes
APRIL	Riyaaz of "Alankars"	Enhance Vocal qualities	Students gained the knowledge of different Alankars which is good for Vocal cards.
MAY	Labour Day song	Respect and Appreciation Value	Learner will respect the hard-work of people in different jobs.
JUNE	Summer Vacation	Summer Vacation	Summer Vacation
JULY	Motivational / Inspirational Song	Strengthen Values	• Learner will be able to boosts self-confidence.
AUGUST	<ul><li> Patriotic Song</li><li> Shri Krishna Bhajan</li></ul>	<ul><li> Patriotism Values</li><li> Devotional Values</li></ul>	• Learner will learn the sacrifices of freedom fighters.
SEPTEMBER	Exam Half Yearly	Exam	• Exam
OCTOBER	Shri Ram Bhajan	Religious Values	Learner will be able to sing Shri Ram Bhajan.
NOVEMBER	<ul><li>Songs on Gandhi Jayanti</li><li>Shabad on account of Shri Guru Nanak Janayti</li></ul>	<ul><li>Patriotism Value</li><li>Devotional Values</li></ul>	<ul> <li>Learner will be able to learn the sacrifices of Gandhi Ji.</li> <li>Learner will be able to learn the teachings of Shri Guru Nanak Dev ji.</li> </ul>
DECEMBER	Periodic Exam	Winter Break	Periodic Exam & Winter Breaks
JANUARY	Folk Songs and Lohri Punjabi Songs	Cultural Values	Learner will gained the knowledge of about culture.
FEBRUARY	Revision of full syllabus	Revision of full syllabus	

# CLASS-X

# SUBJECT: DRAWING

	Topic	Learning Outcomes	Life Skills Value
APRIL	Still Life Nature Study	Observation Skills Observation Skills	Flower Pot Landscape
MAY	Bird Study Animal Art	Observation and inference	Diff. birds & animals with diff. techniques
JULY	Landscape	Critical thinking	Landscape with water colour
AUGUST	Body proportions sketching	Observation skills	Eyes, nose, ear, lips
SEPTEMBER	Portraits	Critical thinking	Pencil shading work
OCTOBER	Composition Poster Design	Observation skills	Buddha Painting Current Topic
NOVEMBER	Calligraphy Life Study	Creative Skills Students will learn the anatomy	Artistic Alphabets Different models
DECEMBER	City Scapes	Observation skills	Landscape
JANUARY	Mix-Media Art	Critical thinking	Canvas art

# CLASS-X

# **SUBJECT: CRAFT**

	Торіс	Life Skills
APRIL	Creation of Personal Diary Cover	Perspective Study
MAY	Creative Wall Hanging	Creative Thinking
JULY	Jute Art	Empathy
AUGUST	Table mats with Coaster Doormat	Fine motor Skills Concentration
SEPTEMBER	Terracotta Art	
OCTOBER	Mixed Media Painting with Cardboard, Shilpkar and Fabric Colours	Perspective study
NOVEMBER	Decor page Art Bottle Art / Design	Self Directed Learning
DECEMBER	Fabric Painting with basic strokes, Tie and Dye	Creativity
JANUARY	Texture Art (Texture making ideas with basic strokes & Household items)	Analization
FEBRUARY	Fun with colours	Creative Skill

## **CLASS-X**

SUBJECT: HINDI (085)

## निर्धारित पुस्तकें :

- 1. स्पर्श भाग-II (NCERT)
- 2. संचयन भाग-II (NCERT)
- 3. व्याकरण संबोध ( मधुबन एजुकेशन )

# कक्षा 10वीं हिंदी - व परीक्षा हेतु पाठ्यक्रम विनिर्देशन 2024-25

खंड		भारांक
क	अपठित बोध	14
ख	व्यावहारिक व्याकरण	16
ग	पाठ्यपुस्तक एवं पूरक पाठ्यपुस्तक	28
ঘ	रचनात्मक लेखन	22

<sup>\*</sup> भारांक - [80 (वार्षिक बोर्ड परीक्षा) + 20 (आंतरिक परीक्षा)]

निर्धारित समय - 3 घंटे भारांक - 80

	वार्षिक बोर्ड परीक्षा हेतु भार विभाजन				
		खंड-क ( बहुविकल्पी प्रश्न )			
		विषयवस्तु	उप भार	कुल भार	
1.	अपिट	उत गद्यांश पर बोध, चिंतन, विश्लेषण, सराहना आदि पर बहुविकल्पीय, अतिलघूत्तरात्मक			
	एवं र	नघूत्तरात्मक प्रश्न			
	i	दो अपठित गद्यांश लगभग 200 शब्दों के	7+7	14	
		एक अंकीय तीन बहुविकल्पीय प्रश्न (1×3=3) पूछे जाएँगे			
		अति लघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न (2×2=4) पूछे जाएँगे			
	खंड—ख ( व्यावहारिक व्याकरण )				
2.	व्याक	रण के लिए निर्धारित विषयों पर विषयवस्तु का बोध, भाषिक बिंदु/संरचना आदि पर			
	अतिलघूत्तरात्मक प्रश्न। (1×16)				
	कुल 20 प्रश्न पूछे जाएँगे, जिनमें से केवल 16 प्रश्नों के उत्तर देने होंगे।				
	i	पदबंध (1×4=4) (5 में से 4 प्रश्न करने होंगे	4	16	
	ii	रचना के आधार पर वाक्य रूपांतरण (1×4=4) (5 में से 4 प्रश्न करने होंगे	4		
	iii	समास (1×4=4) (5 में से 4 प्रश्न करने होंगे	4		
	iv	मुहावरे (1×4=4) (5 में से 4 प्रश्न करने होंगे)	4		

3		खंड-ग ( पाठ्यपुस्तक एवं पूरक पाठ्पुस्तक )		
	अ	गद्य खंड ( पाठ्यपुस्तक )	11	
		1 स्पर्श (भाग-2) से निर्धारित पाठों में से गद्यांश के आधार पर विषयवस्तु का ज्ञान,	5	
		बोध, अभिव्यक्ति आदि पर एक अंकीय पाँच <b>बहुविकल्पीय प्रश्न</b> पूछे जाएँगे।		
		(1×5)		
		2 स्पर्श (भाग-2) से निर्धारित पाठों में से विषयवस्तु का ज्ञान, बोध, अभिव्यक्ति	6	
		आदि पर तीन प्रश्न पूछे जाएँगे (25–30 शब्द सीमा) (विकल्प सहित 4 में से 3		
		प्रश्न करने होंगे) (2×3)		
	ब	काव्य खंड ( पाठ्यपुस्तक )	11	28
		1 स्पर्श (भाग-2) से निर्धारित कविताओं में से काव्यांश के आधार पर एक अंकीय	5	
		पाँच <b>बहुविकल्पीय</b> प्रश्न पूछे जाएँगे। (1×5)		
		2 स्पर्श (भाग-2) से निर्धारित कविताओं के आधार पर विद्यार्थियों का काव्यबोध	6	
		परखने हेतु तीन प्रश्न पूछे जाएँगे (विकल्प सहित-25-30 शब्द-सीमा वाले 4 में		
		से 3 प्रश्न करने होंगे) (2×3)		
	स	पूरक पाठ्यपुस्तक संचयन भाग-2	6	
		संचयन (भाग-2) से निर्धारित पाठों पर आधारित दो प्रश्न पूछे जाएँगे (3×2) विकल्प सहित-50-60 शब्द-सीमा वाले 3 में से 2 प्रश्न करने होंगे)	6	
		खंड—घ ( रचनात्मक लेखन )		
	i.	विभिन्न विषयों और संदर्भों पर विद्यार्थियों के तर्कसंगत विचार प्रकट करने की क्षमता	5	
	1.	को परखने के लिए संकेत-बिंदुओं पर आधारित समसामयिक एवं व्यावहारिक जीवन	J	
		से जुड़े हुए तीन विषयों में से किसी एक विषय पर लगभग 120 शब्दों में अनुच्छेद		
		लेखन (5×1)		
	ii.	अभिव्यक्ति की क्षमता पर केंद्रित अनौपचारिक विषयों में से किसी एक विषय पर लगभग	5	22
		100 शब्दों में पत्र (विकल्प सहित) (5×1)		
	iii.	व्यावहारिक जीवन से संबंधित विषयों पर आधारित लगभग 60 शब्दों में सूचना लेखन।	4	
		(विकल्प सहित) (4×1)		
	iv.	विषय से संबंधित लगभग 40 शब्दों के अंतर्गत विज्ञापन लेखन	3	
		(विकल्प सहित) (3×1)		
	v.	विविध विषयों पर आधारित लगभग 80 शब्दों में ई-मेल लेखन (5×1)	5	
		अथवा		
		दिए गए विषय/शीर्षक आदि के आधार पर लगभग 100 शब्दों में लघुकथा लेखन		
		(5×1)		

प्रथम अवधि — अप्रैल से सितम्बर				
प्रकरण	अधिगम उद्देश्य	जीवन कौशल	कला एकीकृत गतिविधियाँ	
स्पर्श भाग				
पाट्यपुस्तक : ( गद्य भाग ) 1. बड़े भाई साहब	<ul> <li>नवीन शिक्षा प्रणाली के प्रति जागरुकता, ज्ञान का विस्तार, सकारात्मक व आलोचनात्मक</li> </ul>	<ul> <li>आत्म-जागरुकता व आत्म- विश्लेषण की क्षमता का विकास</li> </ul>	• समय–सारिणी तैयार करना	
	दृष्टिकोण का विकास, समय नियोजन के महत्त्व से परिचित करवाना, समय प्रबंधन का ज्ञान	समानुभूति तथा पारस्परिक संबंध की क्षमता का विकास	• समय नियोजन की आवश्यकता क्यों ? विषय पर विचार	
2. डायरी का एक पन्ना	ऐतिहासिक पृष्ठभूमि का ज्ञान, देशभिक्त की भावना का संचार, स्वतंत्रता संग्राम में महिलाओं के योगदान का ज्ञान	• रचनात्मक सोच व प्रभावी संचार का विकास	• डायरी लेखन	
3. तताँरा-वामीरो कथा	समाज में व्याप्त अंधविश्वासों व रूढ़िवादिता से परिचित करवाना तथा लोक भाषा के प्रति आकर्षण उत्पन्न करना तथा संस्कृति से जोड़ना।	• समानुभूति व पारस्परिक संबंध की प्रवृत्ति का विकास, आत्म– जागरुकता का विकास	• समाज में व्याप्त रूढ़ियों पर परिचर्चा	
4. तीसरी कसम के शिल्पकार 'शैलेंद्र'	<ul> <li>फिल्मों के संदर्भ में भारतीय संस्कृति का स्थान व महत्ता से परिचित करवाना, लेखन व वाचन कौशल का विकास</li> </ul>	• निर्णय लेना, रचनात्मक सोच का विकास	• साहित्यिक रचनाओं पर आधारित फिल्मों की सूची	
5. अब कहाँ दूसरे के दु:ख से दु:खी होने वाले	<ul> <li>पर्यावरण के प्रति         संवेदनशीलता, पशुओं/पिक्षयों         के प्रति संवेदना उत्पन्न करना,         मानवीय मूल्यों का विकास</li> </ul>	• रचनात्मकता व आलोचनात्मक सोच का विकास, समानुभूति तथा भावनाओं का विकास	• विलुप्त होती प्रजातियों की समस्या का समाधान विषय पर परिचर्चा	
(पद्य भाग)				
1. कबीर — 'साखी'	<ul> <li>श्रवण व वाचन कौशल का विकास, शब्द भंडार में वृद्धि, मानवीय मूल्यों के प्रति रुझान, नैतिक मूल्यों का विकास</li> </ul>	• आत्म जागरुकता, समानुभूति, रचनात्मक सोच का विकास	• दोहा गायन	
2. मीरा — 'पद'	• हिंदी की विविध बोलियों से परिचय, कृष्ण जीवन से परिचय, ज्ञान का विस्तार	• पारस्परिक संबंध, निर्णय लेना तथा समस्या को सुलझाना		
3. मैथिलीशरण गुप्त — 'मनुष्यता'	• भारत की पौराणिक संस्कृति से परिचय, आध्यात्मिक व नैतिक मूल्यों का विकास	आत्मजागरुकता, रचनात्मकता, आलोचनात्मक सोच का विकास, भावनाओं से निपटना व तनाव को झेलना	• महात्मा बुद्ध से संबंधित कार्य प्रपत्र	

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4. सुमित्रानंदन पंत — पर्वत	• विभिन्न ऋतुओं का ज्ञान,	• समस्या को सुलझाना,	_
प्रदेश में पावस	प्रकृति का मानव जीवन पर	रचनात्मक सोच, प्रभावी संचार	
	प्रभाव का ज्ञान, पर्वतीय स्थलों	का विकास	
	से परिचय, पेड़-पौधों की		
	विशेषताएँ बताना		
5. वीरेन डंगवाल — तोप	• भारतीय विरासत की जानकारी,	• आत्मजागरुकता, निर्णय लेना,	• ऐतिहासिक इमारतों संबंधी
	ज्ञान का विस्तार, देशभक्ति की	भावनाओं से निपटना	कार्य प्रपत्र
	भावना का विकास, विश्व		
	शांति की अनिवार्यता का		
	महत्त्व समझाना		
( संचयन )			
1. हरिहर काका	• वैचारिक मंथन व चिंतन-मनन	• आत्मजागरुकता, निर्णय लेना,	• ''मीडिया का जन–जीवन पर
	की प्रेरणा, स्पष्ट व स्वतंत्र	आलोचनात्मक सोच, तनावों	सकारात्मक व नकारात्मक
	दृष्टिकोण का विकास, समाज	को झेलना, प्रभावी संचार का	प्रभाव'' पर विचाराभिव्यक्ति
	के प्रति दायित्व बोध जगाना,	विकास	की प्रस्तुति
	जनसंचार माध्यमों की महत्ता		
	पर प्रकाश, समाज के प्रति		
	नैतिक दायित्व बोध जगाना		
2. सपनों के से दिन	• शिक्षक के प्रति आदर्श	• आलोचनात्मक व रचनात्मक	• 'अनुशासन के लिए दंड
	दृष्टिकोण का विकास, नैतिक	सोच का विकास, समानुभूति,	आवश्यक' विषय पर 'वाद-
	मूल्यों का विकास, जीवन के	पारस्परिक संबंध, भावनाओं से	विवाद'
	प्रति सकारात्मक दृष्टिकोण का	निपटना	
	विकास, सहभागिता का		
	विकास		
( व्याकरण भाग )			
1. पदबंध	• शब्द भंडार में वृद्धि	• रचनात्मक सोच	
2. रचना के आधार पर वाक्य	• वाक्य के स्वरूप से परिचय	• समस्या को सुलझाना	
रूपांतरण			
3. समास	• व्याकरणिक इकाईयों का ज्ञान	• रचनात्मक सोच	• कार्य प्रपत्र—मुहावरों की
4. मुहावरे	• स्मरण शक्ति का विकास	• समस्या को सुलझाना	पहचान व अर्थ
5. अपठित गद्यांश		• समस्या को सुलझाना	• श्रुतभाव ग्रहण
लेखन			
1. अनुच्छेद			
2. औपचारिक पत्र	• ज्ञान का विस्तार, शब्द भंडार में	· ·	
3. सूचना लेखन	वृद्धि	सोच	
4. विज्ञापन लेखन			
5. ई-मेल			
6. लघुकथा लेखन			
प्रथम आवधिक परीक्षा			

द्वितीय अवधि				
प्रकरण	अधिगम उद्देश्य	जीवन कौशल	कला एकीकृत गतिविधियाँ	
स्पर्श भाग पाठ्यपुस्तक-II				
(गद्य भाग)				
6. पतझड़ में टूटी पत्तियाँ	आदर्शवादी मूल्यों की पहचान, चिंतन प्रवृत्ति का विकास, सामाजिक दायित्वों का विकास तथा भूत, वर्तमान व भविष्यत काल की गहराई से अवगत कराना	<ul> <li>समस्या निदान करना, तनाव को झेलना, प्रभावी संचार, निर्णय लेना, आलोचनात्मक सोच का विकास</li> </ul>	समाज के कुछ आदर्शवादी     लोगों के आदर्शों पर विचार प्रस्तुतीकरण	
7. कारतूस	• देशभिक्त की भावना को जागृत करना, साहस भाव जगाना, विभिन्न स्वतंत्रता सेनानियों का परिचय के साथ स्मरण शक्ति का विकास, संस्मरण विधा से परिचय करवाना	• समस्या को सुलझाना, निर्णय लेना, पारस्परिक संबंध व समानुभूति का विकास	• वर्ग पहेली	
( पद्य भाग )				
6. कैफी आज़मी – कर चले हम फिदा	• देशभिक्त की भावना को जगाना, संगीत के प्रति रुचि व वाचन कौशल का विकास, सैनिकों के प्रति गौरव भाव जगाना	• आत्म जागरुकता, रचनात्मक सोच व समानुभूति का विकास	• एकांकी मंचन	
7. रवींद्रनाथ ठाकुर — आत्मत्राण	<ul> <li>भिक्त भाव जागृत करने का प्रयास, सहभागी प्रवृत्ति का विकास</li> </ul>	<ul> <li>रचनात्मक सोच, आत्म- जागरुकता, तनाव को झेलना, भावनाओं से निपटना</li> </ul>	• प्रार्थना गीत का गायन	
संचयन-II		_	_	
3. टोपी शुक्ला	विचाराभिव्यक्ति की क्षमता का विकास, नैतिक मूल्यों को जगाना, जीवन के प्रति सकारात्मक दृष्टिकोण का विकास	<ul> <li>आत्मजागरुकता का विकास, रचनात्मक सोच, भावनाओं से निपटना तथा समस्या को सुलझाना</li> </ul>	• स्वानुभव प्रस्तुति ''अच्छा परीक्षा परिणाम न आने पर परिवार की प्रतिक्रिया''	

**नोट**— व्याकरण भाग के सभी विषय, अपठित गद्यांश तथा रुचनात्मक लेखन प्रथम आवधिक वाला ही करवाया जाएगा।

# CLASS-X

## **SUBJECT: INFORMATION TECHNOLOGY (402)**

## **EMPLOYABILITY SKILLS**

## **TERM-I**

Unit 1 : Communication Skills-II Unit 2 : Self-Management Skills-II

Unit 3: Information and Communication Technology Skills-II

Unit 4 : Entrepreneurial Skills-II

Unit 5: Green Skills-II

## **SUBJECT SPECIFIC SKILLS**

Unit 1 : Digital Documentation (Advanced)
Unit 2 : Electronic Spreadsheet (Advanced)
Unit 3 : Database Management System

Unit 4: Maintain Health, Safety and Secure Working Environment

## PRACTICAL WORK

- ❖ Practical Examination
- ❖ Advanced Documentation
- ❖ Avanced Spreadsheets
- Databases
- Viva Voce

#### Part-A

Unit No.	Unit Name
Unit 1	Communication Skills-II
Unit 2	Self-Management Skills-II
Unit 3	Information and Communication Technology Skills-II
Unit 4	Entrepreneurial Skills-II
Unit 5	Greek Skills-II

UNIT 1 : COMMUNICATION SKILLS-II				
<b>Learning Outcomes</b>	Theory	Practical		
Demonstrate knowledge of various methods of communication	<ol> <li>Methods of communication</li> <li>Verbal</li> <li>Non-verbal</li> <li>Visual</li> </ol>	<ol> <li>Writing pros and cons of written, verbal and non-verbal communication</li> <li>Listing do's and don'ts for avoiding common body language mistakes</li> </ol>		
Provide descriptive and specific feedback	<ol> <li>Communication cycle and importance of feedback</li> <li>Meaning and importance of feedback</li> <li>Descriptive feedback - written comments or conversations</li> <li>Specific and non-specific feedback</li> </ol>	Constructing sentences for providing descriptive and specific feedback		
3. Apply measures to overcome barriers in communication	<ol> <li>Barriers to effective communication – types and factors</li> <li>Measures to overcome barriers in effective communication</li> </ol>	<ol> <li>Enlisting barriers to effective communication</li> <li>Applying measures to overcome barriers in communication</li> </ol>		
4. Apply principles of communication	<ol> <li>Principles of effective communication</li> <li>7 Cs of effective communication</li> </ol>	<ol> <li>Constructing sentences that convey all facts required by the receiver</li> <li>Expressing in a manner that shows respect to the receiver of the message.</li> <li>Exercises and games on appying 7 Cs of effective communication.</li> </ol>		
5. Demonstrate basic writing skills	<ol> <li>Writing skills to the following:         <ul> <li>Sentence</li> <li>Phrase</li> <li>Kinds of Sentences</li> <li>Parts of Sentence</li> <li>Parts of Speech</li> <li>Articles</li> <li>Construction of a Paragraph</li> </ul> </li> </ol>	Demonstration and practice of writing sentences and paragraphs on topics related to the subject		

UNIT 2 : SELF-MANAGEMENT SKILLS-II			
Apply stress management techniques	<ol> <li>Meaning and importance of stress management</li> <li>Stress management techniques – physical exercise, yoga, meditation</li> <li>Enjoying, going to vacations and holidays with family and friends</li> <li>Taking nature walks</li> </ol>	<ol> <li>Exercises on stress         management techniques –         yoga, meditation, physical         exercises</li> <li>Preparing a write-up on an         essay on experiences during a         holiday trip</li> </ol>	
Demonstrate the ability to work independently	<ol> <li>Importance of the ability to work independently</li> <li>Describe the types of self-awareness</li> <li>Describe the meaning of self-motivation and self-regulation</li> </ol>	<ol> <li>Demonstration on working independently</li> <li>goals</li> <li>Planning of an activity</li> <li>Executing tasks in a specific period, with no help or directives</li> <li>Demonstration on the qualities required for woking independently.</li> </ol>	
	N AND COMMUNICATION T		
Distinguish between different operating systems	<ol> <li>Classes of operating systems</li> <li>Menu, icons and task bar on the desktop</li> <li>File concept, file operations, file organization, directory structures, and file-system structures</li> <li>Creating and managing files and folders</li> </ol>	<ol> <li>Identification of task bar, icons, menu, etc.</li> <li>Demonstration and practicing of creating, renaming and deleting files and folders, saving files in folders and sub-folders, restoring files and folders from recycle bin.</li> </ol>	
Apply basic skills for care and maintenance of computer	Importance and need of care and maintenance of computer     Cleaning computer components     Preparing maintenance schedule     Protecting computer against viruses     Scanning and cleaning viruses and removing SPAM files, temporary files and folders	Demonstration of the procedures to be followed for cleaning, care and maintenance of hardware and software	

## **UNIT 4 : ENTREPRENEURIAL SKILLS-II**

- 1. List the characteristics of successful entrepreneur
- 1. Entrepreneurship and society
- 2. Qualities and functions of an entrepreneur
- 3. Role and importance of an entrepreneur
- 4. Myth about entrepreneurship
- 5. Entrepreneurship as a career option
- Writing a note on entrepreneurship as career option
- 2. Collecting success stories of first generation and local entrepreneurs
- 3. Listing the entrepreneurial qualities analysis of strength and weaknesses
- 4. Group discussion of selfqualities that students feel are needed to become successful entrepreneur
- 5. Collect information and related data for a business
- 6. Make a plan in team for setting up a business

## **UNIT 5 : GREEN SKILLS-II**

- 1. Demonstrate the knowledge of importance, problems and solutions related to sustainable development
- 1. Definition of sustainable development
- 2. Importance of sustainable development
- 3. Problems related to sustainable development
- 1. Identify the problem related to sustainable development in the community.
- 2. Group discussion on the importance of respecting and conserving indigenous knowledge and cultural heritage
- 3. Discussion on the responsibilities and benefits of environmental citizenship, including the conservation and protection of environmental values.
- 4. Preparing models on rain water harvesting drip / sprinkler irrigation, vermincompost, solar energy, solar cooker, etc.

## Part-B

UNIT 1 : DIGITAL DOCUMENTATION (ADVANCED)				
1. Apply Styles in the document	<ul> <li>Styles / categories in Writer</li> <li>Styles and Formatting window</li> <li>Using Fill Format</li> <li>Creating and updating new style from selection</li> <li>Load style from template or another document.</li> <li>Creating a new style using dragand-drop.</li> <li>Applying styles.</li> </ul>	<ul> <li>List style categories in Writer. Select the style from the Styles and Formatting window.</li> <li>Use Fill Format to apply a style to many different areas quickly.</li> <li>Create and update a new style from a selection.</li> <li>Load a style from a template or another document.</li> <li>Create a new style using dragand drop.</li> </ul>		
Insert and use images in document	<ul> <li>Options to insert image to document from various sources.</li> <li>Options to modify, resize, crop and delete an image.</li> <li>Creating drawing objects, setting or changing its properties. Resizing and grouping drawing objects.</li> <li>Positioning image in the text.</li> </ul>	<ul> <li>Insert an image to document from various sources.</li> <li>Modify, resize, crop and delete an image.</li> <li>Create drawing objects</li> <li>Set or change the properties of a drawing object</li> <li>Resize and group drawing objects</li> <li>Position the image in the text</li> </ul>		
3. Create and use template	<ul> <li>Templates in Writer</li> <li>Using predefined templates</li> <li>Creating a template</li> <li>Set up a custom template</li> <li>Using a template</li> <li>Changing to a different template</li> <li>Updating a Document</li> </ul>	<ul> <li>Create a template</li> <li>Use predefined templates</li> <li>Set up a custom default template.</li> <li>Update a document.</li> <li>Change to a different template.</li> <li>Use the Template.</li> <li>Update the document.</li> </ul>		
4. Create table of contents	<ul> <li>Table of contents, Hierarchy of headings, Customization of table of contents.</li> <li>Character styles, Maintaining a table of contents.</li> </ul>	<ul> <li>Create a table of contents.</li> <li>Define a hierarchy of headings.</li> <li>Customize a table of contents.</li> <li>Apply character styles.</li> <li>Maintain a table of contents.</li> </ul>		

UNIT 2 : ELECTRONIC SPREADSHEET (ADVANCED)				
Apply data using scenarios and goal seek	<ul> <li>Using consolidating data, Creating subtotals.</li> <li>Using "what if" scenarios. Using "what if" tools</li> <li>Using goal seek and solver.</li> </ul>	<ul> <li>Use consolidating data</li> <li>Create subtotals</li> <li>Use "what if" scenarios.</li> <li>Use "what if" tools</li> <li>Use goal seek and solver</li> </ul>		
2. Link spreadsheets data	<ul> <li>Setting up multiple sheets. Creating reference to other sheets by using keyboard and mouse.</li> <li>Creating reference to another document by using keyboard and mouse.</li> <li>Relative and absolute hyperlinks</li> <li>Hyperblinks to the sheet.</li> <li>* Linking to external data.</li> <li>* Linking to registered data sources.</li> </ul>	<ul> <li>Setup multiple sheets by inserting new sheets.</li> <li>Create reference to other sheets by using keyboard and mouse.</li> <li>Create references to other documents by using keyboard and mouse.</li> <li>Create, Edit and Remove hyperlinks to the sheet.</li> <li>Link to external data.</li> <li>Link to registered data source.</li> </ul>		
3. Share and review a spreadsheet	<ul> <li>Setting up a spreadsheet for sharing.</li> <li>Opening and saving a shared spreadsheet.</li> <li>Recording changes.</li> <li>Add, Edit and Format the comments.</li> <li>Reviewing changes – view, accept or reject changes, Merging and comparing.</li> </ul>	<ul> <li>Set up a spreasheet for sharing.</li> <li>Open and save a shared spreadsheet.</li> <li>Record changes.</li> <li>Add, Edit and Format the comments.</li> <li>Review changes – view, accept or reject changes.</li> <li>Merge and compare sheets.</li> </ul>		
4. Use Macros in spreasheet	<ul> <li>Using the macro recorder.</li> <li>Creating a simple macro.</li> <li>Using a macro a a function.</li> <li>Passing arguments to a macro.</li> <li>Passing the arguments as values.</li> <li>Macros to work like built-in functions.</li> <li>Accessing cells directly.</li> <li>Sorting the columns using macro.</li> </ul>	<ul> <li>Demonstrate the use of a macro recorder.</li> <li>Create a simple macro.</li> <li>Use a macro.</li> <li>Pass arguments to a macro.</li> <li>Pass the arguments as values.</li> <li>Write the macros that act like built – in functions</li> <li>Access cells directly</li> <li>Sort the columns using macro.</li> </ul>		

UNIT 3: DATABASE MANAGEMENT SYSTEM			
Appreciate the concept of Database Management System	<ul> <li>Concept and examples of data and information,</li> <li>Concept of database,</li> <li>Advantages of database,</li> <li>Features of database,</li> <li>Concept and examples of Relational database,</li> <li>Concept and examples of field, record, table, database,</li> <li>Concept and examples of Primary key, composite primary key, foreign key,</li> <li>Database Management System (DBMS) Software</li> <li>Relational Data Base Management System (RDBMS) software.</li> </ul>	<ul> <li>Identify the data and information.</li> <li>Identify the field, record, table in the database.</li> <li>Prepare the sample table with some standard fields.</li> <li>Assign the primary key to the field.</li> <li>Identify the primary key, composite primary key, foreign key.</li> </ul>	
Create and edit tables using wizard and SQL commands	<ul> <li>Introduction to Libre Office Base</li> <li>Database objects – tables, queries, forms, and reports of the database,</li> <li>Terms in database – table, field, record,</li> <li>Steps to create a table using table wizard</li> <li>Data types in database,</li> <li>Option to set primary key Table Data View dialog box</li> </ul>	<ul> <li>Start the Libre Office Base and observe the parts of main window.</li> <li>Identify the data base objects</li> <li>Create the sample table in any category using wizard.</li> <li>Practice to create different tables from the available list and choosing fields from the available fields.</li> <li>Assign data types of fields, Set primary key.</li> <li>Edit the table in design view, Enter the data in the fields.</li> </ul>	
3. Perform operations on table	<ul> <li>Inserting data in the table,</li> <li>Editing records in the table,</li> <li>Deleting records from the table,</li> <li>Sorting data in the table,</li> <li>Referential integrity,</li> <li>Creating and editing relationships – one to one, one to many, many to many</li> <li>Field properties</li> </ul>	Demonstrate to:  Insert data in the table, Edit records in the table, Delete records from table, Sort data in the table, Create and edit relationships one to one, one to many, many to many Enter various field properties.	

4. Retrieve data using query	<ul> <li>Database query,</li> <li>Defining query,</li> <li>Query creation using wizard,</li> <li>Creation of query using design view,</li> <li>Editing a query,</li> <li>Applying criteria in query – single field, multiple fields, using wildcard,</li> <li>Performing calculations,</li> <li>Grouping of data,</li> <li>Structure Query Language (SQL).</li> </ul>	<ul> <li>Prepare a query for given criteria,</li> <li>Demonstrate to create query using wizard, and using design view,</li> <li>Edit a query,</li> <li>Demonstrate to apply various criteria in query – single field, multiple fields, using wild card,</li> <li>Performing calculations using query in Base,</li> <li>Demonstrate to group data,</li> <li>Usee basic SQL commands,</li> </ul>
5. Create Forms and Reports using wizard	<ul> <li>Forms in BASE.</li> <li>Creating form using wizard.</li> <li>Steps to create form using Form Wizard.</li> <li>Options to enter or remove data from forms.</li> <li>Modifying form,</li> <li>Changing label, background,</li> <li>Searching record using Form,</li> <li>Inserting and deleting record using Form,</li> <li>Concept of Report in Base,</li> <li>Creating Report using wizard,</li> <li>Steps to create a Report using Wizard.</li> </ul>	<ul> <li>Illustrate the various steps to create Form using Form Wizard,</li> <li>Enter or remove data from Forms,</li> <li>Demonstrate to modify Forms,</li> <li>Demonstrate to change label, background,</li> <li>Search record using Form,</li> <li>Insert and delete record using Form View,</li> <li>Illustrate the various steps to create Report using Report Wizard,</li> <li>Demonstrate various examples of Report.</li> </ul>
UNIT 4: MANAGING HEA	ALTH, SAFETY AND SECURE V	WORKING ENVIRONMENT
1. Maintain workplace safety	<ul> <li>Basic safety rules to follow at workplace – Fire safety,</li> <li>Falls and slips, Electrical safety, Use of first aid.</li> <li>Case Studies of hazardous situations.</li> </ul>	<ul> <li>Practice to follow basic safety rules at workplace to prevent accidents and protect workers – Fire safety,</li> <li>Falls and slips, Electrical safety, Use of first aid.</li> </ul>
2. Prevent Accidents and Emergencies	<ul><li>Accidents and emergency,</li><li>Types of Accidents,</li><li>Handling Accidents</li><li>Types of Emergencies.</li></ul>	<ul> <li>Illustrate to handle accidents at workplace,</li> <li>Demonstrate to follow evacuation plan and procedure in cae of an emergency.</li> </ul>

3. Protect Health and Safety at Work	<ul> <li>Hazards and sources of hazards,</li> <li>General evacuation procedures,</li> <li>Heatlhy living.</li> </ul>	<ul> <li>Identify hazards and sources of hazards.</li> <li>Identify the problems at workplace that could cause accidents.</li> <li>Practice the general evaucation procedures in case of an emergency.</li> </ul>
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## CLASS-X

## **SUBJECT: PUNJABI**

ਪਾਠ-ਪੁਸਤਕਾਂ : 1. ਸਾਹਿਤ-ਮਾਲ਼ਾ-10 (ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)

- 2. ਵੰਨਗੀ-10 (ਪੰਜਾਬ ਸਕੂਲ ਸਿੱਖਿਆ ਬੋਰਡ)
- 3. ਗੋਲਡਨ ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਅਤੇ ਲਿਖਤ ਰਚਨਾ (ਨਰਿੰਦਰ ਸਿੰਘ ਦੁੱਗਲ)

## I. ਪੜ੍ਹਨ ਕੌਸ਼ਲ

- 1. ਅਣਡਿੱਠਾ ਪੈਰ੍ਹਾ (ਵਾਰਤਕ) (10)
- 2. ਅਣਡਿੱਠੀ ਕਾਵਿ-ਟੁਕੜੀ

II. ਵਿਆਕਰਨ (12)

- 3. ਸਮਾਸੀ ਸ਼ਬਦ (ਬਹ-ਵਿਕਲਪੀ)
- 4. ਬਹੁ-ਅਰਥਕ (ਬਹੁ-ਵਿਕਲਪੀ)
- 5. ਕਿਰਿਆ ਵਿਸ਼ੇਸ਼ਣ (ਬਹ-ਵਿਕਲਪੀ)
- 6. ਅਗੇਤਰ-ਪਿਛੇਤਰ (ਸ਼ਬਦ ਬਣਾਉਣਾ)
- 7. ਮੁਹਾਵਰੇ (ਕ ਤੋਂ ਝ ਤੱਕ) ਵਾਕਾਂ ਵਿੱਚ ਵਰਤ ਕੇ ਅਰਥ ਸਪੱਸ਼ਟ ਕਰਨਾ।

## III. ਪ੍ਰਭਾਵਸ਼ਾਲੀ ਲਿਖਣ-ਕੌਸ਼ਲ

(18)

- 8. ਲੇਖ ਰਚਨਾ (ਵਿਚਾਰ ਪ੍ਰਧਾਨ ਅਤੇ ਆਮ ਵਿਸ਼ੇ)
- 9. ਪੱਤਰ-ਰਚਨਾ (ਨਿੱਜੀ ਤੇ ਬਿਨੈ-ਪੱਤਰ)
- 10. ਚਿੱਤਰ / ਫੋਟੋ / ਤਸਵੀਰ (ਦ੍ਰਿਸ਼) ਦੇ ਅਧਾਰ 'ਤੇ

## IV. ਪਾਠ-ਪਸਤਕਾਂ 'ਤੇ ਅਧਾਰਿਤ

(40)

## ਅਤਿ ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ (ਬਹੁ-ਵਿਕਲਪੀ)

- 11. ਕਹਾਣੀ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (ਬਹ-ਵਿਕਲਪੀ) ਚੋਣ ਅਧਾਰਤ
- 12. ਕਵਿਤਾ ਤੇ ਇਕਾਂਗੀ ਵਿੱਚੋਂ (ਬਹ-ਵਿਕਲਪੀ) ਚੋਣ ਅਧਾਰਤ
- 13. ਕਹਾਣੀ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (ਇੱਕ ਜਾਂ ਦੋ ਸ਼ਬਦਾਂ ਵਾਲੇ, ਚੋਣ ਅਧਾਰਤ)

## ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲ਼ੇ ਪ੍ਰਸ਼ਨ :

14. ਕਹਾਣੀ ਤੇ ਇਕਾਂਗੀ ਵਿੱਚੋਂ (25-30 ਸ਼ਬਦਾਂ ਵਿੱਚ ਚੋਣ ਅਧਾਰਤ)

## ਵੱਡੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪਸ਼ਨ :

- 15. ਕਵਿਤਾ ਤੇ ਵਾਰਤਕ ਵਿੱਚੋਂ (50 ਤੋਂ 60 ਸ਼ਬਦਾਂ ਵਿੱਚ ਚੋਣ ਅਧਾਰਤ)
- 16. ਇਕਾਂਗੀ 'ਚੋਂ ਵੱਡੇ ਉੱਤਰਾਂ ਵਾਲੇ (50 ਤੋਂ 60 ਸ਼ਬਦਾਂ ਵਿੱਚ ਚੋਣ ਅਧਾਰਤ)

ਨੋਟ— ਵਿਆਕਰਨ ਭਾਗ ਦੇ ਸਾਰੇ ਵਿਸ਼ੇ, ਅਣਡਿੱਠਾ ਪੈਰ੍ਹਾ, ਅਣਡਿੱਠੀ ਕਾਵਿ-ਟੁਕੜੀ, ਚਿੱਤਰ ਪਛਾਣ ਪਹਿਲੀ ਅਵਧੀ ਵਾਲੇ ਹੀ ਕਰਵਾਏ ਜਾਣਗੇ।

ਪਹਿਲੀ ਅਵਧੀ (ਅਪ੍ਰੈਲ ਤੋਂ ਸਤੰਬਰ)			
ਪਾਠ ਪੁਸਤਕਾਂ ਪਾਠ-ਕ੍ਰਮ	ਪਾਠ-ਸੂਝ	ਕਿਰਿਆਤਮਕ ਕਾਰਜ	ਕੌਸ਼ਲਤਾ
1. ਕਹਾਣੀ : ਕੁਲਫ਼ੀ	ਆਰਥਿਕ ਤੰਗੀ ਕਾਰਨ ਇੱਛਾਵਾਂ ਨੂੰ ਦਬਾਉਣਾ	ਪੈਸੇ ਦੀ ਤੰਗੀ ਦੇ ਜ਼ਿੰਦਗੀ ਵਿੱਚ ਨੁਕਸਾਨ ਬਾਰੇ	ਸਵੈ-ਜਾਗਰੁਕਤਾ
2. ਇਕਾਂਗੀ : ਜਫ਼ਰਨਾਮਾ	ਕੀਤੇ ਹੋਏ ਮਾੜੇ ਕਰਮਾਂ ਦਾ ਖ਼ਤ ਰਾਹੀਂ ਅਹਿਸਾਸ ਕਰਵਾਉਣਾ	ਜਫ਼ਰਨਾਮੇ ਬਾਰੇ ਜਾਣਕਾਰੀ	ਆਲੋਚਨਾਤਮਕ ਦ੍ਰਿਸ਼ਟੀ ਦਾ ਵਿਕਾਸ
3. ਸ਼ਬਦ : ਸੋ ਕਿਉਂ ਮੰਦਾ ਆਖੀਐ	ਔਰਤ ਦੀ ਸਮਾਜ ਵਿੱਚ ਪ੍ਧਾਨਤਾ	ਅਜੋਕੇ ਦੌਰ ਵਿੱਚ ਕੁੜੀਆਂ ਦੀ ਘੱਟ ਰਹੀ ਗਿਣਤੀ ਭਰੂਣ ਹੱਤਿਆ ਬਾਰੇ ਵਿਚਾਰ-ਚਰਚਾ	ਹਮਦਰਦੀ ਦੀ ਭਾਵਨਾ ਦਾ ਵਿਕਾਸ
4. ਲੇਖ : ਘਰ ਦਾ ਪਿਆਰ	ਘਰ ਦੇ ਪਿਆਰ ਦਾ ਸ਼ਖ਼ਸੀਅਤ 'ਤੇ ਅਸਰ	ਘਰ ਦੀ ਮਹੱਤਤਾ ਬਾਰੇ ਜਾਣਕਾਰੀ	ਰਚਨਾਤਮਕ ਅੰਤਰਦ੍ਰਿਸ਼ਟੀ ਦਾ ਵਿਕਾਸ
5. ਸ਼ਬਦ : ਤੂੰ ਮੇਰਾ ਪਿਤਾ ਤੂੰ ਹੈ ਮੇਰਾ ਮਾਤਾ	ਦੁਨਿਆਵੀ ਰਿਸ਼ਤਿਆਂ ਦੀ ਥਾਂ ਪ੍ਰਮਾਤਮਾ ਦੀ ਅਹਿਮੀਅਤ	ਪਰਮਾਤਮਾ ਦੀ ਜੀਵਨ ਬਾਰੇ ਅਹਿਮੀਅਤ	ਆਤਮ ਜਾਗਰੁਕਤਾ
6. ਕਹਾਣੀ : ਅੰਗ−ਸੰਗ	ਦੁਨੀਆਂ ਤੋਂ ਜਾਣ ਦੇ ਬਾਵਜੂਦ ਵੀ ਬੰਦੇ ਦੀ ਮੌਜੂਦਗੀ ਮਹਿਸੂਸ ਕਰਨੀ	ਚੰਗੇ ਮਾੜੇ ਕੰਮਾਂ ਦੇ ਨਤੀਜਿਆਂ ਤੇ ਉਨ੍ਹਾਂ ਦੇ ਜ਼ਿੰਦਗੀ 'ਤੇ ਪੈਂਦੇ ਪ੍ਭਾਵ, ਨਸ਼ਿਆਂ ਦੇ ਕੋਹੜ ਬਾਰੇ ਚਰਚਾ	ਆਲੋਚਨਾਤਮਕ ਦ੍ਰਿਸ਼ਟੀ ਦਾ ਵਿਕਾਸ
7. ਸ਼ਬਦ : ਕਿਰਪਾ ਕਰਿ ਕੈ ਬਖਸਿ ਲੈਹੁ	ਬਹੁਤ ਭੁੱਲਾਂ ਅਤੇ ਪਾਪਾਂ ਨੂੰ ਕਰਨ 'ਤੇ ਵੀ ਪਰਮਾਤਮਾ ਕੋਲੋਂ ਬਖ਼ਸ਼ਾਉਣਾ	ਪਰਮਾਤਮਾ ਦੁਆਰਾ ਬਖ਼ਸ਼ੇ ਲੋਕਾਂ ਦੀ ਜਾਣਕਾਰੀ	ਆਤਮ ਚਿੰਤਨ
8. ਬੋਲੀ	ਬੋਲੀ ਦਾ ਜ਼ਿੰਦਗੀ ਵਿੱਚ ਮਹੱਤਵਪੂਰਨ ਯੋਗਦਾਨ	ਸਫ਼ਲ ਸ਼ਖ਼ਸੀਅਤਾਂ ਦੀ ਮਹਾਨਤਾ ਅਤੇ ਸਫ਼ਲਤਾ ਵਿੱਚ ਬੋਲੀ ਦੀ ਅਹਿਮੀਅਤ ਬਾਰੇ	ਭਾਵਨਾਵਾਂ ਦਾ ਵਿਕਾਸ
	ਦੂਜੀ ਅਵਧੀ (ਅਕ	ਤੂਬਰ ਤੋਂ ਫਰਵਰੀ)	
9. ਕਹਾਣੀ : ਧਰਤੀ ਹੇਠਲਾ ਬਲ਼ਦ	ਮਨੁੱਖ ਦੀ ਸਹਿਣਸ਼ਕਤੀ ਜ਼ਿੰਦਗੀ ਲਈ ਬਹੁਤ ਜ਼ਰੂਰੀ	ਸਬਰ ਸੰਤੋਖ ਵਾਲੀਆਂ ਸ਼ਖ਼ਸੀਅਤਾਂ ਦੀ ਚਿੱਤਰਾਂ ਸਹਿਤ ਜਾਣਕਾਰੀ	ਆਤਮ-ਚਿੰਤਨ
10. ਲੇਖ : ਮੇਰੇ ਵੱਡੇ ਵਡੇਰੇ	ਵਡੇਰਿਆਂ ਦੇ ਕਾਰਨਾਮਿਆਂ ਦਾ ਜ਼ਿਕਰ	ਵੱਡਿਆਂ ਦੇ ਤਜ਼ਰਬਿਆਂ ਅਤੇ ਤਜ਼ਰਬਿਆਂ ਨਾਲ਼ ਹੋਏ ਫ਼ਾਇਦਿਆਂ ਬਾਰੇ	ਆਤਮ-ਚਿੰਤਨ
11. ਜੰਗ ਦਾ ਹਾਲ (ਕਵਿਤਾ)	ਸਰਕਾਰ ਤੋਂ ਬਿਨਾਂ ਕੀਤੀ ਤਿਆਰੀ ਦੀ ਅਸਫ਼ਲਤਾ	ਵੀਰਾਂ ਦੀ ਗਾਥਾ ਬਿਆਨ ਕਰਨਾ	ਨਿਰਣਾ ਲੈਣਾ
12. ਤੁਰਨ ਦਾ ਹੁਨਰ (ਲੇਖ)	ਤੁਰਨਾ ਜ਼ਿੰਦਗੀ ਦੀ ਬਹੁਤ ਵੱਡੀ ਕਲਾ	ਤੁਰਨ ਦੇ ਕੋਈ ਪੰਜ ਫ਼ਾਇਦੇ ਲਿਖਣੇ	ਰਚਨਾਤਮਕ ਸੋਚ
13. ਇਕਾਂਗੀ : ਦੂਜਾ ਵਿਆਹ	ਆਪਣੇ ਵੱਸ ਵਿੱਚ ਕਰਨ ਲਈ ਧਮਕਾਉਣਾ	ਦੂਜੇ ਵਿਆਹ ਦੇ ਫ਼ਾਇਦੇ ਅਤੇ ਪੁੱਤਰ ਦੀ ਲਾਲਸਾ ਕਾਰਨ ਟੁੱਟਦੇ ਪਰਿਵਾਰਾਂ ਬਾਰੇ ਦੱਸਣਾ।	ਅੰਤਰ-ਸੰਬੰਧ ਰਿਸ਼ਤਿਆਂ ਬਾਰੇ
14. ਸ਼ਬਦ : ਸਤਿਗੁਰ ਨਾਨਕ ਪ੍ਗਟਿਆ	ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਦੇ ਇਸ ਦੁਨੀਆਂ 'ਤੇ ਆਉਣ ਤੋਂ ਬਾਅਦ ਦਾ ਬਦਲਾਅ	ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਬਾਰੇ ਜਾਣਕਾਰੀ।	ਆਲੋਚਨਾ ਦ੍ਰਿਸ਼ਟੀ ਦਾ ਵਿਕਾਸ

15. ਲੇਖ : ਪ੍ਰਾਰਥਨਾ	ਪ੍ਰਾਰਥਨਾ ਜ਼ਿੰਦਗੀ ਦਾ	ਪ੍ਰਾਰਥਨਾ ਦੇ ਜ਼ਿੰਦਗੀ ਵਿੱਚ	ਸਮੱਸਿਆ ਦਾ ਹੱਲ
	ਮਹੱਤਵਪੂਰਨ ਅੰਗ	ਫ਼ਾਇਦੇ	
ਵਿਆਕਰਨ	_		
ਸਮਾਸੀ-ਸ਼ਬਦ			
ਬਹੁ-ਅਰਥਕ ਸ਼ਬਦ			
ਕਿਰਿਆ ਵਿਸ਼ੇਸ਼ਣ			
ਅਗੇਤਰ-ਪਿਛੇਤਰ			
ਮੁਹਾਵਰੇ			
ਲੇਖ ਰਚਨਾ :			
ਆਮ ਵਿਸ਼ੇ, ਵਿਚਾਰ ਪ੍ਰਧਾਨ	ਲਿਖਣ ਕੌਸ਼ਲ ਦਾ ਵਿਕਾਸ,		
ਪੱਤਰ ਰਚਨਾ :	ਗਿਆਨ ਵਿਸਥਾਰ		
ਨਿੱਜੀ, ਬਿਨੈ-ਪੱਤਰ			
ਚਿੱਤਰ ਦੇ ਅਧਾਰ 'ਤੇ ਵਰਣਨ	ਸ਼ਬਦ-ਭੰਡਾਰ ਵਿੱਚ ਵਾਧਾ	ਕੋਈ ਵੀ ਚਿੱਤਰ ਚਿਪਕਾ ਕੇ	
		ਜਾਣਕਾਰੀ	

# **SUBJECT: SOCIAL SCIENCE**

HISTORY : India and the Contemporary World [18+2 (Map Pointing) = 20]			
Chapter/Topic	Learning Outcomes	Activity	Life Skills
1. The Rise of Nationalism in Europe	<ul> <li>Infer how the French Revolution had an impact on the European Countries in the making of nation state.</li> <li>Evaluate the reasons which led to the First World War.</li> </ul>	Discussion on the French Revolution	<ul><li>Self awareness</li><li>Critical thinking</li></ul>
2. Nationalism in India	<ul> <li>Evaluate the effective-ness of the strategies applied by Gandhiji and other leaders in the movements organized by him.</li> <li>Summarise the effects of the First World War that triggered the two defining movements. (Khilafat and Non-</li> </ul>	Map Activity	Critical thinking
3. The Making of a Global World	Cooperation Movement) in India.  • Summarize the changes that	Group Discussion on the transformation in World.	Self awareness
* Subtopic – 1 to 1.3 The Pre-modern World * Interdisciplinary project as a part of multiple assessment • (Internally assessed for 5 marks) Subtopics 2 to 4.4 – The nineteenth century (1815-1914) to end to Brettonwoods and the beginning of Globalization. 4. The Age of Industrialisation	transformed the world in terms of economy, political, cultural and technological areas.  • Depict the global interconnectedness from the Premodern to the present day.  • Enumerate economic,		
	political, social features of Pre & Post Industrialization.		

(To be assessed as part of Periodic Assessment only)  5. Print Culture and the Modern World	<ul> <li>Analyse and infer how the industrialisation impacted colonies with specific focus on India.</li> <li>Enumerate the development of Print from its beginnings in East Asia to its expansion in Europe and India.</li> <li>Compare and contrast the old tradition of handwritten manuscripts versus print technology.</li> </ul>	Flow chart to depict the development of Print.	<ul> <li>Self awareness</li> <li>Effective     Communication</li> <li>Coping with     Emotions</li> </ul>
POLITI	CAL SCIENCE : Democr	ratic Politics–II (20 M	arks)
Power sharing     Sharing     Sharing     Sharing	<ul> <li>Enumerate the need for power sharing in democracy.</li> <li>Analyse the challenges faced by countries like Belgium and Sri Lanka ensuring effective power sharing.</li> <li>Compare and contrast the power sharing of India with Sri Lanka and Belgium.</li> <li>Appreciate how federalism is</li> </ul>	Discussion on various forms of power-sharing	<ul><li> Creative thinking</li><li> Analytical skill</li><li> Decision making</li></ul>
2. Tederansin	<ul> <li>being practised in India.</li> <li>Analyse and infer how the policies and politics that has strengthens federalism in practice.</li> </ul>	Group discussion on the distribution of power between Union and State Government and present the outcomes to student.	<ul><li>Decision making</li><li>Problem solving</li></ul>
3. Gender, Religion and Caste	<ul> <li>Examines the role and differences of Gender, religion and caste in practicing democracy in India.</li> <li>Analyses the different expressions based on these.</li> </ul>	Debate on how different expressions based on differences in Gender, Religion and Caste are healthy or unhealthy in a democracy.	<ul><li>Social responsibility and Ethics</li><li>Self awareness</li></ul>
4. Political Parties	<ul> <li>Understand the process of parties getting elected.</li> <li>Know the significance of right to vote and exercise the duties are citizen of nation.</li> <li>Examine the role, purpose and no. of Political Parties in Democracy.</li> </ul>	Use flow chart to bring out the role, purpose and no. of Political Parties.	<ul> <li>Critical thinking</li> <li>Analytical thinking</li> </ul>

5. Outcomes of Democracy	Enumerates how a success of democracy depends on quality of government, economic wellbeing, in equality, social differences, conflict, freedom and dignity	Brainstorming session to compare democracy with non-democracy.	<ul><li>Analytical thinking</li><li>Reasoning Skill</li></ul>
GEOGRAPH	Y : Contemporary India-	II [17+3 (Map Pointii	ng) = 20M
Resources and     Development	<ul> <li>Enumerate how the resources are interdependent, justify how planning is essential in judicious utilization of resources and the need to develop them in India.</li> <li>Infers the rationale for development of resources.</li> </ul>	<ul> <li>Brainstorming on how the resources are interdependent in nature and the need to develop them in India.</li> <li>Map Activity</li> </ul>	<ul><li>Self awareness</li><li>Critical thinking</li></ul>
2. Forest and Wildlife Resources	<ul> <li>Examine the importance of conserving forests and wildlife and their interdependency in maintaining the ecology for the sustainable development of India.</li> <li>Anayse the role of grazing and wood cutting in the</li> </ul>	<ul> <li>Read newspaper, articles and discuss deforestation and need for conservation, how developmental work impact forests.</li> <li>Map Activity</li> </ul>	<ul><li>Social responsibility</li><li>Self Awareness</li></ul>
3. Water Resources	<ul> <li>developing and degradation.</li> <li>Examine the reasons for conservation of water resource in India.</li> <li>Analyse and infer how the Multipurpose projects are supporting the requirement of</li> </ul>	<ul> <li>Map Activity</li> <li>Brainstorming session to discuss the scarcity of water.</li> </ul>	<ul><li>Social responsibility</li><li>Problem Solving</li></ul>
4. Agriculture	<ul> <li>water in India.</li> <li>Examine the crucial role played by agriculture in our economy and society.</li> <li>Analyse the challenges faced by the farming community in India.</li> <li>Agricultural practices and the impact of agriculture on the environment.</li> </ul>	<ul> <li>Group discussion on the challenges faced by farmers, such as low productivity, lack of modern technology.</li> <li>Map Activity</li> </ul>	<ul> <li>Analytical thinking</li> <li>Self awareness</li> </ul>
5. Minerals and Energy Resources	<ul> <li>Differentiates between the conventional and non-conventional sources of energy.</li> </ul>	Use of flow-chart to differentiate between the conventional and non-	• Social responsibility and ethics

6. Manufacturing Industries  7. Lifelines of National Economy Only map pointing to be evaluated in the Board Examination. Interdisciplinary project as part of Multiple Assessments (Internally assessed for 5 marks)	<ul> <li>Suggest strategies for sustainable use of natural resources.</li> <li>Analyses the importance of minerals and natural resources for economic development of the country.</li> <li>Enumerates the impact of manufacturing industries on the envrionment and develop strategies for sustainable development of the manufacturing sector.</li> <li>Analyses the relation between the availability of raw material, and location of the industry.</li> </ul>	conventional sources of energy.  • Map Activity  • Map Activity  • Map Activity	<ul> <li>Reasoning skills</li> <li>Analytical skills</li> </ul>
ECONOMICS : UN	L NDERSTANDING ECON	OMIC DEVELOPMI	ENT (20 Marks)
Development     Sectors of the Indian Economy	<ul> <li>Enumerate and examine the different processes involved in setting developmental goals that helps in nation building.</li> <li>Analyse and infer how the per capita income depicts the economic condition of the nation.</li> <li>Analyze how the economic activities in different sectors contribute to the overall growth and development of the Indian economy.</li> </ul>	<ul> <li>Debate on 'Health and Education' are the true indicators of development.</li> <li>Class Conversation / group discussion on how to create more employment</li> </ul>	<ul> <li>Decision Making</li> <li>Creative Thinking</li> <li>Reasoning Skills</li> <li>Analytical thinking</li> </ul>

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3. Money and Credit	<ul> <li>Summarize how the organised and unorganised sectors are providing employment and the challenges faced by them.</li> <li>Enumerate how many play as a medium exchange in all transaction of goods and services since ancient times to the present times.</li> <li>Analyse and infer various sources of credit.</li> </ul>	• Group discussion to enumerate how money plays as a medium exchange in all transactions of goods and services since ancient times to the present times.	<ul><li>Self Awareness</li><li>Critical thinking</li></ul>
<ul> <li>4. Globalization and the Indian Economy Topics to be evaluated in Board Examination: <ul> <li>What is Globalization</li> <li>Factors that have enabled globalization</li> </ul> Interdisciplinary project as part of Multiple Assessment (internally assessed for 5 marks)</li> <li>Production across the countries</li> <li>Chinese toys in India</li> <li>World Trade Organisation</li> <li>The Struggle for a Fair Globalisation</li> </ul> 5. Consumer Rights (Project Work)	Enumerate the concept of globalization and its definition and also factors which enable globalization.	• Interactive group discussion to enumerate the concept of globalization and factors responsible for globalization.	• Interpersonal Relationship

	LIST OF MAPS		
	HISTORY		
Subject	Name of the Chapter	List of Areas to be located / labelled / identified on the map	
History	Nationalism in India	I. Congress sessions:  • 1920 Calcutta  • 1920 Nagpur  • 1927 Madras session  II. 3 Satyagraha movements:  • Kheda  • Champaran  • Ahmedabad mill workers  III. Jallianwala Bagh  IV. Dandi March	
Geography	Resources and Development	Identify Major Soil Types	
	Water Resources	Locating and Labelling:  Salal  Bhakra Nangal  Tehri  Rana Pratap Sagar  Sardar Sarovar  Hirakund  Nagarjun Sagar  Tuhgabhadra	
	Agriculture	<ul> <li>Identify:</li> <li>Major areas of Rice and Wheat</li> <li>Largest/Major producer states of Sugarcane, Tea, Coffee, Rubber, Cotton and Jute</li> </ul>	
	Minerals and Energy Resources	Identify:  a. Iron Ore mines  • Mayurbhanj  • Durg  • Balladla  • Bellary  b. Coal Mines  • Raniganj  • Bokaro  • Talcher  • Neyveli	

	c. Oil Fields Digboi Naharkatia Mumbai High Bassien Kalol Ankaleshwar  Locate & Label: Power Plants  a. Thermal Namrup Singrauli Ramagundam  b. Nuclear Narora Kakrapara Tarapur Kalpakkam  MANUFACTURING INDUSTRIES:  1. Manufacturing Industries (Locating and Labelling Only): Cotton Textile Industries: a. Mumbai b. Indore c. Surat d. Kanpur e. Coimbatore Iron and Steel Plants: a. Durgapur b. Bokaro c. Jamshedpur d. Bhilai e. Vijayanagar f. Saleem Software technology Parks: a. Noida b. Gandhinagar c. Mumbai d. Pune e. Hyderabad f. Bengaluru	
Lifelines of National Economy	g. Chennai h. Thiruvananthapuram  Locating and Labelling:  a. Major Sea Ports  • Kandla • Mumbai • Marmagao • New Mangalore • Kochi • Tuticorin • Chennai • Paradip • Haldia  b. International Airpots  • Amritsar (Raja Sansi-Sri Guru Ram Dasjee) • Delhi (Indira Gandhi) • Mumbai (Chhatrapati Shivaji) • Chennai (Meenam Bakkam) • Kolkata (Netaji Subhash Chandra Bose) • Hyderabad (Rajiv Gandhi)	
Note: Items of Locating and labelling may also be given for Identification.		

INTERNAL ASSESSMENT-20 MARKS		
Types of Assessment	Description	Marks Allocated
1. Periodic Assessment	Pen Paper Test	5
2. Multiple Assessment	Quiz, Debate, Role Play, Viva, Group Discussion, Visual expression, Interactive bulletin board, Gallery Walks, exit cards, concept maps, peer assessment, self assessment etc. through inter-disciplinary project	5
3. Subject Enrichment Activity	Project work on consumer Rights or Social issues. <b>Or</b> Sustainable development	5
4. Portfolio	Classwork, work done (activities / assignments) reflection, narration, journals, etc. Achievement of the student in subject throughout the year and participation in different activities.	5

## CLASS-X

## **SUBJECT: SCIENCE**

### **BOOK**: Science – Textbook for Class X – NCERT Publication

APRIL & MAY									
Content area / Concepts	Learning Objectives	Activities	Life Skills						
<ul><li>1. Chemical Reactions and Equations</li><li>• Introduction</li></ul>	Compare the characteristics of initial & final substances in order to check whether the change is physical or chemical.	observing the following reactions and classifying them into:  A. Combination reaction B. Decomposition reaction C. Displacement reaction D. Double displacement reaction (i) Action of water on quicklime (ii) Action of heat on ferrous sulphate crystals (iii) Iron nails kept in copper sulphate solution (iv) Reaction between sodium sulphate and barium chloride solutions  1. Sas ion) In Sas 2. Observing the action of Zn, Fe, Cu and Al metals on the following salt solutoins:  (i) ZnSO <sub>4</sub> (aq) (ii) FeSO <sub>4</sub> (aq) (iii) FeSO <sub>4</sub> (aq) (iv) Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> (aq) Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of	observing the following reactions and classifying them into:  A. Combination reaction B. Decomposition reaction C. Displacement reaction D. Double displacement reaction (i) Action of water on	observing the following reactions and classifying	<ul><li> Creative thinking</li><li> &amp; Critical thinking</li><li> Self Awareness</li></ul>				
Chemical Equations	Relate the substances taking part in the chemical reaction & substances formed in the chemical reaction in order to classify them as reactants & products.								
	Use chemical symbols & chemical formulae correctly in order to acquire the skill of writing chemical equations.								
	Apply Law of Conservation of Mass in order to balance chemical equations.								
Types of Chemical Reactions	Categorize the given reactions as (combination / decomposition) based on the reactants & products of a chemical reaction.								
	Classify the given reaction as displacement or double displacement based on the type of reactants used & products formed.								
	Predict the reaction as Oxidation or Reduction based on the addition / removal of oxygen / hydrogen / electrons to the reactants to form products.								

<ul><li>Effects of Oxidation</li><li>Rancidity</li></ul>	Observe colour change in iron, copper and silver articles over time in order to outline the effects of corrosion in our surroundings (real life situations, stating any two).  Detect changes in smell, colour, taste of food items overtime, in order to explain effects of oxidation on food items.		
<ul><li>2. Acids, Bases and Salts</li><li>Introduction</li></ul>	Recall the tastes of acids and bases in order to point out if given food items contain an acid or a base.	1. A. Finding the pH of the following samples by using pH paper/universal indicator:	<ul><li> Creative thinking</li><li> Self Awareness</li><li> Problem-Solving Skills</li></ul>
Action of acids and bases on indicators	Observe the action of given substances with various indicators, in order to categorize them as acids or bases	<ul><li>(i) Dilute Hydrochloric</li><li>Acid</li><li>(ii) Dilute NaOH solution</li><li>(iii) Dilute Ethanoic Acid</li></ul>	
• Acid / base + metal > salt + hydrogen gas	Detect the formation of hydrogen gas when a metal reacts with an acid or a base, in order to confirm the presence of an acid / base given an unknown compound.	solution (iv) Lemon juice (v) Water (vi) Dilute Hydrogen Carbonate Solution	
• acid + metal carbonates / bicarbonates > salt + water + CO <sub>2</sub>	Detect the formation of carbon dioxide when a metal carbonate / bicarbonate reacts with acid, in order to detect the presence of acid given an unknown compound.	2. Studying the properties of acids and bases (HCl & NaOH) on the basis of their reaction with:  (a) Litmus solution (Blue/Red)  (b) Zinc Metal	
• acid + base > salt + water	Analyse the reaction taking place between an acid and a base (alkalis, metal oxides) using an indicator.	(c) Solid sodium carbonate	
Acid & base in water solution	Write down the ions present in aqueous solution of an acid or a base, in order to explain why aqueous acid/base conduct electricity		
• How strong are acid or base solutions ?	Detect the strength of given substances based on their position in the pH scale.		

Importance of pH in everyday life	Explain the effect of pH change in animals, plants and environment in order to learn suitable pH range for survival.		<ul><li>Self Awareness</li><li>Critical thinking</li></ul>
More about salts	Identify the positive and negative radicals present in a salt, in order to predict a salt's family and pH range.	Activity 2.8 Pg. 22	
Sodium Hydroxide	Outline the process of formation of sodium hydroxide in order to explain its manufacture using common salt.		
Bleaching Powder,     Baking Soda &     Washing Soda	List the properties & explain the preparation / manufacture some important compounds of Sodium. (bleaching powder, baking soda and washing soda) in order to explain their manufacture using common salt.		
Water of Crystallisation	Demonstrate the activity of heating copper sulphate crystals and change in colour, in order to detect the presence of water of crystallisation.	Activity 2.15 Pg. 32	
Metals and Non-metals     Physical Properties	Observe various substances and their physical properties in order to classify them as metals or non-metals.	Activity 3.1 Pg. 37	<ul><li> Critical thinking</li><li> Creative thinking</li></ul>
Chemical Properties     of metals     Metal + oxygen /     water / dilute acid >	Predict the products when metals & non-metals react with oxygen, water, dilute acids in order to write a balanced chemical equation.		
Reaction of metals     with other metal salts	Identify the product formed when a metal reacts with a metal salt, in order to list the metals in order of their reactivity.	Activity 3.12 Pg. 44	
Ionic compounds	Discuss the process of how metals react with non-metals, in order to explain formation & properties of ionic compounds.	Activity 3.13 Pg. 48	

Occurrence of metals     Refining of metals     Corrosion &	Analyse the process of getting metals from their oxides, sulphides, carbonates in order to extract them from their ores.  Explain the process of electrolytic refining in order to assess how to obtain pure metals from impure samples  Observe corrosion in metal	Activity 3.14 Pg. 53	
Prevention	articles & its process in order to develop ways to prevent corrosion by forming alloys, painting, galvanising		
<ul><li>4. Carbon and its</li><li>Compounds</li><li>Bonding in Carbon</li></ul>	Write down electron shell configuration of carbon in order to predict formulae of carbon compounds and illustrate the structure of molecules of carbon compounds with chain, branched & ring structure.		Problem Solving skills
Saturated and     Unsaturated Carbon     Compounds	Draw structures of carbon compounds in order to classify them as saturated or unsaturated	Activity 4.1 Pg. 58	
Chains branches and rings	Draw structures of carbon compounds and show types of bonds (single / double / triple) in order to classify them as alkanes / alkenes / alkynes		
Functional groups	Draw structures of carbon compounds with functional groups, in order to predict their properties due to functional groups and type of bonding present	Activity 4.2 Pg. 67	
Homologous Series	Classify carbon compounds in homologous series in order to predict their properties		
Nomenclature of carbon compounds	Identify the functional group, type of bonding, number of C atoms present in a carbon		

	compound, in order to correctly name them.		
Chemical properties of carbon compounds	Observe how carbon compounds burn in oxygen, in order to classify them as saturated or unsaturated	Activity 4.3 Pg. 69 Activity 4.4 Pg. 69	
Oxidation	Illustrate the chemical properties of carbon compounds (like combustion, oxidation, addition & substitution) along with balanced chemical reaction.	<ol> <li>Study of the following properties of acetic acid (ethanoic acid):</li> <li>(i) Odour</li> <li>(ii) solubility in water</li> </ol>	
Addition	Identify how carbon compounds react with hydrogen in the presence of nickel catalyst, in order to write a balanced chemical reaction.	<ul><li>(iii) effect on litmus</li><li>(iv) reaction with Sodium</li><li>Hydrogen Carbonate</li></ul> 2. Study of theThe second of the second of th	
• Substitution	Identify how carbon compounds react with chlorine in the presence of sunlight, in order to write a balanced chemical reaction.	comparative cleaning capacity of a sample of soap in soft and hard water.	
Ethanol & Ethanoic acid	Perform physical and chemical tests in order to distinguish between Ethanol & Ethanoic acid based on their properties (reaction with other substances)		
<ul><li>5. Life Processes</li><li>Autotrophic Nutrition</li></ul>	Explain the process of absorption of CO <sub>2</sub> & H <sub>2</sub> O, in order to understand how autotrophs obtain substances necessary for nutrition.	Activity 5.1 Pg. 82 Preparing a temporary mount of a leaf peel to show stomata.	<ul><li>Self-awareness</li><li>Problem Solving skills</li><li>Critical thinking</li></ul>
	Explain the process of conversion of CO <sub>2</sub> & H <sub>2</sub> O into carbohydrates, in order to understand how autotrophs obtain nutrition.		
Heterotrophic     Nutrition	List and explain the strategies employed by heterotrophes to take up food, in order to understand how heterotrophs obtain nutrition.		

Nutrition in Human Beings	Illustrate the process involved in human digestive system, in order to explain how humans obtain nutrients from food.  List the enzymes & their functions involved in human digestive system, in order to understand breakdown of food in humans.		
Respiration	Outline and explain the ways of breakdown of glucose by various pathways, in order to explain how energy is obtained in organisms.  Illustrate the process involved in	Activity 5.3 Pg. 85 Experimentally show that carbon dioxide is given out during respiration.	
	human respiratory system, in order to explain how humans take in oxygen and expel CO <sub>2</sub> .		
Transportation in Animals	Illustrate the process of transport of oxygenated & deoxygenated blood by human heart, in order to explain how oxygen is transported to cells.	Activity 5.7 Pg. 91	
	Outline the process of double circulation of blood in fishes, in order to explain how oxygenated & deoxygenated blood is compartmentalized.		
	Describe the function of blood vessels, arteries, platelets & lymph in human body, in order to understand how human transportation system works.		
Transportation in Plants	Explain the function of xylem (vessels and tracheids) in plants, in order to explain how plants take up water forms soil.	Activity 5.8 Pg. 95	
	Explain the function of transpiration in order to explain how water travels up in plants.		
	Explain the function of phloem & ATP, in order to explain how food is transported in plants.		

Illustrate the process involved in human excretory system, in order to explain how waste is transported out of humans' body.		
Describe transpiration and other ways in which plants shed extra wastes, in order to explain excretion in plants.		
Draw the structure & explain the functioning of a neuron, in order to explain how electrical signals travel in human body.	Activity 6.1 Pg. 101	<ul><li> Coping with Emotions</li><li> Stress management</li><li> Critical thinking</li></ul>
Outline the working of a reflex arc, in order to explain how reflex actions take place in humans		
Illustrate the location and functions of different parts of human brain, in order to understand working of human brain		
Examine tropic movements in plants, in order to understand how plants respond to environmental triggers like light, gravity, water	Activity 6.2 Pg. 107	
Discuss limitaions of electrical impulses, in order to outline the importance and use of hormones		
Illustrate the function of endocrine glands in human body, in order to understand functioning of hormones.	Activity 6.4 Pg. 111	
List down the reasons for changes in DNA copying and their effect on ecosystem, in order to understand importance of variations	Studying (a) binary fission in Amoeba and (b) budding in yeast and Hydra with the help of prepared slides.	<ul><li> Creative thinking</li><li> Empathy</li></ul>
	human excretory system, in order to explain how waste is transported out of humans' body.  Describe transpiration and other ways in which plants shed extra wastes, in order to explain excretion in plants.  Draw the structure & explain the functioning of a neuron, in order to explain how electrical signals travel in human body.  Outline the working of a reflex arc, in order to explain how reflex actions take place in humans  Illustrate the location and functions of different parts of human brain, in order to understand working of human brain  Examine tropic movements in plants, in order to understand how plants respond to environmental triggers like light, gravity, water  Discuss limiations of electrical impulses, in order to outline the importance and use of hormones  Illustrate the function of endocrine glands in human body, in order to understand functioning of hormones.  List down the reasons for changes in DNA copying and their effect on ecosystem, in	human excretory system, in order to explain how waste is transported out of humans' body.  Describe transpiration and other ways in which plants shed extra wastes, in order to explain excretion in plants.  Draw the structure & explain the functioning of a neuron, in order to explain how electrical signals travel in human body.  Outline the working of a reflex arc, in order to explain how reflex actions take place in humans  Illustrate the location and functions of different parts of human brain, in order to understand working of human brain  Examine tropic movements in plants, in order to understand how plants respond to environmental triggers like light, gravity, water  Discuss limiations of electrical impulses, in order to outline the importance and use of hormones  Illustrate the function of endocrine glands in human body, in order to understand functioning of hormones.  List down the reasons for changes in DNA copying and their effect on ecosystem, in order to understand importance  Activity 6.1 Pg. 101  Activity 6.2 Pg. 107  Activity 6.2 Pg. 107  Activity 6.2 Pg. 107  Studying (a) binary fission in Amoeba and (b) budding in yeast and Hydra with the help of

<ul> <li>Fission</li> <li>Fragmentation &amp; spore formation</li> </ul>	Illsutrate the process of fission in amoeba, leishmania & plasmodium, in order to understand how unicellular organisms divide  Illustate the process of fragmentation in Spirogyra & spore formation in Rhizopus, in order to understand how multicellular organisms with simple body design divide.		
Regeneration	Illustrate the process of regeneration in Planaria, in order to understand how fully differentiated mutlicellular organisms divide		
Budding	Illustrate the process of budding in Hydra, in order to understand how fully differentiated multicellular organisms use regenerative cells to divide		
Vegetative     Propagation	Illustrate the process of vegetative propagation in plants like sugarcane, roses, grapes in order to understand how plants reproduce without seeds	Activity 7.6 Pg. 118	
Sexual Reproduction in Flowering Plants	Label the different parts of a flower and explain their functions, in order to understand how flowers reproduce to form fruit.	Identification of the differnt parts of a embryo of a dicotseed (Pea, gram or red Kidney Bean)	
Reproduction in Human Beings	List down the changes occuring in male and female body in teenage years, in order to understand effects of puberty		
Male Reproductive System	Illustrate the male reproductive system, in order to understand its function in reproduction		
• Female Reproductive System	Illustrate the female reproductive system, in order to understand its function in reproduction		

Reproductive health	Describe the changes taking place in female body after / without fertilization, in order to understand human reproduction  List down the ways to avoid fertilization, in order to avoid pregnancy and maintain reproductive health		
8. Heredity and Evolution • Mendel's experiments	State and explain Mendel's traits of inheritance, in order to understand how traits are inherited from one generation to next.		<ul> <li>Communication skills</li> <li>Empathy</li> <li>Interpersonal skills</li> </ul>
Sex determination	Explain the combination of sex chromosomes, in order to understand how sex is determined in humans.		
Inherited & Acquired     Traits	Classify the given traits as inherited or acquired, in order to understand which traits cause a change in genes.	Activity 8.1 Pg. 129	
<ul><li>9. Light-Reflection and Refraciton</li><li>Reflection of light</li></ul>	State the laws of reflection of light, in order to understand how light travels in a medium when it encounters another object		<ul><li>Problem Solving Skills</li><li>Decision Making Skills</li></ul>
Spherical Mirrors	Outline the rule of image formation by spherical mirrors in order to complete the ray diagrams by drawing reflected rays.		
	Represent the path of incident ray and reflected ray in order to decipher the position and nature of image formed.	Activity 9.1 Pg. 135	
Mirror Formula & Magnification	Express $u$ , $v$ , $f$ in the mirror formula in order to apply sign convention in solving word		

Refraction of Light	problems to find the unknown variable.  Deduce the nature and size of image by magnification in order to relate height of object with height of image.  Demonstrate the path of light when it travels through a rectangular glass slab, in order to formulate laws of refraction of light.	1. Tracing the path of a ray of light passing through a rectangular glass slab for different angles of Incidence. Measure the	
Refractive Index	Compare speed of light in one medium with another in order to calculate refractive index.	angle of incidence, angle of refraction, angle of emergence & intercept the	
Refraction by     Spherical Lenses,     Image formation	Represent the path of incident & reflected light rays from a concave lens, in order decipher the position and nature of image formed.	result.  2. Determination of the focal length of: (i) Concave mirror (ii) Convex lens	
	Illsutrate the path of incident & reflected light rays from a convex lens, in order decipher the position and nature of image formed.	by obtaining the image of a distant object.	
Lens formula & magnification	Construct the lens formula for a lens relating $v$ , $u$ , $f$ ; in order to find an unknown variable given the other two.		
	State the magnification for a lens, in order to relate height of object with height of image.		
Power of a lens	Calculate the power of a lens, in order to determine its power to converge or diverge.		
10. Human Eye and the Colourful World  • The Human Eye	Illustrate the parts and function of human eye, in order to understand how humans see the objects around them.	Activity 10.1 Pg. 165	<ul><li>Empathy</li><li>Self-Awareness</li><li>Problem Solving skills</li></ul>

Power of     Accommodation	Describe how focal length of eye changes, in order to understand how humans see close and far objects		
Defects of vision and their correction	Identify the defects of vision in human eye (myopia, hypermetropia, presbyopia) and their causes, in order to devise a correction method for them.		
Refraction of light through a prism	Examine the path of light rays through a prism, in order to determine how light gets deviated when travelling through a prism	1. Tracing the path of the rays of light through a glass prism.	<ul><li> Critical thinking</li><li> Creative thinking</li></ul>
Dispersion	Trace the path of white light rays through a prism, in order to determine that white light is made of seven colours		
Atmospheric Refraction	Elaborate the process of atmospheric refraction, in order to understand natural phenomena, like twinkling of stars and advance sunrise and delayed sunset		
Scattering of Light	Explain the process of scattering of light, in order to understand natural phenomena, like tyndall effect, blue colour of the sky		
<ul><li>11. Electricity</li><li>Electric current &amp; circuit</li></ul>	Evaluate the charge flowing through a conductor in a given time, in order to calculate current flowing through it	1. Studying the dependence of Potential difference (V) across a resistor on the current (I)	<ul><li>Self awareness</li><li>Decision Making Skills</li></ul>
Electric Potential and Potential difference	Determine work done in moving a charge across two points, in order to calculate potential difference between two points	passing through it & determines its resistance. Also plotting a graph between V & I.  2. Determination of the equivalent resistance of two resistors when connected in series & paralle.	
Circuit Diagram	Identify the electrical components and their functions, in order to build a functioning circuit		

<ul> <li>Ohm's Law</li> <li>Factors on which resistance depends</li> <li>Resistance of a system</li> </ul>	Plot a graph between voltage and current, in order to prove ohm's law & find resistance  Define resistivity and its range for different materials, in order to classify substances as conductors, alloys and insulators  Determine the resultant		
of resistors	resistance in a series and a parallel combination, in order to identify the suitable combination like house, etc.		
Heating effect of electric current	Explain and calculate the heating effect of electric current, in order to learn working of appliances like heater and iron		
• Power	Calculate power, in order to represent electric consumption in domestic circuits		
<ul><li>12. Magnetic Effects of Electric Current</li><li> Magnetic field and field lines</li></ul>	Draw magnetic field lines for a bar magnet, in order to identify the magnetic field strength at different points around a magnet		<ul><li> Creative thinking</li><li> Critical thinking</li></ul>
Magnetic field due to a straight current carrying conductor	Represent magnetic field lines for a straight current carrying conductor, in order to identify the magnetic field strength at different points around it.	Activity 12.1 Pg. 195	
Magnetic field due to a current carrying circular loop	Draw magnetic field lines for at current carrying circular loop, in order to identify the magnetic field strength at different points around it.		
Magnetic field due to a current carrying solenoid	Outline magnetic field lines for at current carrying solenoid, in order to identify the magnetic field strength at different points around it.	Activity 12.2 Pg. 196	

Force carrying conductor in a magnetic field     Domestic Electric circuits	State Fleming's Left-Hand rule,  Analyse the significance of neutral, earth and live wire, in order to understand formation of a domestic electrical circuit	Activity 12.7 Pg. 202	Problem Solving Skill
13. Our Environment • Ecosystem	Classify biotic and abiotic components and their interaction with each other, in order to describe an ecosystem	Activity 13.2 Pg. 209	<ul><li>Interpersonal skills</li><li>Communication skils</li></ul>
Food chains and webs	Tabulate the organisms feeding on one another (producers, consumers, decomposers) and energy transfer between them, in order to form a food chain or a food web	Activity 13.3 Pg. 212	<ul><li>Empathy</li><li>Problem Solving Skills</li></ul>
Ozone depletion	Describe the formation & properties of ozone, in order to identify ways to protect it from depletion	Activity 13.8 Pg. 215	
Managing garbage	Classify different waste products as biodegradable or non-biodegradable, in order to assess their effect on environment	Activity 13.9 Pg. 216	

## **CLASS-X**

## **SUBJECT: WORK EDUCATION**

**April** Preparation and use of First Aid Kit

May Bank related activities like how we can open and operate an account

**July** Cooking without Fire

August Participation in Cleanliness activities

September —

**October** A field trip like a museum, a factory or a historical site.

**November** Preparation of a budget and helping the elders in house hold activities.

**December** Funk with Junk

### **CLASS-X**

## **SUBJECT: HEALTH AND PHYSICAL EDUCATION**

**April** General Exercises and Specific Exercises

Mass P.T. Exercises

Yog and Meditation

May Short Distance Races, 100m, 200m, 400m

Recreational Games

July Practice of Different Games: Volley ball, Foot ball, Hand ball, Kho-Kho, T.T., Judo, Yoga, Chess

and Badminton

August Safety in Play Ground

Athletic Field Event's Practice of Skills, Long Jump, Shot Put, Discus throw and Javelin throw

October Athletic Long distance event practice, 800 m, 1500 m, 3000 m and walk events

Fundamental Skills of Volley ball, Hand ball, Foot ball and Badminton

**November** Warming up Exercises

Mass P.T. Exercises

Recreational Games

Yog

**December** Project Work:

Balance Diet

Road Safety Rules

First Aid

Yog Asanas

Traffic Rules

**January** General Discussion about :

Discipline

Moral Education

Health and Hygiene

## CLASS-X

## SUBJECT : MATHEMATICS

### **BOOK**: Mathematics Textbook for Class–X NCERT

#### **Course Structure**

Unit	Unit Name	Marks
I	Number System	06
II	Algebra	20
III	Coordinate Geometry	06
IV	Geometry	15
V	Trigonometry	12
VI	Mensuration	10
VII	Statistics and Probability	11
	Total	80
Internal Assessment		20 Marks
Pen Paper Test and Multiple Assessment (5 + 5)		10 Marks
Portfolio		05 Marks
Lab Practical		05 Marks

TERM-I			
Chapter	Learning Outcomes	Skills	<b>Activities Related</b>
Ch-1 Real Numbers	<ul> <li>The Learner:</li> <li>Generalises properties of numbers and relations among them.</li> <li>Evolves results - Eculid's Division Algorithm and Fundamental Theorem of Arithmetic and applies them to solve problems related to real life context.</li> <li>Proves √2, √3 etc. as irrational numbers.</li> <li>Justifies the condition on rational numbers to be terminating decimals or non-terminating repeating decimals.</li> </ul>	Logical deductions, Critical thinking	To obtain the conditions for consistency of a system of linear equations in two variables by graphical method.

Ch-2 Polynomials	<ul> <li>The Learner:</li> <li>Recalls general form of linear and quadratic polynomials and finds zeroes of polynomial by graph, where it intersects the <i>x</i>-axis.</li> <li>Creates relationship between the zeroes of the quadratic polynomial and its coefficients.</li> <li>Calculates zeroes of the polynomial of degree more than 2.</li> </ul>	Analytical thinking, Observation Skill	Case Study based questions on the topic polynomials
Ch-3 Pair of Linear Equations in Two Variables	<ul> <li>The Learner:</li> <li>Recalls and defines general form of linear equations of two variables and expresses different pair of linear equations in two variables in general form.</li> <li>Draws graph of linear equations of two variables to solve word problems.</li> <li>Determines whether ordered pair (x, y) is a solution of pair of equations.</li> <li>Understands to solve pair of equations by the methods of Substitution and Elimination.</li> <li>Verifies the type of solution of equations by using three conditions.</li> <li>Solves word problems of daily life situations.</li> </ul>	Accuracy, Critical thinking, Verification	Graphical representation of pair of linear equations
Ch-4 Quadratic Equations	<ul> <li>The Learner:</li> <li>Recalls the concept of quadratic polynomial and correlates with quadratic equation.</li> <li>Represents the equation in general form as ax² + bx + c = 0 where a, b, c ∈ R and a ≠ 0.</li> <li>Find roots of quadratic equations by different methods - Factorisation.</li> <li>Calculate discriminant to find nature of the roots.</li> <li>Solves quadratic equations by quadratic formula.</li> </ul>	Recognition, Problem Solving, Analytical thinking	Solution of daily life problems
Ch-5 Arithmetic Progression	<ul> <li>The Learner:</li> <li>Recognises the pattern in a given series.</li> <li>Understands the term common difference and its importance in AP.</li> <li>Identifies the first term and common difference to form an AP.</li> <li>Applies the formulas and calculates <i>n</i>th term of an AP and the sum up to <i>n</i>th term of an AP.</li> <li>Develops strategies to apply the concepts of AP to daily life situations.</li> </ul>	Deductive reasoning, Logical reasoning	To verify the given sequence is an arithmetic pogression by paper cutting & posting method.

Ch-7 Coordinate Geometry	<ul> <li>The Learner:</li> <li>Recalls the Cartesian plane and locates points in it.</li> <li>Derives distance and section formulas and applies them to calculate <ul> <li>(a) Distance between two points in a plane.</li> <li>(b) The coordinates of a point which divides the line segment joining of two points internally in the given ratio.</li> </ul> </li> <li>Finds the coordinates of the mid-point and checks the collinearity of the points by distance formula.</li> </ul>	Verification, Problem Solving	To find the centroid of a triangle using paper cutting & folding activity.
Ch-13 Statistics	<ul> <li>The Learner:</li> <li>Recalls the basic terms of Statistics.</li> <li>Calculates mean of grouped data by different methods - direct, assumed mean method, step deviation method.</li> <li>Determines the modal class and median class to find mode and median of grouped data respectively.</li> <li>Applies formulas of median and mode of solves problem of daily life situations.</li> </ul>	Conceptual thinking, Presentation, Investigation	To find the average height of students studying in class X.
Ch-14 Probability	<ul> <li>The Learner:</li> <li>Defines the different terms - outcome, event, elementary event, sure event, impossible event, complementary events etc.</li> <li>Associates probability as a chance and uses formula to find probability of an event.</li> <li>Verifies the sum of all probabilities of all the elementary events is 1.</li> <li>Justifies that for any E, E' stands for not E and shows P(E) + P(E') = 1.</li> <li>Validate the maximum and minimum values of probability i.e. 0 ≤ P(E) ≤ 1</li> <li>Applies the concepts to solve problems of daily life situations.</li> </ul>	Decision making, Extract, Analytical thinking	To set the idea of probability of an event through a double colour cards experiment.
Ch-6 Triangles Ex. 6.1, 6.2, 6.3	<ul> <li>The Learner:</li> <li>Identifies plane figures which are same in the shape but different in size.</li> <li>Defines similarity of two triangles and understands similarity rules AAA, SAS, SSS.</li> <li>Proves Basic Proportionality Theorem and its converse, then applies in problems.</li> </ul>	Observational skill, Problem solving aptitude	To verify the Basic Proportionality, then using    lines board & triangle cut-outs.

Ch-8 Introduction to Trigonometry	<ul> <li>The Learner:</li> <li>Determines all 6 trigonometric ratios w.r.t. acute angle of a right triangle.</li> <li>Correlates 6 trigonometric ratios with ratio of two sides at a time of a right triangle and knows that names as - sine, cosine, tangent, cosecant, secant, cotangent.</li> <li>Computes the trigonometric ratios of standard angles.</li> <li>Proves trigonometric identities by using three fundamental identities.</li> </ul>	Conceptual understanding	To find the angle of elevatoin of sun to make a matheamtical instrument 'clinometa'.
Ch-9 Some Applications of Trigonometry	<ul> <li>The Learner:</li> <li>Recalls 6 trigonometric ratios.</li> <li>Visualises eye movement while observing an object.</li> <li>Acquires knowledge of line of sight, horizontal line which make angle of elevation and angle of depression.</li> <li>Draws figures of the problems by making use of angles of elevation and depression and applies trigonometric ratios to each the solutions.</li> <li>Applies the concept of trigonometry in solving problems of daily life context life finding heights of different structures and distances between them.</li> </ul>	Observation skill, Logical thinking, Problem solving	To find the heights and distances of buildings etc. in day to day life.
Ch-10 Circles	<ul> <li>The Learner:</li> <li>Demonstrate three possibilities for intersection of a line and a circle in a plane and then defines tangent and secant to circle</li> <li>Understands the results of circle and proves the theorem-2 tangents drawn from external point are equal in length, geometrically and practically.</li> <li>Applies the theorems in various problems.</li> </ul>	Drawing skill, Analytical thinking, Justification	To verify that lengths of tangents drawn from an external point to a circle are equal using paper cutting folding & pasting.
Ch-11 Areas Related to Circles	<ul> <li>The Learner:</li> <li>Recalls the concept of circumference of circle and solves problems of daily life situations.</li> <li>Identifies and applies the terms major / minor sector, major / minor segment, angle subtended by the arc at the centre.</li> <li>Applies the formulas of area of sector, segment and length of an arc in the problems.</li> <li>Calculates area of combined plane figures.</li> </ul>	Observation skill, Problem solving skill, Critical thinking	To get the formula for length of arc of sector and area of sector.

Ch-12 Surface Areas and Volume	<ul> <li>The Learner:</li> <li>Recalls solid figures and formulas of their C.S.A., T.S.A. and volumes.</li> <li>Identifies combined solid figures.</li> <li>Calculates surface area and volume of combined solid figures by using formulas and general understanding.</li> <li>Uses the concepts of S.A. and volume for variety of 3-D objects to apply in real life situations.</li> </ul>	Recognition of 3-D structure, Correlation, Computation skill	To make a right circular cylinder of given height and circumference of circular base from a given rectangle.
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