ENGLISH

Class IX (2026-27)

Introduction

At the secondary stage, language learning strengthens the learners' abilities to use language meaningfully for comprehension, expression, interpretation, and critical engagement with texts. Pedagogical processes emphasise dialogic reading, reflective writing, listening, and speaking activities, and contextual use of language through discussion, interpretation, and creative expression. Assessment focuses on understanding, interpretation, communicative clarity, articulation of ideas, and the ability to analyse and respond to texts in multiple modes, rather than only on recall-based written responses.

As per NCF-SE 2023, language education at the Secondary Stage must specifically aim to achieve:

(a) **Oracy and literacy**: Oracy and literacy are fundamental to school education.

- Attaining oracy means students develop fluency in expression and understanding of spoken language.
- Literacy means that all students demonstrate fluent and critical reading, writing, and comprehension capacities in the language.

(b) **Effective communication skills**: Students may develop their language capacities to think critically, identify real-world problems, analyse them, make rational arguments, work out solutions and communicate well in a variety of situations for effective democratic, social, and cultural participation.

(c) **Literary and creative capacities**: Language teaching in schools must aim at building capacities in students towards an appreciation of the literary aspects of language. It may also allow for an exploration of — how to be creative and imaginative in their spoken and written expressions across cultures.

(d) **Appreciation and engagement in culture**: Learning a language is learning a culture. Thus, language plays an important role in the immersion and participation in culture. Students must be allowed to understand and appreciate the rich linguistic cultures of India.

(f) **Linkages with the Indian Knowledge System**: Along with the development of skills and competence, other aspects such as emotional intelligence, social feeling, national pride, connections of art, social concerns, and natural science are addressed through content, context and pedagogy with the focus on fundamentals of literature and life (critical thinking), such as emotion, perception, feeling, sound, language, thought, memory, metaphor, aesthetics, environment, self, society, culture, civilisation, etc.

Language Learning Approach

Experiential, activity and discussion-based approaches are recommended to promote the culture of self-learning and reduce dependence on the teacher. The teaching of language will be enhanced through innovative and experiential methods. Thus, the teaching of language will also be based on the experiential-learning pedagogy. The shift requires that students' contexts and experiences become part of the pedagogical processes.

Experiential learning includes any type of activity that comprises learning by doing, i.e., experimenting, exploring, sharing personal narratives, observing, cooperative learning, and above all, self-learning and self-assessment. Students need to have mastery in the 21st century skills, such as effective communication, critical thinking, creativity, collaboration, etc.

There are diverse learning situations and contexts in India. Language education plays a crucial role in keeping students rooted to their country, as it allows individuals to connect with their culture, heritage and society.

Learning Standards

Learning standards enable teachers to plan their content, pedagogy, and assessment towards achieving specific competencies. These must be seen as enabling guidelines for teachers and school leaders, not as constraining demands on them. By the end of the secondary stage, we would expect every student must have gained the whole range of skills and competencies. It is at this stage that using the language of students turns out to be more productive. Students use language to interpret, understand, address issues, and gain knowledge that will help them to become autonomous learners.

As per NCF-SE 2023, students will develop linguistic proficiency for academic use in R1 and R2 by the end of the secondary stage ensuring that a higher level of familiarity, understanding, and interpretation of literature is achieved.

Curricular Goals and Competencies-Secondary Stage

Curricular Goals (CGs) are specific statements derived from the broader Aims of Education that give clear direction to curriculum development and implementation. Competencies are the specific, observable, and systematically assessable learning achievements that students must attain by the end of the stage.

Language R1

Curricular Goal (CG)	Competency (C)
CG-1: Uses language for effective communication through writing various forms (essays, letters, articles, discussions, interviews, public speeches) and for new media (email, audio, and visual material).	C-1.1: Uses language appropriate to social context, expresses agreement and disagreement with reasons, and arrives at conclusions through discussion and debate. C-1.2: Writes in different styles (narrative, descriptive, expository, persuasive) from their own experiences and experiences of others. C-1.3: Writes for real-life situations (invitations, speeches, condolence messages, notices, creative slogans, advertisements) and for school newsletter/magazine/journal. C-1.4: Scripts to inform and communicate ideas effectively with the use of technology.
CG-2: Develops an appreciation of the aesthetics in different genres (humour, suspense, tragedy) through analysis of style (narrative, descriptive, expository, persuasive) and employs these elements in their writing.	C-2.1: Describes characteristics of works of literature from different time periods (such as early, medieval, contemporary). C-2.2: Analyses a literary text by close reading, critiquing form and style, and interpreting possible meanings. C-2.3: Composes literary texts by using appropriate literary devices.
CG-3: Uses language to develop reasoning and argumentation skills by engaging with a variety of audio and written material.	C-3.1: Analyses and evaluates the different audio and written material. C-3.2: Argues with proper rationale by carefully evaluating premises.
CG-4: Appreciates literary and cultural heritage in and related to the language and the richness of Indian languages.	C-4.1: Recognises the multilingual nature of Indian society and richness of its literary work through reading texts and watching content of different genres. C-4.2: Appreciates the richness of culture and heritage in the different works of regional language literature and their connections. C-4.3: Shows an understanding of the role of language in the formation of our identities and culture. C-4.4: Demonstrates a basic knowledge of the commonalities among some of the major Indian languages, such as their common phonetic and scientifically arranged alphabets and scripts, common grammatical structures, origins and

Curricular Goal (CG)	Competency (C)
	sources of vocabularies from Sanskrit and other classical languages. C-4.5: Demonstrates a basic knowledge of which languages are spoken in which geographical areas, a sense of the nature and structure of tribal languages, and becomes familiar with a few useful words and phrases and works of literature from a few Indian languages from across the country.

Language R2

Curricular Goal (CG)	Competency (C)
CG-1: Uses language for effective communication through various oral activities (discussions, interviews, public speeches) and writing activities (essays, letters, articles), including new media (email, audio, and visual material).	C-1.1: Uses language appropriate to social context, expresses agreement and disagreement with reasons, and arrives at conclusions through discussion and debate. C-1.2: Writes in different styles (narrative, descriptive, expository, persuasive) from their own experiences and experiences of others. C-1.3: Writes for real-life situations (invitations, speeches, condolence messages, notices, creative slogans, advertisements) and for school newsletter/magazine/journal. C-1.4: Scripts to inform and communicate ideas effectively with the use of technology.
CG-2: Uses language to develop reasoning and argumentation skills by engaging with a variety of audio and written material.	C-2.1: Analyses and evaluates different audio and written material. C-2.2: Argues with proper rationale by carefully evaluating premises.
CG-3: Develops an appreciation of the aesthetics in different genres (humour, suspense, tragedy) through an analysis of style (narrative, descriptive, expository, persuasive) and employs these elements in their writing.	C-3.1: Describes characteristics of works of literature from different time periods (such as early, medieval, contemporary). C-3.2: Analyses a literary text by close reading, critiquing form and style, and interpreting possible meanings. C-3.3: Composes literary texts using appropriate literary devices.

FOCUS AREAS OF THE SYLLABUS

The syllabus aims to develop students' ability to use language effectively for communication, reasoning and creative expression. The curriculum focuses on strengthening Listening, Speaking, Reading and Writing skills while fostering literary appreciation and critical thinking. Students engage with a variety of texts and activities that promote analytical thinking, creativity, collaboration and real-life application of language skills.

Reading

By the end of the secondary stage, students should be able to:

- Read and comprehend a variety of literary and non-literary texts with understanding.
- Identify main ideas, supporting details and key information in written texts.
- Analyse, interpret and evaluate ideas presented in different texts.
- Distinguish between facts and opinions and identify cause–effect relationships.
- Infer meanings and draw conclusions from textual evidence.
- Understand the author's perspective, tone and style of writing.
- Interpret information presented in different forms such as diagrams, charts and tables.
- Connect ideas from the text with personal experiences and social contexts.
- Develop critical reading skills through close reading and discussion.
- Read independently and engage with texts from diverse cultures and contexts.

Writing

By the end of the secondary stage, students should be able to

- Write clearly and coherently using appropriate grammar, vocabulary and organisation.
- Write in different styles such as narrative, descriptive, expository and persuasive.
- Present ideas with a clear beginning, middle and conclusion.
- Describe experiences, events and observations in a logical manner.
- Express opinions and viewpoints with appropriate reasoning and examples.
- Write for real-life purposes such as notices, invitations, advertisements, speeches and messages.
- Gather ideas from different sources and organise them effectively in writing.
- Write reports, articles and pieces for school magazines, newsletters and journals.
- Use technology and digital tools to present ideas through written and visual formats.
- Review, edit and improve written work through feedback and self-assessment.

Listening & Speaking

Listening

By the end of the secondary stage, students should be able to

- Listen attentively to conversations, discussions and audio material.
- Identify the main ideas and important details in spoken texts.
- Analyse and interpret information presented through speeches, discussions and media sources.
- Distinguish between key points and supporting information.
- Understand instructions, explanations and viewpoints expressed by others.
- Note important details and organise information appropriately.

Speaking

By the end of the secondary stage, students should be able to

- Express ideas clearly and confidently in different situations.
- Present opinions, viewpoints and arguments with logical reasoning.
- Participate actively in discussions, debates and conversations.
- Communicate effectively in formal and informal contexts.
- Present ideas through speeches, presentations and oral reports.
- Respond appropriately to questions and viewpoints of others.
- Interact respectfully with others during discussions and collaborative activities.

Structures (Grammar) & Vocabulary

By the end of the secondary stage, students should be able to

- use the **sequence of tenses** correctly in different contexts of communication.
- identify and apply **modal auxiliaries** to express ability, obligation, permission, possibility, and advice.
- transform and use **reported speech** in extended texts including statements, questions, commands, and requests.
- construct sentences using **Conditional Clauses (Type 1)** to express real and possible situations.
- apply the rules of **subject–verb concord** to ensure grammatical accuracy in sentences.
- use appropriate **determiners** to provide clarity and precision in communication.
- identify and construct **clauses**, including **noun clauses** and **relative clauses**, to create complex and meaningful sentences.
- expand vocabulary through contextual reading and writing;
- understand meanings of unfamiliar words through context and reference tools such as dictionaries;
- use appropriate words and expressions to communicate ideas clearly;
- apply vocabulary effectively in speaking and writing tasks.

Grammar and vocabulary learning will be reinforced through editing tasks, sentence transformation, contextual exercises and communicative activities to promote accuracy and fluency in language use.

Literature — Prose & Poetry

By the end of the course, students should be able to:

- Read and appreciate a variety of literary texts from different genres.
- Analyse characters, themes and ideas presented in literary works.
- Interpret events, conflicts and relationships in stories and poems.
- Recognise the influence of context, culture and background on literary texts.
- Identify literary devices such as simile, metaphor, imagery, repetition and symbolism.
- Interpret meanings beyond the literal level through critical reading.
- Evaluate characters' actions and motivations.
- Express personal responses and interpretations through discussion and creative activities.
- Develop an appreciation of the aesthetic and cultural aspects of literature.

Pedagogy of Language

Pedagogy, at the secondary stage, should take into consideration the knowledge and capacities that students will bring from the previous stages of schooling. The pedagogy may encourage more self-study and exploration with a focus on becoming fluent in the methods of inquiry specific to the Curricular Area. At this stage, students can be reasonably expected to become independent learners and the pedagogy in the classroom may reflect this expectation.

Classroom interactions may be a judicious mix of more direct instruction from the teacher with discussion, seminars for discussion, exploration and discovery, and opportunities for students to prepare individual and group projects and present key concepts of the discipline.

Depending on the matter of study, context, and stage of the student, these effective pedagogical approaches would be of a wide range, including pedagogy that is more experiential, integrated, inquiry-driven, discovery-oriented, discussion-based, project-based, arts-based, sports-based, and activity-based. Effective pedagogy, therefore, encourages conceptual understanding, active discovery, questioning and debating, and independent learning. It gives serious consideration to student experiences and student voices, acknowledges and accommodates student diversity, builds on students' previous knowledge, uses a range of teaching techniques, and gives timely feedback on the work done. Classroom processes must encourage active learning with an emphasis on dialogue and building relationships based on mutual respect.

At this stage, the following may become part of the pedagogical process.

a) **Oral presentations**:
   I. Students must be given opportunities for sharing their ideas freely and listening to others' points of view. They must also ask questions, argue for their own views, and accept others' views with proper justification.
   II. Students must be taught focused dialogue and conversation which require organising their thoughts for better clarity, the art of raising relevant questions, brainstorming, and thinking aloud, active participation, and skills of literary appreciation.
   III. Teachers must use methods, such as role play, group discussion, debate, open house dialogue, and interviews to allow students to ask questions and learn to respond impromptu. Club-based activities, assembly gatherings, and celebrations in schools can be used as platforms to practise these methods and may not be seen as a separate exercise.
   IV. Teachers must also find ways to teach students how to work on their listening skills (by paying attention to details and summarising) and use the same in day to-day life.

b) **Developing reading skills**:
   I. **Literary language skills**: Students can be encouraged to participate in group activities in critically analysing a literary text in the class and participate in the activities of the school literature club, poetry house, and fiction-reading groups.
   II. **Critical reading skills**: The teacher may focus on enabling students to make meaning of a variety of texts, move from initial impressions to a closer reading of the text by asking questions related to the effect of words and ideas expressed, and how the effect of the language used in a text is working for specific purposes.
   III. **Exposure to reading multicultural texts**: Activities such as the comparison of literary works of two different writers can be done effectively by inquiring into the author's voice, cultural background, and context of the work, and talking about other similar works in the genre. Projects, plays, folk music performances, and posters are important ways in which students in this stage can be introduced to texts from a different era. Multicultural texts may be available in libraries for students to read in their free time.

c) **Developing writing skills**:
   I. **Functional language writing skills**: Students may be given enough opportunity to practise writing reports, essays, notes, applications, letters to editors, advertisements, and notices. They can also be encouraged to write in magazines, newsletters, newspapers, and blogs.

II. **Literary language writing skills**:
   i. Students must be guided towards independent and creative writing in this stage. They must be taught capacities for analysing literature and connecting it to its historical and socio-economical aspects rather than reading it in isolation, enabling the writing of a critical review.
   ii. Teachers must ensure students practise writing poems, stories, or plays with literary devices (e.g., similes, metaphors, hyperbole, irony, puns, and oxymorons).
   iii. Teaching them to identify voice and style of a writer taking cues from the material they read will help them find their own voice.

Assessment

In alignment with NCF-SE 2023, assessment moves beyond measuring recall to evaluating students' ability to interpret ideas, communicate effectively, think critically, and engage meaningfully with texts and contexts. Assessments should be based on observations, portfolios, and projects and should not just focus on capacities and skills, but also values and dispositions.

Assessments need to be visualised as an ongoing process which teachers integrate within the teaching-learning process using formal and informal ways to elicit reliable evidence about student learning. Assessment may not become an intimidating process that involves the labelling and segregation of students.

The 'assessment culture' must change, so that assessment is conducted increasingly as learning and for learning. There must also be periodic assessment of learning to ensure readiness for the next phase of learning and to arrange suitable support for students when this readiness is not achieved.

Assessment should emphasizes a balanced approach integrating three dimensions:

Assessment of Learning; Assessment for Learning; Assessment as Learning

Assessments could be formative or summative, and both are important for improving teaching and learning.

a) **Formative Assessment**
   I. Formative assessments at secondary stage will continue to be competency-based, covering all dimensions of learning. Therefore, various formative assessment techniques, such as projects, debates, presentations, discussions, experiments, investigations, role plays, journals, and portfolios, should be used to assess learning.
   II. Regular assessments comprising MCQs and constructed responses (e.g., short answer and long answer), with the aim to test conceptual understanding and higher-order capacities rather than merely rote learning.
   III. Classroom and Self-assessment will play a key role in student learning at this stage.

IV. Assessments can be designed using case-based questions, simulations, and essay-type questions to enable the assessment of competencies in order to continually replan and revise the teaching-learning process.

b) **Summative Assessment**

Summative examinations, including certification examinations, continue to be relevant as they serve as a necessary test to understand students' achievement of competencies and learning standards.

I. At the end of each year (or term), there will be a comprehensive summative assessment, which in relevant cases, would be the Board examinations.

II. Assessment may measure the achievement of competencies and learning standards leading to the attainment of Curricular Goals. The connection between the competencies or Learning Outcomes and the assessment should be clear and precise.

III. Appropriate forms of assessments may be chosen in alignment with the competencies and learning standards to be assessed.

IV. Assessments should be constructive, developmental, and learning focused.

Forms of Assessment

There are several forms of assessment that can be used across both formative and summative assessments.

(a) **Written Tests:** Forms of written tests include:

I. **Objective Type Questions**: These include Multiple Choice Questions (MCQs), filling in blanks, matching, sorting lists based on select criteria, picking the odd one out, labelling a diagram, solving a crossword, unscrambling a word, solving riddles and word grids that require a very short or one-word answer.

II. **Constructed Response Questions**: These are questions that require students to frame and write answers. They can be close ended (requiring one correct and short answer) or open-ended (requiring a short or long essay with multiple correct/alternate answers).

It is important to have clear and detailed scoring guides/marking schemes for such questions to avoid subjectivity in assessment.

III. **Graphic Organisers**: These visual representations of ideas and concepts help students organise their learning and assimilate new knowledge.

(b) **Oral Tests**: The most common forms are reading aloud, responding to questions, recitation, and debates and discussions. Other forms, include group discussions, presentations, and extempore talks.

I. **Reading Aloud**: Reading assessments could include reading aloud a passage, a poem, or any other form of writing. Word recognition, fluency,

and voice modulation skills could be assessed along with comprehension by asking students to summarise or talk about what they have read.

II. **Listening and Responding**: Students listen to a text and respond either orally or on a worksheet.

III. **Recitation:** This helps the teacher assess the spoken language with a specific focus on pronunciation, intonation and comprehension by observing students' expressions and actions.

IV. **Debates and Discussions**: Students' fluency of language as well as proficiency in making strong arguments using knowledge and reasoning to persuade and convince the audience can be assessed while also developing an ability to understand and respect others' viewpoints and opinions. Teachers can also include other parameters, such as diction deportment, ability to take criticism positively, and manage their emotions and body language during public speaking. Sharing parameters before setting the task helps students focus on developing these skills which serves as good learning opportunities as well.

Practical Tests

These require students to demonstrate specific skills and applications of their new learning. These include :

I. **Projects**: Projects are longer, structured activities completed by individual students or groups of students that result in a product. For example, a model, a substantial report, or a collection of artefacts. While doing projects, students investigate, explore, and respond to complex questions, real-world challenges, and problems. Projects help assess collaboration, communication, perseverance, creativity, and problem solving along with assessing subject-specific knowledge and skills.

II. **Portfolios**: A student portfolio is a purposeful collection of student work that tells a story about a student's efforts, progress, and achievement in one or more subjects over a period of time. It could be a collection of the student's day-to-day work or a selection of the student's best pieces of work. Portfolios may include writing samples, laboratory reports, journals, artwork, short surveys and research papers, projects, photos, worksheets, tests and map work, Teacher's qualitative comments on the students' work, peer feedback, and the students' own reflections on their learnings.

It becomes a cumulative record of performance from which emerges a clear picture of what students know, can do and how they have progressed over the period.

III. **Multiple Assessment**
These include a range of activities like quizzes, worksheets, oral presentations, class discussions, etc.

IV. **Periodic Pen and Paper Assessment**

Prescribed Textbook- Kaveri: Textbook of English for Grade 9

The textbook has been developed based on common curricular goals rather than rigid differentiation between R1 & R2. The textbook content, learning outcomes, and assessment remain aligned with the common competency framework envisaged for R1 and R2 at the secondary stage, and therefore, the same textbooks can be transacted flexibly in accordance with the learner profile and institutional context.

Question Paper Design- R1 & R2

ENGLISH LANGUAGE – SYLLABUS CLASS – IX (2026-27) R1

SUBJECT CODE –

Section		Weightage
A	Reading Skills	20 Marks
B	Writing Skills and Grammar	30 Marks
C	Language through Literature	30 Marks
D	Internal Assessment	20 Marks

Section A – Reading Skills

I. Reading Comprehension through Unseen Passage – 20 Marks (10+10)

- Descriptive/ Discursive Passage – 400-450 words – 10 Marks
- Case Based Passage (With verbal/visual inputs – statistical data/chart etc.) – 200-250 words – 10 Marks

Total Length of the two passages to be 600-700 words.

Question types to be included: Selected and constructed responses (MCQ's, Objective type, VSAQs, SAQs)

Section B – Writing Skills and Grammar – 30 Marks (10+20)

II. Grammar – 10 Marks (04+03+03)

- Sequence of Tenses in different contexts of communication
- Modal Auxiliaries and their functions in expressing ability, obligation, permission, possibility and advice
- Reported Speech in extended texts including
  - statements
  - questions
  - commands and requests
- Conditional Clause – Type 1
- Subject–Verb Concord
- Determiners
- Clauses – Noun Clause, Relative Clause

3. Editing/Omitting (Selected responses – MCQs) – 04 Marks
4. Sentence Rearrangement – 03 Marks
5. Sentence Transformation – 03 Marks

III. Writing Skills – 20 Marks (03+05+05+07)

6. Writing a Notice, Informal Invitation (Word Limit – Up to 50 words) – 3 Marks

7. Writing a Letter to Editor, Formal E-mail on a given issue for presenting views and suggestions –(Word Limit – 120-150 words) – 5 Marks

8. Writing a Factual Description, Magazine Article (Word Limit – 120-150 words) – 5 Marks

9. Writing Descriptive, Narrative Essay (Word Limit – 200-250 words) – 7 Marks

For questions 6 to 9 attempt any one as per the internal choice provided. The internal choice could comprise both same or different topics.

Section C – Language through Literature – 30 Marks (10 + 10 + 05 + 05)

IV. Extract Based Questions – 5x2 = 10 Marks

10. One extract out of two, from Drama / Prose.

11. One extract out of two, from poetry.

Types of questions to be included – Selected and constructed responses (MCQs, Objective Type Questions, VSAQs)

V. Constructed Responses (Short & Long Answer Questions)

12. Five out of Six Questions to be answered in 40-50 words. 5x2 = 10 Marks

13. One out of two Questions assessing extrapolation beyond the text and across the texts to be answered in about 120-150 words. 5 Marks

14. One out of two Questions assessing theme / plot/ character to be answered in about 120-150 words. 5 Marks

INTERNAL ASSESSMENT 20 MARKS	
Periodic Pen and Paper Tests	**05 Marks**
Multiple Assessment (Quizzes/ Oral Discussions/Presentations etc.)	**05 marks**
Portfolio	**05 Marks**
Subject Enrichment projects (ALS/ Art / IKS / Tech Integrated)	**05 Marks**

ENGLISH LANGUAGE – SYLLABUS CLASS – IX (2026-27) R2

SUBJECT CODE –

Section		Weightage
A	**Reading Skills**	**20 Marks**
B	**Writing Skills and Grammar**	**30 Marks**
C	**Language through Literature**	**30 Marks**
D	**Internal Assessment**	**20 Marks**

Section A – Reading Skills

I. Reading Comprehension through Unseen Passage – 20 Marks (12 + 8)

- Factual/ Literary Passage – 400-450 Words – 12 Marks
- Case Based Passage (With verbal inputs) – 200-250 Words – 8 Marks

Total Length of the two passages to be 600-700 words.

(Question types to be included: Selected and constructed responses (MCQ's, Objective type, VSAQs, SAQs)

Section B – Writing Skills and Grammar – 30 Marks (10+20)

II. Grammar – 10 Marks (04+03+03)

- Sequence of Tenses in different contexts of communication
- Modal Auxiliaries and their functions in expressing ability, obligation, permission, possibility and advice
- Reported Speech in extended texts including
  - statements
  - questions
  - commands and requests
- Conditional Clause – Type 1
- Subject–Verb Concord
- Determiners
- Clauses – Noun Clause, Relative Clause

3. Paragraph Completion (Selected responses: Fill ups with options) – 04 Marks
4. Sentence Rearrangement – 03 Marks
5. Sentence Transformation – 03 Marks

III. Writing Skills – 20 Marks (04+05+05+06)

6. Writing a Notice, Creating a Poster (Word Limit – Up to 50 words) – 4 Marks

7. Writing a Letter to the Editor, Formal E-mail on a given issue for presenting views and suggestions (Word Limit – 120-150 words) – 5 Marks

8. Writing a Speech, Magazine Article based on visual or verbal cues (Word Limit – 120-150 words) -5 Marks

9. Writing a Narrative Essay (Word Limit – 150-180 words) – 6 Marks

For questions 6 to 9 attempt any one as per the internal choice provided. The internal choice could comprise both same or different topics.

Section C – Language through Literature – 30 Marks (15 + 10 + 05)

IV. Extract-Based Questions – 5x3 = 15 Marks

10. One extract out of two, from Prose.

11. One extract out of two, from Drama.

12. One extract out of two, from Poetry.

Types of questions to be included – Selected and constructed responses (MCQs, Objective type questions, VSAQs)

V. Constructed Responses (Short & Long Answer Questions)

13. Five out of Seven Questions to be answered in 40-50 words 5x2 = 10 Marks

14. One out of two Questions to be answered in 120-150 words to assess extrapolation beyond the text and across the texts; theme / plot/ character. 5 Marks

INTERNAL ASSESSMENT 20 MARKS	
Periodic 'Pen and Paper Tests	**05 Marks**
Multiple Assessment (Quizzes/ Oral Discussions/Presentations etc.)	**05 marks**
Portfolio	**05 Marks**
Subject Enrichment projects (ALS/ Art / IKS / Tech Integrated)	**05 Marks**

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Mathematics

Class IX (2026 – 27)

Introduction:

The Mathematics curriculum for the Secondary stage has been redesigned in alignment with the National Education Policy 2020 and the National Curriculum Framework for School Education (NCF – SE) 2023, prioritizing deep conceptual understanding and logical reasoning. The revised syllabus places strong emphasis on developing core mathematical competencies, including problem-solving, visualisation, mathematical modelling, mathematical communication, computational thinking, and data analytics. The syllabus integrate Indian Knowledge System with contemporary mathematical knowledge, highlighting the rich contributions of Indian mathematicians to foster a sense of pride and historical context. A deliberate shift from rote learning to competency-based education ensures that students build deep conceptual understanding and logical reasoning rather than mere procedural fluency. Greater emphasis has been laid on the integration of real-life applications and experiential learning, encouraging students to connect mathematical concepts with everyday situations and cross-disciplinary contexts. Greater emphasis has been laid on competency based learning outcomes encouraging students to connect mathematical concepts with everyday situations and inter-disciplinary contexts. Continuous and holistic assessment through projects, activities, and investigations forms an integral part of the learning process, moving beyond summative examinations.

At the secondary stage, the curriculum focuses on developing essential global mathematical competencies, including mathematical representation through quantities and relations, mathematical modelling and algorithm building, and effective mathematical communication. The study of the number system, algebra, geometry, mensuration, statistics and probability is designed to build a strong foundation for higher education while enhancing functional life skills. The curriculum thus aims to build rich mathematical learning frameworks not only for higher academic pursuits but also for the practical demands of life in a rapidly changing, data-driven world.

Objectives: The broad objectives of teaching Mathematics at the secondary stage are to help the learners to:

- develop logical thinking, critical reasoning, and a structured approach to problem-solving;
- build the ability to recognise, analyse, and solve diverse problems with confidence and adaptability;
- communicate mathematical ideas effectively using appropriate language, symbols, and representations;
- appreciate the beauty, history, and real-life relevance of Mathematics as a discipline;
- connect mathematical concepts to fields such as Science, Technology, Engineering, and Economics;
- engage in both collaborative and independent mathematical exploration and learning;
- develop habits of precision, accuracy, and logical consistency in mathematical work;
- build confidence to explore, experiment, and grow in mathematical understanding without fear of failure.

Curricular Goals (CGs) and Competencies (Cs) from the NCF-SE 2023

CG-1: Understands numbers (natural, whole, integer, rational, irrational, and real), ways of representing numbers, relationships amongst numbers, and number sets.

C-1.1 Develops understanding of numbers, including the set of real numbers and its properties.

CG-2: Builds deductive and inductive logic to prove theorems related to numbers and their relationships (such as '2 is an irrational number', a recursion relation for *Virahanka* numbers, a formula for the sum of the first *n* square numbers).

C-2.1 Understanding of powers (radical powers) and exponents.

CG-3: Discovers and proves algebraic identities and models real-life situations in the form of equations to solve them.

C-3.1 States and proves remainder theorem, factor theorem, and division algorithm.

C-3.2 Models and solves contextualised problems using equations (for example, simultaneous linear equations in two variables or single polynomial equations), and draws conclusions about a situation being modelled.

C-3.3 Learns Brahmagupta's quadratic formula (in both symbolic and poetic form) and its derivation, and uses it to solve some of the poetic puzzles of Bhaskara as well as modern-day problems.

CG-4: Analyses characteristics and properties of two-dimensional geometric shapes, and develops mathematical arguments to explain geometric relationships.

C-4.1 Describes relationships including congruence of two-dimensional geometric shapes (such as lines, angles, triangles) to make and test conjectures and solve problems.

C-4.2 Proves theorems using Euclid's axioms and postulates for triangles and quadrilaterals, and applies them to solve geometric problems.

C-4.3 Proves theorems about the geometry of a circle, including its chords, subtended angles, inscribed polygons, and area in terms of pi.

C-4.4 Understands the irrationality of pi, the best approximations to be discovered over human history, and the first exact formula (infinite series) for pi given by Madhava.

C-4.5 Specifies locations and describes spatial relationships using coordinate geometry, for example, plotting a pair of linear equations and graphically finding the solution, or finding the area of triangle with given coordinates as vertices.

C-4.6 Understands the definitions of the basic trigonometric functions, their history and motivation (including the introduction of the sin and cos functions by Aryabhata using chords), and their utility across the sciences.

CG-5: Derives and uses formulae to calculate areas of plane figures, surface area, and volumes of solid objects.

C-5.1 Visualises, represents, and calculates the area of a triangle using Heron's formula and its generalisation to cyclic quadrilaterals given by Brahmagupta's formula.

C-5.2 Visualises and uses mathematical thinking to discover formulae to calculate surface areas and volumes of solid objects (cubes, cuboids, spheres, hemispheres, right circular cylinders or cones, and their combinations).

CG-6: Analyses and interprets data using statistical concepts (such as measures of central tendency, standard deviations) and probability.

C-6.1 Applies measures of central tendencies, such as mean, median, and mode.

C-6.2 Applies concepts from probability to solve problems on the likelihood of everyday events.

CG-7: Begins to perceive and appreciate the axiomatic and deductive structure of Mathematics.

C-7.1 Proves mathematical statements and carries out geometric constructions using stated assumptions, axioms, postulates, definitions, and mathematics vocabulary.

C-7.2 Visualises and appreciates geometric proofs for algebraic identities and other 'proofs without words'.

C-7.3 Proves theorems using Euclid's axioms and postulates for angles, triangles, quadrilaterals, circles, area-related theorems for triangles, and parallelograms.

C-7.4 Constructs different geometrical shapes like bisectors of line segments, angles and their bisectors, triangles, and other polygons, satisfying given constraints.

CG-8: Builds skills, such as visualisation, optimisation, representation, and mathematical modelling along with their application in daily life.

C-8.1 Models daily-life phenomena and uses representations, such as graphs, tables, and equations to draw conclusions.

C-8.2 Uses two-dimensional representations of three-dimensional objects to visualise and solve problems, such as those involving surface area and volume.

C-8.3 Employs optimisation strategies to maximise desired quantities (such as area, volume, or other output) under given constraints.

CG-9: Develops computational thinking, i.e., deals with complex problems and is able to break them down into a series of simple problems that can then be solved by suitable procedures/algorithms.

C-9.1 Decomposes a problem into sub-problems.

C-9.2 Describes and analyses a sequence of instructions being followed.

C-9.3 Analyses similarities and differences among problems to make one solution or procedure work for multiple problems.

C-9.4 Engages in algorithmic problem-solving to design such solutions.

CG-10: Knows and appreciates important contributions of mathematicians from India and around the world.

C-10.1 Recognises the important contributions made by mathematicians (Indian and others) in the field of Mathematics (such as the evolution of numbers, geometry, and algebra).

C-10.2 Recognises modern contributions to Mathematics made in both India and abroad, and understands the next frontiers and next major open questions in the field of Mathematics.

CG-11: Explores connections of Mathematics with other subjects.

C-11.1 Applies mathematical knowledge and tools to analyse problems or situations in multiple subjects across Science, Social Science, Visual Arts, Music, Vocational Education, and Sports.

COURSE STRUCTURE CLASS – IX

Units	Unit Name	Chapter Name	Marks
I	Number System	• Number System	07
II	Algebra	• Introduction to Polynomials • Sequences and Progressions • Exploring Algebraic Identities • Linear Equations in Two Variables	20
III	Coordinate Geometry	• Coordinate Geometry	04
IV	Geometry	• Introduction to Euclid's Geometry: Axioms and Postulates • Lines and Angles • Triangles – Congruence Theorems • 4-gons (Quadrilaterals) • Circles	25
V	Mensuration	• Area and Perimeter • Surface Area and Volume	14
VI	Statistics and Probability	• Statistics • Introduction to Probability	10
	Total		**80**

Chapter Name	Key Concepts	Relevant CGs	Competencies
	Unit 1: Number System		**No. of periods : 12**
Number System	• Introduction to rational numbers • Representation of rational numbers on the number line • Density of rational numbers and its proof • Finding rational numbers between any two rational numbers • Decimal representation of rational numbers • Introduction to irrational numbers • Proof of irrationality of $\sqrt{2}$ and $\sqrt{3}$ • The square root spiral	CG-1, C-1.1, CG-9	The student will be able to: • Understand the concept of a rational number. • Represent rational numbers on the number line. • Understand the properties of rational numbers. • Explain the concept of density of rational numbers. • Compute decimal representation of rational numbers. • Understand the concept of irrational numbers. • Prove the irrationality. • Construct the square root spiral. • Apply computational thinking to represent rational and irrational

			numbers through algorithms and visual models, generate decimal expansions systematically, and reason about numbers using step-by-step logical procedures.
	UNIT II: ALGEBRA		**No. of periods : 66**
Introduction to Polynomials	• Algebraic expressions • Definition of a polynomial. • Degree of a polynomial • Introduction to linear polynomials and applications • Exploring linear patterns • Modelling linear growth and linear decay • Linear relationships • Visualising linear relationships • Slope and y-intercept of a line y = ax + b	CG-3, C-3.2, CG-9	The student will be able to: • Understand the meaning of an algebraic expression. • Define a polynomial. • Identify the degree, terms and coefficients of terms in a polynomial. • Model linear growth and decay using linear polynomials. • Explain and identify patterns in linear relationships. • Identify the slope and y-intercept of a linear equation in two variables. • Graph a linear equation in two variables. • Use computational thinking to identify patterns, construct linear expressions, and systematically represent and analyse linear relationships using equations and graphs.
Sequences and Progressions	• Introduction to sequences • Explicit or general rule of a sequence • Recursive rule of a sequence • Arithmetic Progressions • (AP): nth term, visualising an AP, and practical contexts leading to Aps • Sum of the first n natural numbers • Geometric Progressions (GP): nth term, visualising a GP, and practical contexts leading to GPs • Applications of GP in fractals • Tower of Hanoi puzzle	CG-11, C-8.1, CG-9	The student will be able to: • Understand the concept of a sequence of numbers. • Identify the pattern in a sequence and predict the next few terms. • Determine the recursive and explicit rules for different sequences. • Obtain the terms of sequence given its recursive and explicit rule. • Identify Arithmetic Progressions (AP). • Determine the nth term of an AP. • Visualise an AP graphically. • Identify Geometric Progressions (GP). • Determine the nth term of a GP. • Visualise a GP graphically. • Analyse attributes of fractals using GP. • Solve the Tower of Hanoi puzzle. • Use computational thinking to identify patterns, write step-by-step rules, and model patterns in sequences and progressions.

Exploring Algebraic Identities	• Revisiting algebraic identities • Visualising identities using geometrical models • Factorisation of algebraic expressions using identities • More identities and their applications • Visualising factorisation of quadratic expressions through algebra tiles and without using algebra tiles • Finding new identities • Simplifying rational expressions	CG-7, C-7.2, CG-9	The student will be able to: • Visualise algebraic identities using geometric models. • Determine the factors of algebraic expressions using identities. • Interpret factors of quadratic expressions through geometric models. • Find simplified versions of rational expressions. • Use computational thinking strategies, such as decomposition and step-by-step procedures to visualise algebraic identities, factor expressions, and simplify rational expressions.
Linear Equations in Two Variables	• Introduction to linear equations in two variables through practical examples • Solution of linear equation in two variables: graphical representation • Slope-intercept form of linear equation in two variables • Drawing graphs of linear equations when x and y assume only certain values • Pair of linear equations in two variables • Graphical method for solving a pair of linear equations in two variables • Nature of solutions: consistency and inconsistency • Algebraic methods of solving a pair of linear equations: substitution and elimination method	CG-3, C-3.2, C-8.1, CG-9	The student will be able to: • Understand the concept of a linear equation in two variables. • Graph a pair of linear equations. • Solve a pair of linear equations graphically. • Solve a pair of linear equations through the methods of substitution and elimination. • Determine the nature of solutions of a pair of linear equations. • Model and solve contextualised problems using a pair of linear equations and draw conclusions. • Model daily-life phenomena using representations, such as graphs, tables, and equations. • Use computational thinking to systematically represent, solve, and interpret pairs of linear equations through graphs, tables, and step-by-step procedures.

	UNIT III: COORDINATE GEOMETRY No. of periods : 6		
Coordinate Geometry	• Brief history of coordinate geometry • The 2-D Cartesian coordinate system • Distance between two points in the 2-D plane • Midpoint of the line-segment between two points in the 2-D plane	CG-4, C-4.5, CG-9	The student will be able to: • Specify locations and the position of one point relative to another point using coordinates. • Represent a floor plan on a grid using coordinates. • Compute the distance between two points using coordinates. • Determine whether three points lie in a straight line using coordinates. • Compute the position of the midpoint of a line segment using coordinates. • Check whether a triangle is right-angled using coordinates. • Apply computational thinking to model situations on the coordinate plane and verify geometric properties through systematic reasoning.
	UNIT IV: GEOMETRY No. of periods : 69		
Introduction to Euclid's Geometry: Axioms and Postulates	• History of geometry • Constructing a square with a given side as described in the Baudhayana's Sulbasutras • Discovering Euclid's definitions • Axioms: Axioms of measurement and rules for geometric objects	CG-7, C-7.1, C-7.3	The student will be able to: • Describe how geometry grew from the practical needs ancient civilisations. • Describe contributions of India, Egypt and Greece to the development of geometric ideas. • Understand the role of definitions, axioms, and postulates. • Explain that there are elements of plane geometry (point, line, surface) for which we have an intuitive sense. • State the 5 postulates of Euclidean geometry. • Define parallelism of straight lines. • Explain the construction of a square as given in the Sulbasutras. • Justify simple constructions using the axioms.
Lines and Angles	• Rays and angles • Measures of angles • Intersecting lines and angles • Pairs of angles • Theorems and examples on intersecting lines • Theorems and examples on parallel lines	CG-7, C-7.1, C-7.3, CG-9	The student will be able to: • Explain the notion of an angle. • Explain the notion of a ray. • Explain that angles are formed between two rays with a common starting point. • State that a straight angle equals two right angles and measures 180° while a right angle measures 90°.

			• Classify angles as acute, right, obtuse, or reflex. • Define parallelism. • State and apply the linear pair theorem and its converse. • Follow proof by contradiction in geometry. • Prove that vertically opposite angles are equal. • Identify corresponding, alternate, and interior angles. • Explain transitivity of parallelism. • Explain why a triangle must have at least two acute angles; why it cannot have two obtuse angles, or all three angles less than 60° • Apply computational thinking to analyse geometric ideas by breaking constructions into ordered steps, using axioms and postulates as rules, and justifying geometric results through logical step-by-step reasoning.
Triangles: Congruence Theorems	• Practical applications of triangles • Proofs of conditions of congruence of triangles • Theorems on triangles • Propositions and their converse • Problems based on applications of theorems on triangles	CG-4, C 4.1, C-7.3	The student will be able to: • Explain that a triangle is rigid, unlike a quadrilateral. • Identify uses of triangle rigidity. • Explain why triangles give strength and stability to structures. • Describe what it means for two triangles to be congruent. • Identify correspondence between the vertices, sides, and angles of two congruent triangles. • Use the SAS congruence axiom. • Use the SSS congruence condition. • Use the ASA congruence condition. • Use the RHS congruence condition. • Use the AAS congruence condition. • Prove the basic properties of isosceles triangles. • Explain the notion of a proposition. • Explain the notion of converse of a proposition. • Identify the converse of a given proposition. • Explain that not all converses are true; use counter examples to show that some converses are false. • Explain why SSA is not, in general, a valid congruence condition.

			• Identify the situations where SSA is a valid congruence condition. • Justify the role of diagram accuracy.
4-gons (Quadrilaterals)	• Properties of parallelograms • Important theorems related to parallelograms and their proof • Midpoint theorem and its applications • Understanding the notion of central symmetry in the context of parallelograms	CG-4, C-4.2, C-7.3	The student will be able to: • Frame a precise definition of a 4-gon. • Prove various characterisations of a parallelogram. • Prove the midpoint theorem. • Prove a converse of the midpoint theorem. • Prove that the medians of a triangle are concurrent and each median is divided in the ratio 2:1 at the point of concurrence. • Prove that the 4-gon formed by joining the midpoints of a given 4-gon is a parallelogram. • Find the coordinates of the midpoint of a line segment given its end points and find the coordinates of the fourth vertex of a parallelogram given the other three. • Understand reflection and rotation symmetries of 4-gons. • Understand how any 4-gon can tile a plane. • Practice forming logical converses of statements and asking questions guided by converses of theorems. • Engage in drawing, measurement and paper manipulation activities to discover geometric patterns involving triangles and 4-gons.
Circles	• Practical applications and uses of circles • Definitions related to a circle — centre, diameter, and radius • Chords and the angles they subtend • Midpoints and perpendicular bisectors of chords • Distance of chords from the centre • Subtended angles by an arc • Cyclicity of points	CG-4, C-7.3, CG-9	The student will be able to: • State the definition of a circle. • Explain the meanings of the terms ‘chord’, ‘diameter’, ‘radius’, ‘arc’, ‘segment’, and ‘sector’. • Explain why there exists a unique circle through three non-collinear points. • Construct the circumcircle and circumcentre of a triangle. • Describe the location of the circumcentre for acute, obtuse, and right-angled triangles. • Explain what ‘angle subtended by an arc at the centre’ means. • Explain why ‘equal chords subtend equal angles at the centre’.

			• Explain why ‘chords that subtend equal angles at the centre are equal’. • Explain why ‘the line from the centre of a circle to the midpoint of a chord is perpendicular to the chord’. • Explain why ‘a perpendicular from the centre to a chord bisects the chord’. • State the relationship between length of a chord and its distance from the centre of the circle. • Explain why ‘equal chords are equidistant from the centre (and conversely)’. • Explain why ‘among unequal chords, the longer chord is closer to the centre’. • Explain why ‘the diameter is the longest chord’. • Explain why ‘the angle subtended by an arc at the centre is double the angle subtended by the arc at any point on the remaining part of the circle’. • Explain why ‘angles in the same segment of a circle are equal’. • Explain why ‘the angle in a semicircle is a right angle’. • Determine when four given points are concyclic. • Explain why ‘a quadrilateral with supplementary opposite angles is cyclic, and conversely’. • Explain how circular wheels have influenced transport, farming, building, and technology. • Identify cultural motifs involving circles, for example, the Dharmachakra, Ashoka Chakra, Sudarshan Chakra. • Use computational thinking to break down circle-related problems, apply geometric rules step-by-step, and verify properties of figures, such as chords, angles, and cyclic quadrilaterals through systematic reasoning.
	UNIT V: MENSURATION		**No. of periods : 27**
Mensuration : Area and Perimeter	• Perimeter of shapes • Perimeter of a circle: Introduction to Pi and its irrationality • Length of an arc	CG-5, C-5.1, CG-9	The student will be able to: • Define perimeter as the length around the boundary of any shape. • Explain that the circumference-to-diameter ratio is constant for all circles.

	• Area of shapes: rectangles, parallelograms, and triangles • Heron's formula • Squaring a rectangle: Proof from Baudhayana's Sulbasutras • Area of a circle: derivation • Area of the sector of a circle • Brahmagupta's formula for area of a cyclic 4-gon • Heron's formula as a special case of Brahmagupta's formula		• List historical approximations to π (from Archimedes, Aryabhata, and Zu Chongzhi). • Compute the circumference of a circle and the length of an arc. • Apply ideas of circle perimeter and arc-length to real-world contexts. • Explain why a median of a triangle divides it into two triangles of equal area. • Use Heron's formula to compute the area of a triangle from its sides. • Explain the classical problem of 'squaring' a given shape. • Explain how ancient civilisations approximated the area of a circle. • Compute the area of a circle using the formula. • Explain and use the formula for area of a sector of a circle. • Solve problems on areas of sectors and segments of circles. • State Brahmagupta's formula for the area of a cyclic quadrilateral in terms of its sides. • Explain why Heron's formula is a 'special case' of Brahmagupta's formula. • Explain the notion of 'special case' and 'generalisation' in mathematics. • Use computational thinking to break down shapes, apply step-by-step methods to calculate perimeter and area, recognise patterns across formulae, and understand generalisation and special cases in geometry.
Mensuration : Surface Area and Volume	• Surface areas and volumes of spheres (including hemispheres) and right circular cones	CG-5, C-5.1, CG-9	The student will be able to: • Recognise cuboids and cubes in real-life situations. • Compute the surface area and volume of a cuboid. • Explain how a cube is a 'special case' of a cuboid. • Describe a right circular cylinder using its radius and height. • Compute the surface area and volume of a cylinder. • Recognise cones in daily life, and describe them using radius and height.

			• Compute the surface area and volume of a cone. • Recognise a pyramid, and identify its base and apex. • Compute the surface area and volume of a pyramid. • Recognise spheres in real-life situations. • Compute the surface area and volume of a sphere. • Use computational thinking to systematically calculate, and compare surface areas and volumes of 3-D shapes by varying dimensions and analysing patterns.
	UNIT VI: STATISTICS AND PROBABILITY No. of periods : 24		
Statistics	• Graphical representation of data • Measures of central tendency	CG-6, C-6.1, CG–9	The student will be able to: • Collect, organise, visualise and interpret data to answer a statistical investigative question. • Compute and apply weighted average in different settings. • Read and interpret stacked bar graphs and 100% stacked bar graphs. • Apply computational thinking strategies to analyse real-life data, create appropriate graphical representations, and interpret mean, median and mode for decision-making.
Introduction to Probability	• Concept of probability and randomness • The probability scale • Empirical probability: analysing statistical data and performing experiments • Theoretical probability: sample space and events • Representing probability through tree diagrams and tables	CG-6, C-6.2, CG-9	The student will be able to: • Understand the concept of randomness. • Describe the likelihood of an event using the probability scale. • Estimate the empirical probability of the occurrence of an event by analysing statistical data. • Define theoretical probability of an event. • Apply the definition of theoretical probability to compute the probability of an event. • Compute probability of events with the help of tree diagrams and tables. • Use computational thinking strategies, such as pattern recognition and simulation, to model random experiments and estimate probabilities.

MATHEMATICS QUESTION PAPER DESIGN
CLASS – IX (2026-27)

Time: 3 Hrs. **Max. Marks: 80**

S. No.	Typology of Questions	Total Marks	% Weightage (approx.)
1	**Remembering:** Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. **Understanding:** Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas	43	54
2	**Applying:** Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	19	24
3	**Analysing:** Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations **Evaluating:** Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. **Creating:** Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions	18	22
	Total	80	100

INTERNAL ASSESSMENT	**20 MARKS**
Pen Paper Test and Multiple Assessment (5+5)	10 Marks
Portfolio	05 Marks
Lab Practical (Lab activities to be done from the prescribed books)	05 Marks

Prescribed Books:

1. Mathematics - Textbook for class IX - NCERT Publication
2. Guidelines for Mathematics Laboratory in Schools, class IX - CBSE Publication
3. Laboratory Manual - Mathematics, secondary stage - NCERT Publication
4. Mathematics exemplar problems for class IX, NCERT publication

SCIENCE

Subject Code – 086

Classes IX (2026-27)

Introduction

Science is the study of the natural and physical world around us through a systematic process of observing, questioning, forming hypotheses, testing hypotheses through experiment, analysing evidence, and continuously revising our knowledge. It develops essential skills like curiosity, creativity, evidence-based thinking, and sound decision-making that help us lead rational and fulfilling lives. Learning Science provides valid knowledge about the world, and builds scientific values and capacities. It draws knowledge from Biology, Chemistry, Physics, Earth Science, Mathematics, Computational Sciences, and sometimes Social Science and Vocational Education to offer an interdisciplinary understanding of the role of science.

Science Education helps students to develop an understanding of the natural and physical world through systematic inquiry. Learning Science also develops important capacities, such as observation, questioning, analysis, inference, etc. This helps individuals to meaningfully participate in society and the world of work with a scientific temper, critical and evidence-based thinking, asking relevant questions, analysing practices and norms, and acting for necessary change.

Science Education aims to achieve:

- Scientific understanding of the natural and physical world;
- Capacities for scientific inquiry;
- Understanding the evolution of scientific knowledge;
- Interdisciplinary understanding between Science and other curricular areas;
- Understanding of the relationship between Science, Technology, and Society;
- Scientific temper, and
- Creativity.

Together, the NEP 2020 and NCF-SE 2023 envision science classrooms that encourage curiosity, creativity, collaboration and connection with the real world, ultimately nurturing not just future scientists, but responsible, informed and critically thinking citizens.

Learning standards (Curricular Goals and Competencies) describe what students should know, understand, and be able to do in Science. In Grades 9 – 10, Science is taught using an integrated approach that combines Biology, Chemistry, Physics, and Earth Science. This helps students understand the connections between disciplines and relate Science to their observations and experiences. At this stage, scientific inquiry skills are developed alongside conceptual understanding, with content selected both for disciplinary relevance and real-life usefulness. Students must deepen their understanding of the world, explore scientific questions through discussion and experimentation, and communicate their learning in various ways. It is important to note that the Curricular Goals are interdependent and not separate.

Learning standards are organised into four levels: broad curricular aims define the overall objectives for Science Learning by the end of each schooling stage; more specific Curricular Goals guide the design of the science curriculum for each stage and topic; Competencies

represent measurable scientific skills and knowledge-based on these goals, assessed at the end of each stage; and detailed Learning Outcomes (LOs) are granular milestones of learning and usually progress in a sequence leading to the attainment of a competency. These LOs enable teachers to plan their content, pedagogy, and assessments towards achieving specific competencies.

Curricular Goals (CGs) and Competencies (Cs)

CG 1 – Explores the world of matter, its interactions, and properties at the atomic level

C 1.1 – Describes classification of elements in the Periodic Table, and explains how compounds (including carbon compounds) are formed based on the atomic structure (Bohr's model) and properties (valency).

C 1.2 – Investigates the nature and properties of chemical substances (distillation, crystallisation, chromatography, centrifugation, types and properties of mixtures, solutions, colloids, and suspensions)

C 1.3 – Describes and represents chemical interactions and changes using symbols and chemical equations (acid and base, metal and non-metal, reversible and irreversible)

CG 2 – **Explores the physical world around them, and understands scientific principles and laws based on observations and analysis**

C 2.1 – Applies Newton's laws to explain the effect of forces (change in state of motion — displacement and direction, velocity and acceleration, uniform circular motion, acceleration due to gravity) and analyses graphical and mathematical representations of motion in one dimension

C 2.2 – Explains the relationship between mass and weight using universal law of gravitation, and connect it to the laws of motion

C 2.3 – Manipulates the position of object and properties of lenses (focus, centre of curvature) to observe image characteristics and correspondence with a ray diagram, and extends this understanding to a combination of lenses (telescope, microscope)

C 2.4 – Manipulates and analyses different characteristics of the circuit (current, voltage, resistance) and mathematises their relationship (Ohm's law), and applies it to everyday usage (electricity bill, short circuit, safety measures)

C 2.5 – Defines work in scientific terms, and represents the relationship between potential and kinetic energy (conservation of energy) in mathematical expressions

C 2.6 – Demonstrates the principle of mechanical advantage by constructing simple machines (system of levers and pulleys)

C 2.7 – Describes the origin and properties of sound (wavelength, frequency, amplitude) and differences in what we hear as it propagates through different instruments

C 2.8 – *Explores interconnected systems and phenomena that support and affect life on Earth (hydrosphere, biosphere, atmosphere, geosphere, cryosphere and their interrelationships, earth processes, hazards, etc.)

*Additional Competency for Earth Science

CG 3 – **Explores the structure and function of the living world at the cellular level**

C 3.1 – Explains the role of cellular components (nucleus, mitochondria, endoplasmic reticulum, vacuoles, chloroplast, cell wall), including the semi-permeability of cell membrane in making cell the structural basis of living organisms and functional basis of life processes

C 3.2 – Analyses similarities and differences in the life processes involved in nutrition (photosynthesis in plants; absorption of nutrients in fungi; digestion in animals), transport (transport of water in plants; circulation in animals), exchange of materials (respiration and excretion), and reproduction

C 3.3 – Describes the mechanisms of heredity (in terms of DNA, genes, chromosomes) and variation (as changes in the sequence of DNA)

CG 4 – **Explores interconnectedness between organisms and their environment**

C 4.1 – Applies the knowledge of cellular diversity in organisms along with the ecological role organisms play (autotrophic or heterotrophic nutrition) to classify them into five kingdoms

C 4.2 – Illustrates different levels of organisations of living organisms (from molecules to organisms)

C 4.3 – Analyses different levels of biological organisation from organisms to ecosystems and biomes along with interactions that take place at each level

C 4.4 – Analyses patterns of inheritance of traits in terms of Mendel's laws and its consequences at a population level (using models and/or simulations)

C 4.5 – Analyses evidences of biological evolution demonstrating the consequences of the process of natural selection in terms of changes — in allele frequency in population, structure, and function of organisms

CG 5 – **Draws linkages between scientific knowledge and knowledge across other curricular areas**

C 5.1 – Explores how literature and arts have influenced Science

C 5.2 – Examines a case study related to the use of Science in human life from the perspective of Social Sciences and Ethics (for example, Marie Curie, Jenner, treatment of patients with mental illnesses, the story of the atomic bomb, green revolution and GMOs, conservation of biodiversity)

C 5.3 – Applies scientific principles to explain phenomena in other subjects (sound pitch, octave, and amplitude in music; use of muscles in dance form and sports)

CG 6 – **Understands and appreciates the contribution of India through history, and the present time to the overall field of Science, including the disciplines that constitute it**

C 6.1 – Knows and explains the significant contributions of India to all matters (concepts, explanations, methods) that are studied within the curriculum in an integrated manner

CG 7 – **Develops awareness of the most current discoveries, ideas, and frontiers in all areas of scientific knowledge in order to appreciate that Science is ever evolving, and that there are still many unanswered questions**

C 7.1 – States concepts that represent the most current understanding of the matter being studied, ranging from mere familiarity to conceptual understanding of the matter as appropriate to the developmental stage of the students

C 7.2 – States questions related to matters in the curriculum for which current scientific understanding is well-recognised

CG 8 – **Explores the nature of Science by doing Science**

C 8.1 – Develops accurate and appropriate models (including geometric, mathematical, graphical) to represent real-life events and phenomena using scientific principles, and use these models to manipulate variables and predict results

C 8.2 – Designs and implements a plan for scientific inquiry (formulates hypotheses, makes predictions, identifies variables, accurately uses scientific instruments, represents data — primary and secondary — in multiple modes, draws inferences based on data, and understanding of scientific concepts, theories, laws and principles, and communicates findings using scientific terminology)

COURSE OUTLINE

CLASS IX (2026-27)

Cell **No. of Periods: 12**

Key Concepts		Learning Outcomes
• Discovery of cell • Plant and animal cells • Prokaryotic and eukaryotic cells • Cell as a structural and functional unit of life; structure and function of key organelles (nucleus, mitochondria, chloroplast, endoplasmic reticulum, vacuoles, plasma membrane, cell wall) • Permeability of cell membranes • Cellular division and cancer • Recent advancement in cell biology	C-3.1	• Differentiate between plant and animal cell, prokaryote and eukaryote • Describe the structural and functional features of cells • Explain the role of cells in the structure and functions of organisms • Explain activities inside the cell and its interactions with the environment • Demonstrate osmosis in cells • Prepare slides to observe cell structure
	C-3.2	• Differentiate between diffusion and osmosis
	C-3.3	• Explain the role of cell division mitosis and meiosis in creating similarities and variations
	C-4.2	• Identify and describe the role of biomolecules in the structure and function of cell
	C-5.2	• Cite case study related to the use of science in human life, for example, Leigh Syndrome and mitochondrial dysfunction
	C-5.3	• Apply learning of a structure and function of muscles cells or joints in dance form and/or sports
	C-6.1	• Discuss significant contributions of India, for example, Professor Arun Kumar Sharma for his work on chromosomes and methods for its studies
	C-7.1	• Recognise that the cell is a structural unit of life and functional unit of life processes
	C-7.2	• Pose questions, such as — Can we create artificial cell which behaves exactly like a natural living cell?

	C-8.1	• Exhibit creativity and design models using low cost or no-cost eco-friendly material to study structure and functions of cell and cell organelles
	C-8.2	• Carry out an experiment to understand the osmosis • Analyze result and present finding using scientific terms

Tissues **No. of Periods: 13**

Key Concepts		Learning Outcomes
Tissues: Introduction and importance • Level of organisation in the living organisms • Plant and animal tissues • Types of plant tissues • Meristematic tissues (types and function of each) • Permanent tissues (types, structure and function of each) • Animal tissues • Overview (epithelial, connective, muscular and nervous tissues — types, structure and function of each) • Elementary idea of musculoskeletal system • Care of musculoskeletal system: injuries, postural care, nutrition and exercise	C-4.2	• Differentiate between plant and animal tissues; meristematic and permanent tissues; simple and complex tissues; parenchyma, collenchyma and sclerenchyma; xylem and phloem; striated smooth and cardiac muscles; • Different types of joints • Relate the structure of the different types of tissues with their functions • Explain the role of various types of tissues in plants and animals • Describe the level of organisation in a multicellular organism
	C-5.3	• Establish the correlation between different tissues for fitness, for example, role of muscles, cartilage and bones in facilitating movement
	C-6.1	• Explain the importance of yoga exercises for physical agility and in maintaining the correct posture
	C-6.1	• Discuss significant contributions of India, for example, Professor Sipra Guha Mukherjee and Professor S.C. Maheshwari for their significant contribution in the plant cell and tissue culture research in India
	C-7.1	• Discuss the techniques and medical recommendations in recovery from muscular injuries

	C-8.2	• Carry out an experiment to understand the growth in plant due to apical meristem • Represent data in multiple modes, including appropriate figures, tables, graphs, or digital formats, interpret and draw inferences from the data • Analyse results and present findings using scientific terms • Communicate findings and conclusions effectively, such as those from experiments, activities, or projects, both orally and in written form

Reproduction **No. of Periods: 13**

Key Concepts		Learning Outcomes
• Introduction to different forms of reproduction — sexual and asexual • Types of asexual reproduction with examples • Sexual reproduction in flowering plants (flower and its parts, pollination, fertilisation, seed dispersal) • Sexual reproduction in humans: male and female reproductive systems (structure and function, formation of gametes, sperm and egg, fertilisation, pregnancy and development of embryo, menstrual cycle) • Reproductive health and hygiene • Introduction to birth control methods and importance	C-2.8	• Analyse the interactions between members of different groups of organisms, such as plants and pollinators
	C-3.2	• Compare asexual and sexual reproduction • Describe male and female reproductive organs in plants and animals • Differentiate between ovule and seed; ovary and fruit • Explain pollination and fertilisation
	C-3.3	• Explain how variations are introduced by sexual reproduction
	C-4.3	• Identify and explain the role of biotic and abiotic agents in seed dispersal and pollination
	C-5.1	• Illustrate the structure of male and female reproductive units or systems in plants and animals
	C-5.2	• Recognise the significance of contraceptive devices for population control and health including reproductive health
	C-6.1	• Describe the contribution of India to the understanding of human anatomy
	C-6.1	• Discuss significant contributions of India, for example, Professor Panchanan Maheshwari for

		laying the foundation of plant cell and tissue culture research in India
	C-7.1	• Recognise the importance of improvements in medical field for assisted reproductive technologies
	C-7.2	• Pose questions, such as — How do heavy metals harm reproductive organs? Can extreme heat affect fertility?

Diversity **No. of Periods: 12**

Key Concepts		Learning Outcomes
• Importance of classification • Five kingdoms and their key features with examples • Major division of animals and plants • Binomial nomenclature • Acellular entities: viruses	C-4.1	• Distinguish organisms based on certain characteristics, such as number of cells present, cellular organisation and mode of nutrition • Classify various organisms in groups, such as five kingdoms, on the basis of their cellular organisation and ecological role • Describe the significance and rules of binomial nomenclature • Apply binomial nomenclature on some common organisms in their surroundings
	C-2.8	• Analyse the interactions between members of different groups of organisms, such as lichens • Discuss ecological role of diverse organisms
	C--7.1	• Recognise three domains of classification of organisms on molecular basis

Exploring Mixtures and their Separation **No. of Periods: 12**

Key Concepts		Learning Outcomes
• Homogeneous and heterogeneous mixtures; • Solutions, suspensions, colloids and their properties • Various ways to express concentration of solutions (mass by mass percentage of a solution,	C-1.2	• Differentiate between homogeneous and heterogeneous mixtures on the basis of their properties • Demonstrate separation techniques, such as crystallisation, distillation, paper chromatography, sublimation, centrifugation and coagulation • Classify mixtures as solutions, suspensions, or colloids based on their properties • Explain the scientific principles behind different

mass by volume percentage of a solution, volume by volume percentage of a solution) • Separation techniques based on the physical properties of components, including crystallisation, distillation, paper chromatography, sublimation, centrifugation and coagulation		separation techniques • Apply the knowledge of homogeneous and heterogeneous mixtures in daily life • Define and calculate the concentration of solutions using mass by mass percentage, mass by volume percentage, volume by volume percentage • Analyse graphs of solubility and explain how the solubility of substances changes with temperature • Use scientific conventions and standard units to express concentrations • Handle common laboratory chemicals and apparatus safely • Relate separation techniques with practices observed in the local environment
	C-5.1	• Draw labelled diagrams or flow charts of separation techniques
	C-5.2	• Display awareness about the societal impact of chemistry in making life healthier, cleaner and sustainable
	C-5.3	• Correlate the phenomenon used in centrifugation to the spinning dance
	C-6.1	• Describe the cultural practices, like traditional methods of distillation • Display awareness about the contributions of Indian scientists, such as Dilip Mahalanabis
	C-7.1	• Demonstrate the use of small-scale or micro-scale experiments, such as crystallisation of copper sulfate, as an alternative to traditional methods
	C-7.2	• Poses question, such as — Can we create artificial blood that works just as real blood for all patients?
	C-8.1	• Exhibit creativity and work collaboratively in groups to create models of apparatus used for separating mixtures, such as a paperfuge and a distillation unit, using eco-friendly materials
	C-8.2	• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, and predict the results of an experiment or investigation based on their hypotheses

		• Accurately use scientific instruments, apparatus and chemicals to collect data • Analyse results and findings using scientific terms • Represent findings in multiple modes, including appropriate figures, tables, graphs, or digital formats, and interpret and draw inferences from the findings • Communicate findings and conclusions effectively, such as those from experiments, activities or projects, both orally and in written form

Structure of an Atom **No. of Periods: 14**

Key Concepts		Learning Outcomes
• Atoms are the basic units of elements • Atoms consist of subatomic particles • Atomic Models (Thomson's Model, Rutherford's Model, and Bohr's Model) • Distributions of electrons in elements (up to 18 elements) • Symbols • Valency as the combining capacity • Atomic number • Mass number • Isotopes • Isobars	C-1.1	• Differentiate between subatomic particles (electrons, protons, and neutrons) based on their charge, and position in the atom • Illustrate how electrons are distributed in different energy levels, such as K, L, M, N ... or by numbers n = 1, 2, 3, 4 ... • Explain valence electrons, valency, atomic number, atomic mass, isotopes, and isobars • Calculate the number of electrons, protons, and neutrons of an element using its atomic and mass numbers • Interpret data, such as atomic mass, maximum number of electrons in a shell, and valency to classify elements accurately • Use scientific conventions as per international standards, such as notations for electron, proton, neutron, unified atomic mass unit (u), and distribution of electrons in various shells, such as K, L, M, N …
	C-1.3	• Recognise and accurately apply the chemical symbols for the first eighteen elements according to IUPAC
	C-5.1	• Draw labelled diagrams of various atomic models, such as Thomson's model, Rutherford's model and Bohr's model • Create and present a role play, stage play, or story of 'Journey Inside the Atom' to display awareness about the contributions of key scientists in the

		discovery and development of atomic structure
	C-5.2	• Display awareness about the role of Indian scientists and their contributions to atomic science for peaceful purposes and explore how their works influenced India's scientific development
	C-5.3	• Display awareness about the societal impact of science in making life healthier, like the use of various isotopes in medicines to treat different diseases, and atomic energy in power generation • Design and develop games that utilise atomic number, mass number, and subatomic particle clues to accurately predict and identify elements
	C-6.1	• Display awareness about the contributions of the ancient Indian philosopher, Acharya Kanad's idea of indivisible particles (Parmanu)
	C-7.1	• Describe the use of the atomic mass unit (u) to measure the mass of atoms as per IUPAC recommendations • Describe scientific discoveries that explain how the structure of the atom has evolved over time through various atomic models proposed by different scientists
	C-7.2	• Pose question, such as — is it possible to completely understand everything that happens inside an atom?
	C-8.1	• Exhibit creativity and work collaboratively in groups to design different models of atoms
	C-8.2	• Formulate hypotheses about scientific phenomena by applying prior knowledge and understanding of scientific concepts, and predict the results of data based on the hypotheses • Analyse results and present findings using scientific terms • Correlate the results and conclusions of different models of atomic structure • Represent data in multiple modes, including appropriate figures, tables, graphs or digital formats, and interpret and draw inferences from the data

		• Communicate findings and conclusions effectively, such as those from experiments, activities or projects, both orally and in written form

Atoms and Molecules **No. of Periods: 14**

Key Concepts		Learning Outcomes
• Law of conservation of mass • Law of constant proportion • Dalton's Atomic theory • Molecules of elements, Molecules of covalent compounds and their properties • Ions, Ionic compounds and their properties • Writing chemical formulae • Molecular mass • Formula unit mass	C-1.1	• Differentiate between chemical species based on their properties or characteristics, such as atoms and molecules, elements and compounds, ionic and covalent compounds, cations and anions, formula unit mass and molecular mass• Plan and demonstrate activities to observe and verify the law of conservation of mass • Explain the Dalton's atomic theory, the law of conservation of mass, the law of constant proportions, and formation of ionic and covalent compounds • Calculate the charge on an ion, valency from the atomic number, the molecular and formula unit mass • Use scientific conventions, symbols, and valency to write the chemical formulae of simple compounds • Display awareness about the scientific discoveries, such as the contributions of Antoine Lavoisier, Joseph Proust, and John Dalton • Handle common laboratory chemicals and apparatus safely
	C-5.1	• Draw diagrams of electron dot structures of atoms and molecules
	C-5.2	• Describe how atoms and molecules can lead to beneficial applications, such as medicine, energy and peaceful use of atomic science • Relate atomic bonding to social bonding
	C-5.3	• Design educational games to write chemical formulae using symbols
	C-6.1	• Display awareness about the contributions of Indian scientists in promoting the peaceful use of atomic energy and the traditional use of the red pigment 'cinnabar' obtained from rocks

	C-7.1	• Describe the basic concepts that matter are made of particles; elements combine in fixed ratios to form compounds; the law of conservation of mass; and different types of bonding (ionic and covalent)
	C-7.2	• Pose question, such as — Are there any chemical changes that do not obey the law of conservation of mass?
	C-8.1	• Exhibit creativity and work collaboratively in groups to construct simple models of compounds
	C-8.2	• Formulate hypotheses about scientific phenomena by applying prior knowledge and understanding of scientific concepts and laws, and predict the results of data based on the hypotheses • Accurately use scientific instruments, apparatus and chemicals to collect data • Analyse results and findings using scientific terms • Represent data in multiple modes, including appropriate figures, tables, graphs or digital formats • Communicate findings and conclusions effectively, such as those from experiments, activities or projects, both orally and in written form

Earth as a System: Energy, Matter & Life **No. of Periods: 12**

Key Concepts		Learning Outcomes
• Earth as interconnected system • Nature of solar energy: solar radiation, electromagnetic • spectrum, and speed of light • Solar energy interaction with the Earth's Surface and differential heating of the Earth (the role of the atmosphere and the Earth's surface) • Differential warming of the Earth causes winds	C-2.8	• Explain the interconnectedness between different spheres of the Earth (biosphere, geosphere, hydrosphere, cryosphere and atmosphere) • Explain the nature of solar radiation • Explain that solar radiation is an electromagnetic waves having different Frequencies • Explain how heat from the Sun warms the Earth's surface differently based on the shape, latitude and tilt of the Earth • Explain the interaction of solar radiation with the Earth's surface and relate the differential heating of the Earth's surface with the atmospheric phenomena, such as air movement, evaporation, etc., and describe phenomena like mountain, valley, sea and land breezes

• Biogeochemical cycles (water cycle, carbon cycle, nitrogen cycle, oxygen cycle) • Human impact on Earth's system		• Describe how the latitude and tilt of the Earth, and absorption and reflection of solar radiation by different surfaces cause differential heating of the Earth's surface • Identify various components of the Earth that interact with solar energy • Explain the role of the atmosphere in influencing weather and climate on the Earth • Identify the reflectivity of different materials through reliable scientific sources, such as the internet and books • Describe how elements like carbon, nitrogen, oxygen and water are recycled between biotic and abiotic environments • Explain biogeochemical cycles, and the roles of biogeochemical cycles in circulating matter and energy continuously between the non-living environment (abiotic) and living (biotic) organisms, making nutrients available, and maintaining environmental balance
	C-6.1	• Reflect the changing nature of Earth's environment through our traditional knowledge
	C-7.2	• Pose questions, such as — What will happen if there is no differential heating of the Earth?
	C-8.1	• Draw flow charts, concept maps for biogeochemical cycles, differential heating of the Earth's surface and Electromagnetic spectrum
	C-8.2	• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of differential heating of the Earth and biogeochemical cycle • Predict the results of an experiment or investigation based on their hypotheses • Communicate findings and conclusions effectively, such as those from experiments, activities or projects, both orally and in written form

Motion **No. of Periods: 13**

Key Concepts		Learning Outcomes
• Motion — displacement, velocity, acceleration • Graphical representation of motion for an object moving in a straight line in one direction (with constant velocity, and constant acceleration) • Kinematic equations for motion in a straight line with constant acceleration (by graphical method) • Elementary idea of uniform circular motion	C-2.1	• Differentiate between distance travelled and displacement, and speed and velocity for objects moving in a straight line • Define displacement, velocity, acceleration, and uniform circular motion • Express displacement, velocity, acceleration in appropriate SI units • Plot and interpret position-time graphs and velocity-time graphs to describe the motion of an object moving in a straight line in one direction (with constant velocity and constant acceleration) • Calculate average velocity from position-time graph, displacement and average acceleration from velocity-time graph • Derive kinematic equations for motion in a straight line with constant acceleration by graphical method • Calculate values of unknown physical quantities from the given physical quantities, using kinematic equations • Derive the expression of speed for uniform circular motion
	C-8.1	• Analyse real-life events and phenomena, and identify the key factors that influence their Behaviour.
	C-8.2	• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, theories, laws, and principles • Predict about the outcome of an experiment or investigation based on their hypotheses • Identify the variables that are relevant to a scientific investigation and determine how to control or manipulate them • Accurately use scientific instruments and equipment to collect data • Represent data in multiple modes, including tables, graphs and visual representations, and interpret and draw inferences from the data • Communicate their findings using scientific terminology and effectively communicate their conclusions to others

Force and Laws of Motion **No. of Periods: 13**

Key Concepts		Learning Outcomes
• Force; balanced and unbalanced forces • Force of friction • Newton's first law of motion • Newton's second law of motion • Newton's third law of motion	C-2.1	• Explain that force has magnitude as well as direction • Identify situations in which balanced and unbalanced forces are acting on an object • Explain the role of friction on the motion of objects • Recognise that for an object moving with constant velocity, the net force is zero, whereas a change in velocity (acceleration) is caused by a force • State and explain Newton's first law of motion • State and explain Newton's second law in terms of mass and acceleration • Calculate force using mathematical expression of Newton's second law of motion • Define SI unit of force • State and explain Newton's third law of motion • Apply Newton's laws of motion to explain everyday life events
	C-8.1	• Analyse real-life events and phenomena, and identify the key factors that influence their behaviour • Develop a model to represent real-life event • Use models to manipulate variables and predict results
	C-8.2	• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, theories, laws, and principles • Predict about the outcome of an experiment or investigation based on their hypotheses • Identify the variables that are relevant to a scientific investigation and determine how to control or manipulate them • Accurately use scientific instruments and equipment to collect data • Represent data in multiple modes, including tables, graphs and visual representations, and interpret and draw inferences from the data • Communicate their findings using scientific terminology and effectively communicate their conclusions to others

Work, Energy and Simple Machines **No. of Periods: 13**

Key Concepts		Learning Outcomes
• Concept of work; work done by a constant force • Work-Energy theorem • Mechanical energy, kinetic and potential energy, and conversion between potential energy and kinetic energy • Conservation of energy • Power • Simple machines and their mechanical advantage (pulley, inclined plane, lever)	C-2.5	• Define work done by a constant force and its SI unit • Calculate work done by a force using mathematical expression • State work-energy theorem • Explain the concept of energy and state its SI unit • Name forms of energy and identify their interconversion in surroundings (elementary idea) • Define kinetic energy of a moving object and derive its mathematical expression • Define potential energy for an object raised to a height and derive its mathematical expression • Calculate kinetic and potential energy using mathematical expressions • Explain conversion between potential energy and kinetic energy (for the case of an object under free fall) • State the law of conservation of energy • Define power and its unit • Calculate power using its mathematical expression
	C-2.6	• Identify different simple machines (pulley, inclined plane and lever) • Define mechanical advantage and calculate its value for simple machine • Demonstrate and explain mechanical advantage of simple machines their conclusions to others
	C-8.1	• Analyse real-life events and phenomena, and identify the key factors that influence their behaviour • Develop model to represent real-life event • Use models to manipulate variables and predict results
	C-8.2	• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, theories, laws, and principles • Predict about the outcome of an experiment or investigation based on their hypotheses • Identify the variables that are relevant to a scientific

		investigation and determine how to control or manipulate them • Accurately use scientific instruments and equipment to collect data • Represent data in multiple modes, including tables, graphs and visual representations, and interpret and draw inferences from the data • Communicate their findings using scientific terminology and effectively communicate their conclusions to others

Sound **No. of Periods: 11**

Key Concepts		Learning Outcomes
• Production of sound • Propagation of sound (as a longitudinal wave through a medium) • Graphical representation of sound wave • Characteristics of sound wave (wavelength, frequency, time period, amplitude, intensity, speed) • Human perception of sound (pitch, loudness) • Propagation of sound in different media (solid, liquid) • Reflection of sound (echo, reverberation), echolocation	C-2.7	• Demonstrate the production of sound in multiple ways (through vibration of strings, membranes, air columns) using materials in surroundings • Explain that sound is produced by vibrations • Demonstrate that sound can travel through different mediums (air, solid and liquid) • Describe that sound needs a medium for propagation • Explain that sound travels as a longitudinal wave • Describe the characteristics of sound waves the (wavelength, frequency, time period, amplitude, intensity and speed) • Analyse graphs representing sound • Write relationship between time period and frequency of sound wave • Derive mathematical expression for speed of sound • Calculate speed of sound using its mathematical expression • Explain human perception of sound in terms of audible range, loudness and pitch of sound • Describe reflection of sound, and apply it to echo and reverberations in surroundings • Explain the use of sound waves for echolocation
	C-5.3	• Describe music in terms of characteristics of sound waves, such as loudness and pitch
	C-6.1	• Name historical buildings designed for echoes, such as whispering gallery of Gol Gumbaz

		• Display awareness about Sir C.V. Raman
	C-8.1	• Analyse real-life events and phenomena, and identify the key factors that influence their behaviour • Develop model to represent real-life event • Use models to manipulate variables and predict results
	C-8.2	• Formulate hypotheses about scientific phenomena based on prior knowledge and understanding of scientific concepts, theories, laws, and principles • Predict about the outcome of an experiment or investigation based on their hypotheses • Identify the variables that are relevant to a scientific investigation and determine how to control or manipulate them • Accurately use scientific instruments and equipment to collect data • Represent data in multiple modes, including tables, graphs and visual representations, and interpret and draw inferences from the data • Communicate their findings using scientific terminology and effectively communicate their conclusions to others

Practical will be announced shortly.

Assessment Structure	Marks
Annual Examination (03 hrs.)	80 Marks
Internal Assessment • Periodic Assessment - 05 marks + 05 marks • Subject Enrichment (Practical Work) - 05 marks • Portfolio - 05 marks	20 Marks
Total	100 Marks

PRESCRIBED BOOKS:

- Science-Textbook for class IX-NCERT Publication
- Assessment of Practical Skills in Science-Class IX - CBSE Publication
- Laboratory Manual-Science-Class IX, NCERT Publication
- Exemplar Problems Class IX – NCERT Publication

Social Science
Subject Code-087
Class - IX (2026-27)

RATIONALE

The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive and contributing citizens for building an equitable, inclusive and plural society as envisaged by our Constitution. [NEP 2020, pages 4-5]

Social Science is a compulsory subject at Secondary Stage Phase-I of school education. Social Science can play a unique role within the school curriculum to enable Knowledge, Capacities, and Values and Dispositions that underpin the purpose of education as committed to in NEP 2020.

The teaching and learning of Social Science at the secondary stage is aligned with the transformational vision of the National Curriculum Framework for School Education (NCF-SE) 2023 and the National Education Policy (NEP) 2020. The NCF-SE 2023 emphasises learning, i.e., competency-based, inquiry-oriented, and rooted in Indian Knowledge Systems (IKS) and lived realities. The deliberate reduction of content load with a focus on core concepts rather than memorisation, creates space for discussion, exploration, and deep understanding. The framework's call for interdisciplinarity encourages students to draw meaningful connections across disciplines and relate classroom learning to real-life contexts and experiences.

Furthermore, the NCF-SE 2023 envisions rootedness in India, in which learning is grounded in India's diverse heritage and intellectual traditions, while also being combined with a global outlook. Within this perspective, Social Science education engages students with India's historical experiences, democratic values, and patterns of economic and social development, geographical understanding alongside global processes and contemporary challenges. By integrating the aims of the NEP 2020, Social Science education seeks to transform learning into a process that builds knowledge, capacities, and values essential for personal growth, social harmony and national progress.

Social Science at the secondary stage is an integrated study of human society like its evolution, structures, and dynamics through the disciplines of History, Geography, Political Science, and Economics. It explores how societies function and transform over time through the interplay of historical, geographical, cultural, political, economic, and environmental forces. The subject goes beyond the factual understanding to include inquiry, interpretation, and analysis.

Students learn to source and validate information, interpret data and evidence, and construct logical explanations, thus fostering critical and reflective thinking. It also cultivates empathy, respect for diversity, and a sense of justice and responsibility — values that reflect India's intellectual traditions of reasoning, dialogue, and debate as pathways to truth and understanding.

AIMS & OBJECTIVE

As per NCF- 2023, the aims of teaching Social Science in school education can be summarised as follows:

a. Develop disciplinary knowledge and understanding of how society functions through an interplay of historical, geographical, social, economic, and political factors.

   This can be enabled through:

   i. an understanding of continuity and change in human civilisation, its causation and effect and its impact on modern life.

   ii. an understanding of the interaction between nature and human beings, the spatial patterns arising out of this interaction and its effect on human life.

   iii. an awareness and understanding of the diversity of people and their practices in different societies, regions and cultures within societies.

   iv. an awareness of various social, political and economic institutions, their origin, functioning and transformations over time.

b. Develop an understanding and appreciation for the methods of enquiry relevant to Social Science and deepen students' skills to engage with the key questions and issues confronting society.

   These could be specifically seen as:

   i. Skills in sourcing evidence, interpreting them, checking through multiple sources and evidences and constructing a coherent narrative.

   ii. Skills in recognizing spatial patterns, map-reading, interpretation and analysis of various interconnected concepts and processes.

   iii. Skills of creative and analytical thinking to form informed opinions, demonstrate logical decision-making and incline towards a problem- solving attitude.

   iv. Skills to collect, organize, analyse, represent, and present data and information on various historical, geographical, and socio-political issues.

   v. Skills to question unsubstantiated ideas, biases, stereotypes, and assumptions to foster scientific temper and propose meaningful responses to contemporary concerns of society.

c. Foster ethical, human, and Constitutional values:

   As the NEP 2020 emphasises to foster a "democratic outlook and commitment to liberty and freedom; equality, justice, and fairness; embracing diversity, plurality, and inclusion; humaneness and fraternal spirit; social responsibility and the spirit of service; ethics of integrity and honesty; scientific temper and commitment to rational and public dialogue; peace; social action through Constitutional means; unity and integrity of the nation, and a true rootedness and pride in India with a forward-looking spirit to continuously improve as a nation.

   NOTE-*Refer to NCF-2023-Page no-320-323*

In alignment with the NEP 2020, Social Science education seeks to develop responsible human beings capable of rational thought and action, possessing compassion, empathy, courage, resilience, scientific temper, and creative imagination — qualities that prepare them to contribute meaningfully to the nation and humanity.

Studying Social Science is essential for developing informed, empathetic, and active citizens. It enables learners to situate themselves within broader social, cultural and environmental contexts, and to recognise their role in shaping them. Through this subject, students understand the origins of democratic values, Constitutional principles, and India's civilisational ethos of unity in diversity. They also develop awareness of pressing issues such as inequality, conflict, environmental degradation and economic challenges, and learn to respond to them with evidence-based reasoning and ethical reflection. Social Science thus, bridges knowledge and action, encouraging learners to think critically about society and participate responsibly and effectively in it.

CURRICULAR GOALS-CG

As per NCF 2023 - At the Secondary Stage, students will go into details to understand India's past and appreciate its complexity, diversity, and unity brought about by cultural integration and the sharing of knowledge traditions across geographical and linguistic boundaries. NCF 2023 Page no -154

- CG-1 Understands and analyses the important phases in Indian history and draws insights to understand present-day India
- CG -2 Analyses the important phases in world history and draw insight to understand the present-day world
- CG-3 Understands the idea of a nation and the emergence of the modern Indian Nation
- CG -4 Develops an understanding of the inter-relationship between human beings and their physical environment and how that influences the livelihoods, cultural diversity, and biodiversity of the region
- CG -5 Understand the Indian Constitution and explores the essence of Indian democracy and the characteristics of a democratic government.
- CG -6 Understand and analyse social, cultural, and political life in India over time – as well as the underlying historical Indian ethos and philosophy of unity in diversity – and recognises challenges faced in these areas in the past and present and the efforts (being) made to address them
- CG -7 Develop an understanding of the inter-relationship between human beings and their physical environment and how that influences the livelihoods, cultural diversity, and biodiversity of the region
- CG -8 Evaluate the economic development of a country in terms of its impact on the lives of its people and nature
- CG-9 Understand and appreciate the contribution of India through history and present times, to the overall field of Social Science, and the disciplines that constitute it

COMPETENCIES

Competencies are specific learning achievements that are observable and can be assessed systematically. In NCF, Competencies are directly derived from a Curricular Goal and are

expected to be attained by the end of a Stage. The following competencies need to be developed in students to achieve the curricular goals at secondary stage.

- CG-1.1 Explains the historical events and processes using different types of sources with specific examples from Indian history
- CG-1.2 Explains and analyses the chronology of human life on the Indian subcontinent, from prehistory to its civilisational beginnings and beyond, and its relations with other civilisations over time, such as those in Mesopotamia, Greece, Central Asia, China, Southeast Asia, Arabia, and Eastern Africa
- CG-1.3 Traces aspects of continuity and change in different phases of history across the Indian subcontinent (including cultural trends, social and religious trends and reforms, and economic and political transformations)
- CG-1.4 Explains the growth of new indigenous ideas across India in Mathematics, Philosophy, Science and Technology, Medicine, Architecture, Agriculture, Literature and Art, and Social Science (such as zero and the Indian number system, *ahimsa*, the six systems of Indian philosophy, Ayurveda, yoga, the 22 *shrutis* of Indian music, horticulture, use of herbs and spices, etymology, meters, and grammar) and how they affected the course of the Indian history
- C-2.1 Explains historical events and processes with different types of sources with specific examples from India and world history.
- C-2.3 Traces aspects of continuity and change in different phases of world history (including cultural trends, social and religious reforms, and economic and political transformations)
- C-2.4 Explains the growth of new ideas and practices across the world (including humanism, mercantilism, industrialisation, scientific developments and explorations, imperialism, colonialism, the rise of the new nation states across the world, and various technologies including the most current) and how they affected the course of world history.
- C-2.5 Recognises the various practices that arose, such as those in C- 2.4, and came to be condemned later on (such as racism, slavery, colonial invasions, conquests, and plunder, genocides, exclusion of women from democratic and other institutions), all of which have also impacted the course of world history and have left unhealed wounds.
- C 3.1 Analyses the meaning of nation and how the concept evolved over time across the world and in the specific context of India, including its roots in the rich civilisational history of the Indian subcontinent
- C3.2 Identifies and analyses important phases of the Indian national freedom struggle against British colonial rule, with special reference to the movement led by Mahatma Gandhi and other important figures as well as those that led to independence, and

  understands the specific Indian concepts, values, and methods (such as Swaraj, Swadeshi, passive resistance, fight for dharma self- sacrifice, ahimsa) that played a part in achieving Independence.
- C-4.1 Locates physiographic regions of India and the climatic zones of the world on a globe/map.
- C-4.2 Explains important geographical concepts, characteristics of key landforms, their origin, and other physical factors of a region
- C-4.3 Draws inter- linkages between various components of the physical environment, such as climate and relief, climate and vegetation, vegetation, and wildlife.
- C-4.4 Analyses and evaluates the inter- relationship between the natural environment and human beings and their cultures across regions and, in the case of India, the special environmental ethos that resulted in practices of nature conservation

- C-4.5 Critically evaluates the impact of human interventions on the environment, including climate change, pollution, shortages of natural resources (particularly water), and loss of biodiversity; identifies practices that have led to these environmental crises and the measures that must be taken to reverse them.
- C-4.6 Develops sensitivity towards the judicious use of natural resources (by individuals, societies, and nations) and suggests measures for their conservation
- C-5.1 Understands that the Indian Constitution draws from the great cultural heritage and common aspirations of the Indian nation, and recalls India's early experiments with democracy (assemblies in *Mahajanapadas*, kingdoms and empires at several levels of the society, guilds *sanghas* and *ganas*, village councils and committees, *Uthiramerur* inscriptions)
- C-5.2 Appreciates fundamental Constitutional values and identify their significance for the prosperity of the Indian nation.
- C-5.3 Explains that fundamental rights are the most basic human rights, and they flourish when people also perform their fundamental duties
- C-5.4 Analyses the basic features of a democracy and democratic government – and its history in India and across the world – and compares this form of government with other forms of government.
- C-5.5- Analyses the critical role of non-state and non-market participants in the functioning of a democratic government and society, such as the media, civil society, socio-religious institutions, and community institutions
- C-6.1 Understands how the Indian ethos and the cultural integration across India did not attempt uniformity, but respected and promoted a rich diversity in Indian society, and how this harmonisation and unity in diversity, with a historical respect for all cultures, women have counted among India's great strengths by promoting peaceful coexistence
- C-6.2 Understands that despite C-6.1, forms of inequality, injustice, and discrimination have occurred in different sections of society at different times (due to internal as well as outside forces such as colonisation), leading to political, social, and cultural efforts, struggles, movements, and mechanisms at various levels towards equity, inclusion, justice, and harmony, with varying outcomes and degrees of success.
- C 6.3 Analyses aspects of differential treatment or discrimination that may exist in the Indian society, based on, socio-cultural background, region, language spoken, and what individuals and societies can do to eradicate such differential treatment
- C 6.4 Understands that a progressive society and nation, such as India is one that recognises not only its civilisational strengths but also its socio-economic, cultural and political challenges, and continuously makes efforts to address those challenges to become ever more prosperous, inclusive, just, and harmonious
- C-7.1 Defines key features of the economy, such as, production, distribution, demand, supply, trade, and commerce, and factors that influence these aspects (including technology)
- C-7.2 Evaluates the importance of the three sectors of production (primary, secondary, and tertiary) in any country's economy, especially India
- C-7.3 Distinguishes between 'unorganised' and 'organised' sectors of the economy and their role in production for the local market in small, medium, and large-scale production centres (industries), and recognises the special importance of the so-called 'unorganised' sector in

Indian economy and its connections with the self-organising features of Indian society

- C-7.4 Traces the beginning and importance of large- scale trade and commerce (including e- commerce) between one country and another - the key items of trade in the beginning, and the changes from time to time.
- C-8.1 Gathers, comprehends and analyses data related to income, capital, poverty, and employment in one's locality, region and at the national level. Markets.
- C- 8.2 Understands and analyses the concepts and practices of the range of economic systems — from free market to entirely state-controlled markets.
- C-8.3 Understands these features in the context of ancient India, with its thriving trade, both internal and external, and its well- established trade practices and networks, business conventions, and diverse industries, all of which made India one of the world's leading economies up to the colonial period
- C-8.4 Describes India's recent path towards again becoming one of the three largest economies of the world, and how individuals can contribute to this economic progress.
- C-8.5 Appreciates the connections between economic development and the environment, and the broader indicators of societal wellbeing beyond GDP growth and income.
- C – 9.1 Knows and explains the significant contributions of India to all matters (concepts, explanations, methods) studied within the curriculum, in an integrated manner

Pedagogy for teaching geography should integrate experiential, visual, and analytical approaches to make learning more meaningful and connected to the real world. Effective geography teaching goes beyond textbooks- it involves helping students observe, analyse, and interpret the Earth's surface and human-environment relationships. The use of three-dimensional models enables students to visualise complex geographical processes, such as mountain formation, river systems, and soil profiles, thus making abstract concepts tangible. Field observation is an essential pedagogical tool that promotes experiential learning; by directly engaging with local landscapes, students develop geographical inquiry skills, observation techniques, and data collection abilities. Incorporating Bhuvan images, India's indigenous satellite imagery and mapping platform allow learners to explore their own regions using real-time geospatial data and satellite views, linking classroom knowledge to local realities. Map reading is another fundamental component, as it cultivates spatial awareness, orientation, and the ability to interpret symbols, scales, and coordinates. Likewise, photo interpretation — analysing aerial and satellite photographs — helps students understand the land-use patterns, vegetation cover, urbanisation, and environmental changes. When combined, these methods foster critical thinking, spatial reasoning, and a deeper appreciation of the dynamic Earth systems that geography seeks to explain.

For understanding the past and India's rich heritage, teachers are expected to engage students in the following ways. Firstly, they are expected to analyse inscriptions or edicts (for example, Ashoka's edicts, and Gupta records) to understand how rulers communicated policies, messages, and ethical guidelines to their subjects. Secondly, they are to encourage students to read excerpts or chapters from Indian literary sources that throw light on the social, cultural, and political life of people. Thirdly, they are expected to conduct research and present examples of forts, temples, mosques, and palaces to illustrate cultural, architectural, and political developments in the Indian history. Finally, the teachers should explore and discuss the works of artists and philosophers of the Renaissance period, highlighting their contributions and influence.

Students should be made to locate the extent of various important empires on a world map. They are also expected to investigate and explain the key Indian ideas that shaped the thinking of Western philosophers, scientists, and artists. Finally, students should be encouraged to use a world map to trace India's trade and cultural exchanges with other civilisations, and analyse their patterns and impact.

Transaction of political concepts requires connecting students with evidence, inquiry, and real-world reasoning. Document-based inquiry helps learners explore authentic sources, such as Vedic texts, constitutional excerpts, and letters from national leaders to interpret historical contexts and moral reasoning. Case-based pedagogy, using landmark judgments, maps, and data analysis, builds decision-making and analytical skills, encouraging students to apply theory to practice. Evidence-based learning engages learners with real datasets from Census, NITI Aayog, or UNDP reports to develop data literacy and link concepts like equality and representation with measurable realities. Further, multimedia and experiential approaches use podcasts, documentaries, and archival materials to connect abstract political ideas with real experiences, sharpening students' interpretive and critical listening skills. Visual and graphic organiser-based pedagogy-through charts, tables, and concept maps — supports comprehension, memory, and summarisation by converting complex ideas into structured visuals. Together, these pedagogies transform classrooms into laboratories of civic thinking, empathy, and inquiry. They nurture students as reflective citizens who can interpret evidence, question assumptions, and engage meaningfully with India's democratic processes.

The pedagogy for teaching Economics needs to be interactive, experiential, and inquiry-driven, enabling students to relate economic concepts to real-life situations. Teachers can use role-play activities — such as running a lemonade stall or simulating the circular flow of income with students acting as households, firms, banks, and the government to make ideas like production, income, and expenditure tangible. Class discussions on familiar issues, such as rising vegetable prices during monsoons, help students link classroom learning with everyday experiences and develop critical thinking. Engaging classroom activities and games, like preparing a classroom budget, allow students to understand scarcity, choice, and opportunity cost in a fun and participatory way. The use of visual tools — including maps, pie charts, and graphs — can help students analyse data on GDP, trade, and sectoral trends. The case studies on topics like pollution as an externality, public goods like street lights, or successful entrepreneurs encourage application and deeper reflection. Surveys and field visits to local shopkeepers or MSMEs further bridge theory and practice by exposing students to real market dynamics. Incorporating current resources, such as newspaper articles or the Union Budget fosters analytical skills and awareness of contemporary economic issues. Through this diverse, hands-on approach, learners will move beyond memorisation to active understanding, making Economics relevant, engaging, and empowering

COURSE OUTLINE

Class IX-2026-27			
Part 1			
S. No.	**Theme (time allocation in instructional hours)**	**Outline/Concepts**	**Learning Outcomes and Competencies Students will be able to:**
1.	Understanding Social Science (4 Hours)	• Meaning, scope and relevance of Social Science • Understanding Social Science from an Indian perspective	• Explain the relevance of studying Social Science to understand society, environment, economy, and governance in our lives. • Explain the meaning and scope of Geography, History, Political Science, and Economics as disciplines and recognise their interconnections. • Appreciate diversity, inclusivity, sustainability, and equity as guiding values when studying society and making decisions.
2.	Shaping of the Earth's Surface (8 Hours)	• Theory of plate tectonics • Interior of the Earth • Role of weathering and erosion; agents of gradation — river, waves and currents, wind, glaciers, and underground water • Landforms and disasters: earthquakes, landslides, avalanches, Glacial Lake Outburst Flood (GLOF) and duststroms	C4.2 • Describe the concept of plate tectonics and analyse its relevance in understanding Earth's dynamics. • Locate major tectonic plates on a world map. • Explain processes of weathering and erosion with suitable examples. • Identify the prominent agents of gradation operating in a given region. • Describe major landforms and explain the processes involved in their formation. • Explain the causes of natural disasters and propose strategies for their mitigation.
3.	Atmosphere and Climate (7 Hours)	• Structure and composition; elements of weather and climate • Seasons of India and monsoons • Climate change • Floods Carbon footprint	C4.3, C4.4, C4.5 • Explain the different atmospheric layers and represent them using sketches and diagrams. • Observe and analyse local winds and their impact. • Understand the impact of the Indian monsoon on life, agriculture, and livelihoods across different regions.

			• Explain the causes and effects of climate change. • Represent climatic data (temperature, rainfall, etc.) through appropriate graphs, charts, or diagrams. • Analyse how climate change influences the frequency and intensity of natural disasters.
4.	Early Humans and Beginning of Civilisation (9 Hours)	• Cultural development from 2 million years ago • Early human history, periodisation: Archaeological ages • Who are human ancestors? • Palaeolithic hunter-gatherers and use of stone tools	C1.2, C2.1, C2.2, C2.3 • Describe how prehistoric time divisions are organised. • Explain how humans lived before the invention of writing • Understand the beginning of the settled life with development of agriculture, and domestication of plants and animals. • Explore the factors of urban development and transformation through time.
		• Mesolithic transition to food production: Mesolithic sites and tools • Neolithic and the beginning of farming: Neolithic revolution domestication of plants and animals • Harappan and contemporary cultures • Mesopotamian, egyptian, and chinese civilisation	• Appreciate the diversity of crafts and trade, and their role the establishment of prosperous economy. • Understand the diversity of food habits. • Describe the social, political, and religious structures of the civilisations of Egypt and Mesopotamia.
5.	State and Society (upto 1000 CE) (9 Hours)	• Vedic Age — geography; texts; rituals; political institutions, and social order • Administrative structure of early empires • Quest for knowledge — educational heritage, institutions, knowledge traditions, and cultural practices	C1.3, C2.3, C3.1, C1.4 • Explain various facets of Vedic society and polity. • Appreciate the achievements of Indian empires and their cultural legacy. • Understand the knowledge traditions and practices of India. • Understand the foundations of the Indian social and political institutions and their continuity.

		• Traders and trade routes, guilds and merchants, crafts and industries	
6.	Democracy (9 Hours)	• Meaning features and types of democracy • Roots of democracy in India • Challenges to democracy in India • Democratic systems in the world	C5.1, C5.2 • Understand the features of democracy. • Appreciate early democratic traditions in India and how they influenced modern democracy. • Differentiate between parliamentary and presidential systems. • Identify examples of both systems across countries, such as India, USA, France, Russia, and Canada.
7.	Elections (9 Hours)	• Factors of importance of elections • Electoral systems • Delimitation Commission • Election Commission of India and its role • Constituency, electoral rolls, enumerators • Party system in India	C5.2, C5.3, C5.4, C5.5, C6.2, C6.3, C6.4, C9.1 • Identify factors highlighting importance of elections in a democracy. • Categorise three types of electoral systems and list examples. • Identify the major laws that govern the conduct of elections in India. • Describe the main provisions of the Representation of the People Acts. • Define the concept of delimitation and its purpose in the Indian electoral system. • Identify the role and functions Election Commission of India (ECI) in the electoral process. • Explain constituency, electoral roll, enumerator. • Understand the party system in India. • Explain the meaning and features of a coalition government in the Indian political system. Explain key provisions of the Anti-Defection Law with reference to political instability and the need for anti-defection measures.
8.	Building Blocks in Economics (7 Hours)	• Scarcity of resources, opportunity cost and the need for making choice. What do economists do?	C8.2 • Explain the meaning of scarcity, choice, and opportunity cost in everyday life, and economic decision-making. • Describe what economists do and how they study production, distribution, and consumption of goods and services.

		• What to produce, how to produce, and for whom to produce? • Difference between market, centrally planned, and mixed economic systems • Welfare economy	• Recognise how economic analysis helps in policy-making and solving real-world issues. • Describe the three central problems of an economy — what to produce, how to produce, and for whom to produce. • Identify and differentiate the characteristics of planned, free market, and mixed economic systems. • Explain the concept of a welfare economy and the importance of social safety nets.
9.	The Price Puzzle: What Drives the Market (8 Hours)	• Laws of demand and supply • Real-world deviations from textbook theory, such as in case of necessities, luxury goods, perishable items, and expectations • Some related concepts — price ceilings and market failures (externalities, information asymmetry, public goods)	C7.1 • Explain the Law of Demand and Law of Supply with the help of real life examples. • Interpret how changes in price affect the quantity demanded and quantity supplied of goods and services. • Identify the equilibrium price and quantity where demand and supply intersect. • Analyse how changes in market conditions (e.g., increase in demand or supply) lead to surplus or shortage and affect equilibrium. • Explain the concept of price ceilings and how they can lead to shortages or black markets. • Understand market failures and identify their main types. • Understand public goods (non- excludable and non-rival goods like parks or street lighting).

Part 2

S. No.	Theme (time allocation instructional hours)	Outline/Concepts	Learning Outcomes (pertinent) CGs, Cs Students will be able to:
1.	Oceans and Life (7 Hours)	• Introduction to ocean relief, movement of ocean water- waves, tides and currents • Marine resources and their significance; open seas, navigation fishing, and livelihood concerns and challenges • Cyclones and	C4.1, C4.2 • Explain the movement of ocean waters, including waves, tides, and currents. • Analyse the connections between ocean currents, and global and regional climate patterns. • Understand the importance of marine resources for human livelihoods and ecosystems. • Examine the relationship between oceans, climate, livelihoods, and natural disasters. • Highlight key rules, conventions, and

		Tsunamis — early warning systems • International maritime rules and regulations	international agreements governing ocean navigation. and the use of marine resources. • Explain the need for international cooperation and agreements in the sustainable use of ocean resources. • Construct models or sketches representing ocean relief.
2.	Life on Earth (7 Hours)	• Biomes: Distribution and characteristics; biosphere reserves in India • Forest and ecotourism; forest dwellers, their livelihoods, and challenges • Forest and wildlife conservation • Government efforts to support forest dwellers	C4.3, C4.4, C4.5, C4.6 • Identify the major biomes of the world and describe their key climatic conditions, characteristic flora, and fauna. • Locate biosphere reserves on the map of India. • Appreciate local traditional practices related to biodiversity conservation and analyse their effects. • Explain the concept and importance of biosphere reserves in conserving ecosystems and biodiversity. • Analyse the concept of ecotourism and discuss its role in promoting sustainable forest ecosystem and conservation. • Investigate the causes of forest fires in the local area, and prepare a plan for mitigation and prevention.
3.	Resistance and Resilience (1000 CE – 1700 CE) (9 Hours)	• Safeguarding sovereignty: resistance, alliances and confederacies • Development of art and architecture, languages and literature • The Bhakti tradition • Forts and fortifications • Expansion of Indian economy and state	C1.3, C1.4, C3.1 • Explain the cultural, political, and military contributions of regional kingdoms in India. • Appreciate how diverse communities and regions shaped India's history from 1000 CE to 1700 CE. • Explore how regional kingdoms adapted to changing political, economic, and cultural contexts over time. • Analyse the continuity of the civilisational history of India as a nation upto 18th century CE.
4.	India and the World-I (1900 BCE-1200 CE) (8 Hours)	• Trade and commerce — trade with Mesopotamia, Greece, Roman Empire, China and Southeast Asia • Cultural Connections — Interactions with Greece and Rome, Central Asia, China, and Influence on South East Asia	C1.2, C1.4, C6.1, C2.3, C9.1 • Explore India's relations with early civilisations of the world. • Identify the major articles of trade and the major trading ports. • Appreciate the significant contributions of India in diverse spheres in an integrated manner. • Appreciate the influence of Indian religion and culture, particularly in Southeast Asia.

		• Indian Knowledge Systems — Medicine, Mathematics and Astronomy, Medicine, Religion	
5.	Authority (10 Hours)	• The Roots of Authority: in Kautilya and *shukraniti- danda* and relationship with *nyaya* and *bala*; the types of *nyaya* and *bala* • Constitutional status of justice and security since ancient times • Links the role of citizens with the elections and the democratic institutions • Types of authority — functional, sensitive, and welfare-oriented	C5.1, C5.2, C 5.3 • Explain the roots of authority in Indian political thought. • Interpret the relationship between *Danda* (discipline/ force) and *Nyaya* (justice) as the twin foundations of authority, development, and security. • Trace the evolution of authority structures in India. • Understand the post- independence concept of justice and security. • Illustrate types of authority. • Develop an understanding of citizen discipline, justice, and strength. • Illustrate the role of citizens in authority.
6.	From Ideas to Startups (8 Hours)	• What is entrepreneurship and explain the resources required to start a business • Case studies of successful entrepreneurs • Creative destruction with examples • Start-up ecosystem in India. • Make in India initiative, role of MSMEs and the unorganised sector in India's economic growth. • Stages of starting and executing a business idea through a business plan • Some basic accounting concepts	C7.3 • Define entrepreneurship and explain its importance in innovation, job creation, and economic growth. • Understand the key resources for business. • Explain how resources are managed to produce goods and services. • Analyse real-world examples of successful entrepreneurs. • Describe the features of India's start-up ecosystem and initiatives like Make in India, Startup India, and Digital India. • Recognise the role of Micro, Small, and Medium Enterprises (MSMEs) and the unorganised sector in promoting employment, innovation, and inclusive growth. • Identify and explain the stages of starting a business from developing an idea to creating and executing a business plan. • Understand simple profit and loss. Identify the key components of a balance.

7.	Smart Ways to Manage Your Finances (6 Hours)	• Relevance of personal financial management in daily life • Inflation and its impact on purchasing power • Simple vs. compound interest rate • Budgeting • Various savings and investment options like fixed deposit, stocks, bonds, mutual funds, etc. • Risk and insurance • Personal income tax	CG8 • Explain what personal financial management means and why it is essential in everyday life. • Recognise how managing income, spending, saving, and investment helps achieve financial stability and long-term goals. • Explain the difference between simple interest and compound interest. • Prepare a simple personal or family budget showing income, expenditure, and savings. • Identify various savings and investment instruments. • Understand the relationship between risk and return in different investment types. • Understand the concept of income tax and why citizens are required to pay it.

Note-Course Structure will be provided shortly

CLASS IX (2025-26)
INTERNAL ASSESSMENT: 20 MARKS

Type of Assessment	Description	Marks
Periodic Assessment	Pen Paper Test	5
Multiple Assessment	Quiz, debate, role play, viva-voce, group discussion, visual expression, interactive bulletin boards, gallery walks, exit cards, concept maps, peer assessment, self- assessment etc. through interdisciplinary project , Report Writing on field visits, Commentaries/visual interpretations, site-map making	5
Subject Enrichment Activity	Project work (Interdisciplinary)	5
Portfolio	Classroom, work done (activities/assignments) reflections, narrations, journals etc. Achievements of the student in the subject throughout the year. Participation of the student in different activities like Heritage India quiz etc.	5

CLASS IX
PRESCRIBED TEXT BOOKS

S. No.	Name of the Book	Publisher
1	Social Science-Part 1	NCERT
2	Social Science-Part 2	NCERT

हिंदी पाठ्यक्रम (2026-27)

कक्षा-नवीं (आर -1)

भाषा किसी भी ज्ञान-क्षेत्र की आधारशिला है। हम प्रकृति और समाज को बहुत हद तक अपनी भाषा के ढाँचे के माध्यम से ही समझते और विश्लेषित करते हैं। इस कार्य को करने में भाषा का साहित्य हमारी विशेष सहायता करता है। माध्यमिक स्तर पर प्रवेश करने वाले विद्यार्थी सामान्य भाषा-ज्ञान से विशिष्ट अनुशासनात्मक अध्ययन की ओर बढ़ते हैं।

राष्ट्रीय शिक्षा नीति 2020 और विद्यालयी शिक्षा हेतु राष्ट्रीय पाठ्यचर्या की रूपरेखा 2023 की दृष्टि के अनुरूप यह पाठ्यक्रम हिंदी को केवल एक विषय नहीं बल्कि अनुभवों, मूल्यों, बहुसांस्कृतिकता, सृजनात्मकता और संवाद की एक समृद्ध प्रक्रिया के रूप में प्रस्तुत करता है। यह ज्ञान के संग्रह तक सीमित नहीं रहता बल्कि विद्यार्थियों को सोचने, कल्पना करने, विश्लेषण करने और अभिव्यक्ति के लिए प्रेरित करता है। पाठ्यक्रम का लक्ष्य विद्यार्थियों की चेतना को इस दिशा की ओर ले जाना है कि हिंदी भाषा के माध्यम से यथार्थ को अर्थात जो भी घटित हो रहा है, उसे समझा जाए और उसमें अपनी आकांक्षाओं का चित्र रचा जाए।इस पाठ्यक्रम का केंद्रीय उद्देश्य पाठों का पठन-पाठन मात्र नहीं बल्कि उनके माध्यम से विद्यार्थियों में गहन पाठानुभूति, संवेदनशील अभिव्यक्ति, तार्किक विश्लेषण, संदर्भ-आधारित लेखन तथा भाषिक एवं सांस्कृतिक विविधता की समझ को विकसित करना है।हिंदी भाषा के सीखने-सिखाने के माध्यम से विद्यार्थियों में भाषा, संस्कृति का समावेशी दृष्टिकोण पैदा करना, जीवन के विविध संदर्भों को समझना, विविधता के प्रति सकारात्मकता का बोध पैदा करना- यह सब आवश्यक रूप से अपेक्षित है।

नवीं कक्षा में प्रवेश करने वाले विद्यार्थी की भाषा-शैली और विचार-बोध का एक ऐसा आधार बन चुका होता है कि अब उसे उसके भाषिक दायरे के विस्तार और वैचारिक समृद्धि के लिए आवश्यक संसाधन मुहैया कराए जाने की आवश्यकता होती है। माध्यमिक स्तर तक आते-आते विद्यार्थी किशोरावस्था में प्रवेश कर चुके होते हैं और उनमें सुनने, बोलने, पढ़ने, लिखने एवं समझने के साथ-साथ आलोचनात्मक दृष्टि विकसित होने लगती है। उनमें भाषा के सौंदर्यात्मक पक्ष, कथात्मकता, गीतात्मकता, समाचार-पत्रों की समझ, शब्द-शक्तियों के बीच अंतर की समझ, राजनैतिक चेतना एवं सामाजिक चेतना का विकास हो जाता है। वे आस-पड़ोस की भाषा और आवश्यकता के अनुसार उपयुक्त भाषा-प्रयोग, शब्दों के सुविचारित प्रयोग, भाषा की नियमबद्ध प्रकृति आदि से परिचित हो जाते हैं। इतना ही नहीं, वे विभिन्न विधाओं और अभिव्यक्ति की अनेक शैलियों से भी परिचित हो चुके होते हैं। अब विद्यार्थियों का अध्ययन आस-पड़ोस, राज्य-देश की सीमा को लाँघते हुए वैश्विक क्षितिज तक फैल जाता है। इन विद्यार्थियों की दुनिया में समाचार, खेल, फ़िल्म तथा अन्य कलाओं के साथ-साथ पत्र-पत्रिकाएँ और अलग-अलग तरह की पुस्तकें भी प्रवेश पा चुकी होती हैं।

एनसीईआरटी के पाठ्यक्रम और पाठ्यपुस्तकों में आर1 और आर2 के संदर्भ एनसीसीएफ-एसई 2023 के परिप्रेक्ष्य पर आधारित सांकेतिक और प्रासंगिक हैं। इन संदर्भों का उद्देश्य माध्यमिक स्तर पर आर1 और आर2 के बीच किसी भी प्रकार का संरचनात्मक या योग्यता-आधारित अंतर दर्शाना नहीं है।

पाठ्यपुस्तक की विषयवस्तु, अधिगम परिणाम और मूल्यांकन माध्यमिक स्तर पर आर 1 और आर 2 के लिए परिकल्पित सामान्य योग्यता ढाँचे के अनुरूप हैं, इसलिए संदर्भ के अनुसार इन पाठ्यपुस्तकों का लचीले ढंग से उपयोग किया जा सकता है।

इस स्तर पर हिंदी का अध्ययन-अध्यापन साहित्यिक, सांस्कृतिक और व्यावहारिक भाषा के रूप में कुछ इस तरह से हो कि माध्यमिक स्तर तक पहुँचते-पहुँचते यह विद्यार्थियों की पहचान, आत्मविश्वास और विमर्श की भाषा बन सके। आवश्यकता इस बात की है कि विद्यार्थी भाषा के लिखित प्रयोग के साथ-साथ सहज और स्वाभाविक मौखिक अभिव्यक्ति में भी सक्षम हो सकें। वे हिंदी की प्रकृति के अनुसार वर्तनी और उच्चारण के आपसी संबंधों को समझ सकें ताकि उनकी लिखित और मौखिक भाषा में समानता एवं स्पष्टता हो।

CG-1: लेखन के विभिन्न रूपों (निबंध, पत्र, लेख, चर्चा, साक्षात्कार, सार्वजनिक भाषण) और नव मीडिया (ईमेल, श्रव्य और दृश्य सामग्री) के माध्यम से प्रभावी संप्रेषण के लिए भाषा का उपयोग करना।

दक्षताएँ	सीखने के संकेत बिंदु/गतिविधियाँ
C-3.1-विभिन्न श्रव्य और लिखित सामग्री का विश्लेषण और मूल्यांकन करना।	• विभिन्न प्रकार की श्रव्य और लिखित सामग्री में विवरणों का अवलोकन और विश्लेषण करके उन्हें व्यवस्थित रूप से लिखते हैं। • किसी एक विषय पर विभिन्न स्रोतों से प्राप्त सामग्री का विश्लेषण करके उसकी विश्वसनीयता की जाँच करते हैं।
C-3.2-रचना में परिवेश का सावधानीपूर्वक मूल्यांकन करके उचित तकों के साथ चर्चा-परिचर्चा करना।	• पाठ्यवस्तु को पढ़ते और सुनते समय स्वयं के पूर्वग्रहों को पहचानते हैं और साक्ष्यों का मूल्यांकन करके पाठ्यवस्तु/श्रव्य-सामग्री की विश्वसनीयता का निर्धारण करते हैं।

पाठ्यचर्या CG-4: भारतीय भाषाई विविधता से जुड़ी साहित्यिक और सांस्कृतिक विरासत की सराहना करना।

दक्षताएँ	सीखने के संकेत बिंदु/गतिविधियाँ
C-4.1-पाठ को पढ़ते हुए विभिन्न शैलियों की सामग्री के अवलोकन के माध्यम से भारतीय समाज और साहित्यिक विविधता की बहुभाषी प्रकृति की पहचान करना।	• भारतीय समाज की बहुभाषी प्रकृति को पहचानने के लिए विभिन्न क्षेत्रीय भाषाओं के चलचित्र और वृतचित्र देखते हैं और उनके बारे में अपने विचार साझा करते हैं।
C-4.2-भारतीय भाषाओं की विभिन्न साहित्यिक रचनाओं में निहित संस्कृति एवं विरासत की विविधता और उनके आपसी संबंधों की सराहना करना।	• पढ़ी गई साहित्यिक रचनाओं को विषयों, पात्रों और परिस्थितियों के आधार पर अपने व्यक्तिगत अनुभवों/जीवन से जोड़ते हैं। • विभिन्न भारतीय भाषाओं के साहित्य की विशिष्टता और साहित्य जगत में उनके योगदान की सराहना करते हैं।
C-4.3-हमारी संस्कृति और पहचान के निर्माण में भाषा की भूमिका को समझते हुए अभिव्यक्त करना।	• भाषा में निहित सांस्कृतिक परंपराओं से प्रभावित कहावतों/पहेलियों/मुहावरों के उदाहरण साझा करते हैं। • लिखने और बोलने में सांस्कृतिक परंपराओं से प्रभावित अपनी भाषा की शब्दावली का संदर्भों के अनुसार उपयुक्त उपयोग करते हैं।

हिंदी पाठ्यक्रम - आर -1 (2026 - 27)			
कक्षा - नवीं			
खंड			भारांक
क	अपठित बोध		14
ख	व्यावहारिक व्याकरण		16

ग	पाठ्यपुस्तक			30
घ	रचनात्मक लेखन			20
	• भारांक - 80 (वार्षिक परीक्षा) +20 (आंतरिक परीक्षा)			
	खंड -क (अपठित बोध)		उपभार	कुल भार
	विषयवस्तु			
1	अपठित गद्यांश व काव्यांश पर बोध, चिंतन, विश्लेषण, सराहना आदि पर बहुविकल्पीय, अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न			14
अ	एक अपठित गद्यांश लगभग 200 शब्दों का | इसके आधार पर एक अंकीय तीन बहुविकल्पी प्रश्न (1x3=3) पूछे जाएँगे, अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न (2×2=4) पूछे जाएँगे |		7	
ब	एक अपठित काव्यांश लगभग 80-100 शब्दों का | इसके आधार पर एक अंकीय तीन बहुविकल्पी प्रश्न (1x3=3) पूछे जाएँगे, अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न (2×2=4) पूछे जाएँगे		7	
	खंड -ख (व्यावहारिक व्याकरण)			
2	व्याकरण के लिए निर्धारित विषयों पर विषयवस्तु का बोध, भाषिक बिंदु /संरचना आदि पर अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न | (1X16 = 16) कुल 20 प्रश्न पूछे जाएँगे, जिनमें से केवल 16 प्रश्नों के उत्तर देने होंगे |			16
	(i)	शब्द -निर्माण उपसर्ग - 2 अंक ,प्रत्यय - 2 अंक (5 प्रश्नों में से 4 प्रश्न करने होंगे)	4	
	(ii)	संज्ञा, सर्वनाम,विशेषण,क्रिया (5 प्रश्नों में से 4 प्रश्न करने होंगे)	4	
	(iii)	अर्थ की दृष्टि से वाक्य-भेद - 4 अंक (5 प्रश्नों में से 4 प्रश्न करने होंगे)	4	

	(iv)	अलंकार - 4 अंक शब्दालंकार : अनुप्रास, यमक,श्लेष (5 प्रश्नों में से 4 प्रश्न करने होंगे)	4	
3	खंड -ग (पाठ्यपुस्तक)			30
4	खंड -घ (रचनात्मक लेखन)			20
	लेखन			
	(i)	विभिन्न विषयों और संदर्भों पर विद्यार्थियों के तर्कसंगत विचार प्रकट करने की क्षमता को परखने के लिए संकेत-बिंदुओं पर आधारित समसामायिक एवं व्यावहारिक जीवन से जुड़े हुए तीन विषयों में से किसी एक विषय पर लगभग 120 शब्दों में अनुच्छेद लेखन ।	5	
	(ii)	अभिव्यक्ति की क्षमता पर केंद्रित अनौपचारिक दो विषयों में से किसी एक विषय पर लगभग 100 शब्दों में पत्र लेखन । (विकल्प सहित)	5	
	(iii)	दिए गए विषय / परिस्थिति के आधार पर लगभग 80 शब्दों में संवाद लेखन । (विकल्प सहित)	5	
	(iv)	दिए गए विषय / शीर्षक के आधार पर लगभग 80 शब्दों में सूचना लेखन । (विकल्प सहित)	5	

राष्ट्रीय शैक्षिक अनुसंधान केंद्र द्वारा राष्ट्रीय पाठ्यचर्या की रूपरेखा 2023 के आधार पर जारी की गई पाठ्यपुस्तक के आधार पर साहित्य से संबंधित अध्ययन किया जाए।

हिंदी पाठ्यक्रम (2026-27)

कक्षा-नवीं (आर -2)

राष्ट्रीय पाठ्यचर्या की रूपरेखा 2023 के अनुरूप द्वितीय भाषा के रूप में हिंदी आर 2 के रूप में पढ़ाई जाएगी। रोचक ढंग से इस भाषा का अध्ययन-अध्यापन पूर्णतः स्तरानुकूल रहेगा जिससे सभी

शिक्षार्थी लाभान्वित हो सकें तथा भारतीय भाषाओं के साथ सुरुचिपूर्ण ढंग से सामंजस्य स्थापित कर सकें ।

एनसीईआरटी द्वारा जारी पाठ्यचर्या के लक्ष्यों एवं दक्षताओं को प्रमुख रूप से ध्यान में रखते हुए शिक्षण बिंदुओं का कार्यान्वयन किया जाएगा।

भाषा किसी भी ज्ञान-क्षेत्र की आधारशिला है। हम प्रकृति और समाज को बहुत हद तक अपनी भाषा के ढाँचे के माध्यम से ही समझते और विश्लेषित करते हैं। इस कार्य को करने में भाषा का साहित्य हमारी विशेष सहायता करता है। माध्यमिक स्तर पर प्रवेश करने वाले विद्यार्थी सामान्य भाषा-ज्ञान से विशिष्ट अनुशासनात्मक अध्ययन की ओर बढ़ते हैं।

राष्ट्रीय शिक्षा नीति 2020 और विद्यालयी शिक्षा हेतु राष्ट्रीय पाठ्यचर्या की रूपरेखा 2023 की दृष्टि के अनुरूप यह पाठ्यक्रम हिंदी को केवल एक विषय नहीं बल्कि अनुभवों, मूल्यों, बहुसांस्कृतिकता, सृजनात्मकता और संवाद की एक समृद्ध प्रक्रिया के रूप में प्रस्तुत करता है। यह ज्ञान के संग्रह तक सीमित नहीं रहता बल्कि विद्यार्थियों को सोचने, कल्पना करने, विश्लेषण करने और अभिव्यक्ति के लिए प्रेरित करता है। पाठ्यक्रम का लक्ष्य विद्यार्थियों की चेतना को इस दिशा की ओर ले जाना है कि हिंदी भाषा के माध्यम से यथार्थ को अर्थात जो भी घटित हो रहा है, उसे समझा जाए और उसमें अपनी आकांक्षाओं का चित्र रचा जाए।इस पाठ्यक्रम का केंद्रीय उद्देश्य पाठों का पठन-पाठन मात्र नहीं बल्कि उनके माध्यम से विद्यार्थियों में गहन पाठानुभूति, संवेदनशील अभिव्यक्ति, तार्किक विश्लेषण, संदर्भ-आधारित लेखन तथा भाषिक एवं सांस्कृतिक विविधता की समझ को विकसित करना है।हिंदी भाषा के सीखने-सिखाने के माध्यम से विद्यार्थियों में भाषा, संस्कृति का समावेशी दृष्टिकोण पैदा करना, जीवन के विविध संदर्भों को समझना, विविधता के प्रति सकारात्मकता का बोध पैदा करना- यह सब आवश्यक रूप से अपेक्षित है।

नवीं कक्षा में प्रवेश करने वाले विद्यार्थी की भाषा-शैली और विचार-बोध का एक ऐसा आधार बन चुका होता है कि अब उसे उसके भाषिक दायरे के विस्तार और वैचारिक समृद्धि के लिए आवश्यक संसाधन मुहैया कराए जाने की आवश्यकता होती है। माध्यमिक स्तर तक आते-आते विद्यार्थी किशोरावस्था में प्रवेश कर चुके होते हैं और उनमें सुनने, बोलने, पढ़ने, लिखने एवं समझने के साथ-साथ आलोचनात्मक दृष्टि विकसित होने लगती है। उनमें भाषा के सौंदर्यात्मक पक्ष, कथात्मकता, गीतात्मकता, समाचार-पत्रों की समझ, शब्द-शक्तियों के बीच अंतर की समझ, राजनैतिक चेतना एवं सामाजिक चेतना का विकास हो जाता है। वे आस-पड़ोस की भाषा और आवश्यकता के अनुसार उपयुक्त भाषा-प्रयोग, शब्दों के सुविचारित प्रयोग, भाषा की नियमबद्ध प्रकृति आदि से परिचित हो जाते हैं। इतना ही नहीं, वे विभिन्न विधाओं और अभिव्यक्ति की अनेक शैलियों से भी परिचित हो चुके होते हैं। अब विद्यार्थियों का अध्ययन आस-पड़ोस, राज्य-देश की सीमा को लाँघते हुए वैश्विक क्षितिज तक फैल जाता है। इन विद्यार्थियों की दुनिया में समाचार, खेल, फ़िल्म तथा अन्य कलाओं के साथ-साथ पत्र-पत्रिकाएँ और अलग-अलग तरह की पुस्तकें भी प्रवेश पा चुकी होती हैं।

एनसीईआरटी के पाठ्यक्रम और पाठ्यपुस्तकों में आर 1 और आर 2 के संदर्भ एनसीसीएफ-एसई 2023 के परिप्रेक्ष्य पर आधारित सांकेतिक और प्रासंगिक हैं। इन संदर्भों का उद्देश्य माध्यमिक

स्तर पर आर1 और आर2 के बीच किसी भी प्रकार का संरचनात्मक या योग्यता-आधारित अंतर दर्शाना नहीं है।

पाठ्यपुस्तक की विषयवस्तु, अधिगम परिणाम और मूल्यांकन माध्यमिक स्तर पर आर1 और आर2 के लिए परिकल्पित सामान्य योग्यता ढाँचे के अनुरूप हैं, इसलिए संदर्भ के अनुसार इन पाठ्यपुस्तकों का लचीले ढंग से उपयोग किया जा सकता है।

इस स्तर पर हिंदी का अध्ययन-अध्यापन साहित्यिक, सांस्कृतिक और व्यावहारिक भाषा के रूप में कुछ इस तरह से हो कि माध्यमिक स्तर तक पहुँचते-पहुँचते यह विद्यार्थियों की पहचान, आत्मविश्वास और विमर्श की भाषा बन सके। आवश्यकता इस बात की है कि विद्यार्थी भाषा के लिखित प्रयोग के साथ-साथ सहज और स्वाभाविक मौखिक अभिव्यक्ति में भी सक्षम हो सकें। वे हिंदी की प्रकृति के अनुसार वर्तनी और उच्चारण के आपसी संबंधों को समझ सकें ताकि उनकी लिखित और मौखिक भाषा में समानता एवं स्पष्टता हो।

CG-1: लेखन के विभिन्न रूपों (निबंध, पत्र, लेख, चर्चा, साक्षात्कार, सार्वजनिक भाषण) और नव मीडिया (ईमेल, श्रव्य और दृश्य सामग्री) के माध्यम से प्रभावी संप्रेषण के लिए भाषा का उपयोग करना।

दक्षताएँ	सीखने के संकेत बिंदु/गतिविधियाँ
C-3.1-विभिन्न श्रव्य और लिखित सामग्री का विश्लेषण और मूल्यांकन करना।	• विभिन्न प्रकार की श्रव्य और लिखित सामग्री में विवरणों का अवलोकन और विश्लेषण करके उन्हें व्यवस्थित रूप से लिखते हैं। • किसी एक विषय पर विभिन्न स्रोतों से प्राप्त सामग्री का विश्लेषण करके उसकी विश्वसनीयता की जाँच करते हैं।
C-3.2-रचना में परिवेश का सावधानीपूर्वक मूल्यांकन करके उचित तर्कों के साथ चर्चा-परिचर्चा करना।	• पाठ्यवस्तु को पढ़ते और सुनते समय स्वयं के पूर्वग्रहों को पहचानते हैं और साक्ष्यों का मूल्यांकन करके पाठ्यवस्तु/श्रव्य-सामग्री की विश्वसनीयता का निर्धारण करते हैं।

पाठ्यचर्या CG-4: भारतीय भाषाई विविधता से जुड़ी साहित्यिक और सांस्कृतिक विरासत की सराहना करना।

दक्षताएँ	सीखने के संकेत बिंदु/गतिविधियाँ
C-4.1-पाठ को पढ़ते हुए विभिन्न शैलियों की सामग्री के अवलोकन के माध्यम से भारतीय समाज और साहित्यिक विविधता की बहुभाषी प्रकृति की पहचान करना।	• भारतीय समाज की बहुभाषी प्रकृति को पहचानने के लिए विभिन्न क्षेत्रीय भाषाओं के चलचित्र और वृत्तचित्र देखते हैं और उनके बारे में अपने विचार साझा करते हैं।
C-4.2-भारतीय भाषाओं की विभिन्न साहित्यिक रचनाओं में निहित संस्कृति एवं विरासत की विविधता और उनके आपसी संबंधों की सराहना करना।	• पढ़ी गई साहित्यिक रचनाओं को विषयों, पात्रों और परिस्थितियों के आधार पर अपने व्यक्तिगत अनुभवों/जीवन से जोड़ते हैं। • विभिन्न भारतीय भाषाओं के साहित्य की विशिष्टता और साहित्य जगत में उनके योगदान की सराहना करते हैं।
C-4.3-हमारी संस्कृति और पहचान के निर्माण में भाषा की भूमिका को समझते हुए अभिव्यक्त करना।	• भाषा में निहित सांस्कृतिक परंपराओं से प्रभावित कहावतों/पहेलियों/मुहावरों के उदाहरण साझा करते हैं। • लिखने और बोलने में सांस्कृतिक परंपराओं से प्रभावित अपनी भाषा की शब्दावली का संदर्भों के अनुसार उपयुक्त उपयोग करते हैं।

हिंदी पाठ्यक्रम - आर - 2 (2026 - 27)			
कक्षा - नवीं			
खंड			भारांक
क	अपठित बोध		14
ख	व्यावहारिक व्याकरण		16
ग	पाठ्यपुस्तक		30
घ	रचनात्मक लेखन		20
• भारांक - 80 (वार्षिक परीक्षा) +20 (आंतरिक परीक्षा)			

खंड -क (अपठित बोध)			उपभार	कुल भार
विषयवस्तु				
1	अपठित गद्यांश पर बोध, चिंतन, विश्लेषण, सराहना आदि पर बहुविकल्पीय, अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न			14
	दो अपठित गद्यांश लगभग 200 शब्दों के। एक अंकीय तीन बहुविकल्पी प्रश्न (1x3=3) पूछे जाएँगे अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न (2×2=4) पूछे जाएँगे |		7+7=14	
	खंड -ख (व्यावहारिक व्याकरण)			
2	व्याकरण के लिए निर्धारित विषयों पर विषयवस्तु का बोध, भाषिक बिंदु /संरचना आदि पर अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न | (1X16 = 16) कुल 20 प्रश्न पूछे जाएँगे, जिनमें से केवल 16 प्रश्नों के उत्तर देने होंगे |			16
	(i)	(क) शब्द भंडार समानार्थी शब्द - 2 अंक (पाठ्यपुस्तक के आधार पर) (3 प्रश्नों में से 2 प्रश्न करने होंगे) (ख) मुहावरे -2 अंक (पाठ्यपुस्तक के आधार पर) (3 प्रश्नों में से 2 प्रश्न करने होंगे)	4	
	(ii)	शब्द -निर्माण उपसर्ग - 2 अंक ,प्रत्यय -2 अंक (5 प्रश्नों में से 4 प्रश्न करने होंगे)	4	
	(iii)	विराम चिह्न - 2 अंक (3 प्रश्नों में से 2 प्रश्न करने होंगे)	2	
	(iv)	संज्ञा -2 अंक सर्वनाम -2 अंक निपात -2 अंक (7 प्रश्नों में से 6 प्रश्न करने होंगे)	6	
3	खंड -ग (पाठ्यपुस्तक)			30

4	खंड -घ (रचनात्मक लेखन)			20
	लेखन			
	(i)	विभिन्न विषयों और संदर्भों पर विद्यार्थियों के तर्कसंगत विचार प्रकट करने की क्षमता को परखने के लिए संकेत-बिंदुओं पर आधारित समसामायिक एवं व्यावहारिक जीवन से जुड़े हुए तीन विषयों में से किसी एक विषय पर लगभग 100 शब्दों में अनुच्छेद लेखन		5	
	(ii)	अभिव्यक्ति की क्षमता पर केंद्रित अनौपचारिक दो विषयों में से किसी एक विषय पर लगभग 100 शब्दों में पत्र लेखन	(विकल्प सहित)	5	
	(iii)	दिए गए विषय / परिस्थिति के आधार पर लगभग 80 शब्दों में संवाद लेखन	(विकल्प सहित)	5	
	(iv)	किसी दृश्य /घटना के चित्र पर आधारित लगभग 80 शब्दों में लेखन	(बिना किसी विकल्प के)	5	

राष्ट्रीय शैक्षिक अनुसंधान केंद्र द्वारा राष्ट्रीय पाठ्यचर्या की रूपरेखा 2023 के आधार पर जारी की गई पाठ्यपुस्तक के आधार पर साहित्य से संबंधित अध्ययन किया जाए।

ODIA
SUBJECT CODE
013 CLASS-IX
(2026-27)

Time: 3 Hrs **Max Marks: 80**

The question paper will be divided into four sections.

SECTION –A	Unseen Prose Passage	10 Marks
SECTION –B	Writing	12 Marks
SECTION –C	Grammar	10Marks
SECTION –D	Literature (Prose, Poetry, Non-Detailed)	48 Marks

Prescribed Books:
Sahitya Dhara (Class-IX)-2023 (Revised Edition) Published by- Board of Secondary Education, Odisha.
Madhyamika Byakarana (Class IX) – 2023 (Revised Edition) Published by – Board of Secondary Education, Odisha.

Course Content- 2026-27

1.	**Reading**	Comprehension from an Unseen Prose Passage (130 to 150 words)	
2.	**Writing**	Essay(Contemporary Issues) Official Letter	
3	**Grammar**	1. Sandhi(Swara,Byanjana, Bisarga) 2. Samasa (Tatpurusa,Dwandwa, Dwigu, Karmadharaya, Bahubrihi, Abyaibhaba) 3. Taddhita 4. Krudanta	
4.	**Literature** Poetry 1.Bande Utkala Janani 2. Kaha Mukha Anai Banchibi 3.Padma 4.He Mora Kalama	Prose 9. Jatiya Jibana 10. Bhasa O Jatiyata 11. Bamanara Hata O Akasara Chandra 12. Prakruta Bandhu 13. Samuha Drusti	Short Story 16.Budha Sankhari 17..Pataka Uttolana 18.Laxmira Abhisara One-Act-Play 19.Dalabehera 20.Durapahada

	5. Manisha Bhai 6.Gopa Prayana 7. Paikabadhura Udbodhana		

Activities/Guidelines for Internal Assessment

Marks: 20

Periodic Tests (5 Marks)- 3 Periodic Tests: - Average marks of best 2 Tests will be taken for final submission of marks.

Portfolio (5 Marks):

- Organization – Neatness and visual appeal
- Completion of guided work focused on specific curricular objectives
- Evidences of student's growth
- Inclusion of all relevant contents.

Subject Enrichment Activities (Any One) (5 Marks)

- Quiz
- Books & Authors Chart
- Art Integrated Activities

Multiple Assessments- (Any One) (5 Marks)

- Listening and Speaking skills
- Individual or Group work
- Class Room Activity, Field work
- Audio Visual Representation
-

BLUE PRINT

S.L No	Section	Very Short Answer (1Mark)	Short Answer-I (2Marks)	Long Answer-I (4/5Marks)	Long Answer-II (6Marks)	Total Marks
1.	**A. Reading**	-----	Q.1 (5x2)	-----	-----	10
2.	**B. Writing**	**-----**	------	-----	Q.2 (1x6) Q.3 (1x6)	12
3.	**C. Grammar**	Q.4 (3x1) Q.5 (3x1) Q.6 (2x1) Q.7 (2x1)	------	--------	--------	10
4.	**D. Literature**	Q.10 (10x1) Q.13 (10x1)	Q.9 (3x2) Q.12 (3x2) Q.14 (3x2)	Q.8 (1x5) Q.11 (1x5)	------	48
Total Marks/Qs		30 /6 Qs	28 /4Qs	10 /2Qs	12 /2Qs	80/14Qs

Design of Question Paper

SECTION	DETAILS	Question No	Details Of QS.	Total Marks
Section –A Reading	Comprehension from Unseen Prose Passage (130 to 150 Words)	Q.No-1	5 Out of 5	5x2=10
Section – B Writing	Essay (Contemporary Issues)	Q.No-2	1 Out of 3	1x6=6
	Official Letter	Q.No-3	1 Out of 2	1x6=6
Section – C Grammar	Sandhi(Swara,Byanjana , Bisarga)	Q.No-4	3 Out of 4	3x1=3
	Samasa (Tatpurusa, Dwandwa, Dwigu, Karmadharaya, Bahubrihi, Abyaibhaba)	Q.No-5	3 Out of 4	3x1=3
	Taddhita	Q.No-6	2 Out of 3	2x1=2
	Krudanta	Q.No-7	2 Out of 3	2x1=2
Section – D Literature	Explanation From Prose	Q.No-8	1 Out of 2	1x5=5
	Short Answer Type Questions From Prose	Q. No-9	3 Out of 5	3x2=6
	MCQ From Prose	Q.No-10	10 Out of 10	10x1=10
	Explanation From Poetry	Q.No-11	1 Out of 2	1x5=5
	Short Answer Type Questions From Poetry	Q.No-12	3 Out of 5	3x2=6
	MCQ From Poetry	Q.No-13	10 Out of 10	10x1=10
	Short Answer Type Questions From Non- Detailed	Q.No-14	3 Out of 5	3x2=6
				80 Marks

CBSE | DEPARTMENT OF SKILL EDUCATION
CURRICULUM FOR SESSION 2026-2027

INFORMATION TECHNOLOGY (SUB. CODE – 402)

JOB ROLE: DOMESTIC DATA ENTRY OPERATOR

CLASS – IX

COURSE OVERVIEW:

A Data Entry Operator/Analyst is a person who is responsible for entering data into different applications and computer databases, manage and maintain effective record keeping. In addition, S/he is responsible for organizing files, collecting and managing data to be entered into the computer. S/he is also responsible for security of data and safeguard of the computer network.

With every office and organization seeking to become computerized, the demand for data entry operators/analysts is on a rise. Data entry operators/analysts usually work in an indoor, office setting using a computer and other electronic machines. To be in the profession of data entry/analysis, one has to have computer literacy, high typing speed, organization skills, concentration skills, communication skills and an ability to sit for long periods of time entering and computing data.

OBJECTIVES OF THE COURSE:

In this course, the students will be introduced to the fundamental concepts of digital documentation, digital spreadsheet, digital presentation, database management and internet security.

The following are the main objectives of this course:

- To familiarize the students with the world of IT and IT enabled services.
- To provide an in-depth training in use of data entry, internet and internet tools.
- To develop practical knowledge of digital documentation, spreadsheets and presentation.
- To enable the students to understand database management system and have updated knowledge about digital record keeping.

- To make the students capable of getting employment in Private Sector, Public Sector, Ministries, Courts, House of Parliament and State Legislative Assemblies.
- To develop the following skills:
    - Data Entry and Keyboarding skills
    - The concept of Digital Documentation
    - The concept of Digital Presentation
    - The concept of Electronic Spreadsheet
    - The concept of Databases
    - Internet Technologies

SALIENT FEATURES

To be a data entry operator/analyst, one requires a lot of hard work and practical hands-on experience. One should have an intensive knowledge of Office applications, computer operations, and knowledge of clerical, administrative techniques and data analysis. Along with this, as a data entry operator/analyst, you will be expected to have fast typing speed, accuracy, and efficiency to perform tasks.

As a data entry operator/analyst, one should improve their computer skills, numerical and literacy skills. These skills can help one expand into a new career path in the future.

SCHEME OF UNITS

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class IX opting for skill subject along with other education subjects. The unit-wise distribution of hours and marks for class IX is as follows:

INFORMATION TECHNOLOGY (SUBJECT CODE - 402)

CLASS – IX (Session 2026-2027)

Total Marks: 100 (Theory-50 + Practical-50)

	UNITS	NO. OF HOURS for Theory and Practical		MAX. MARKS for Theory and Practical
Part A	**Employability Skills**			
	Unit 1 : Communication Skills-I	10		2
	Unit 2 : Self-Management Skills-I	10		3
	Unit 3 : ICT Skills-I	10		1
	Unit 4 : Entrepreneurial Skills-I	15		3
	Unit 5 : Green Skills-I	05		1
	Total	**50**		**10**
Part B	**Subject Specific Skills**	**Theory**	**Practical**	**Marks**
	Unit 1: Introduction to IT- ITeS industry	2	4	4
	Unit 2: Data Entry & Keyboarding Skills	4	10	6
	Unit 3: Digital Documentation	10	26	10
	Unit 4:Electronic Spreadsheet	18	35	10
	Unit 5: Digital Presentation	10	31	10
	Total	**44**	**106**	**40**
Part C	**Practical Work**			
	Practical Examination			15
	Written Test			10
	Viva Voce			10
	Total			**35**
Part D	**Project Work/ Field Visit**			
	Practical File/ Student Portfolio			10
	Viva Voce			05
	Total			**15**
	GRAND TOTAL	**200**		**100**

DETAILED CURRICULUM/TOPICS:

Part-A: EMPLOYABILITY SKILLS

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills-I	10
2.	Unit 2: Self-Management Skills-I	10
3.	Unit 3: Basic Information and Communication Technology Skills-I	10
4.	Unit 4: Entrepreneurial Skills-I	15
5.	Unit 5: Green Skills-I	05
	TOTAL	**50**

NOTE: **Detailed Curriculum/ Topics to be covered under Part A: Employability Skills can be downloaded from CBSE website**.

Part-B – SUBJECT SPECIFIC SKILLS

- Unit 1: Introduction to IT- ITeS industry
- Unit 2: Data Entry & Keyboarding Skills
- Unit 3: Digital Documentation
- Unit 4: Electronic Spreadsheet
- Unit 5: Digital Presentation

UNIT 1: INTRODUCTION TO IT–ITeS INDUSTRY

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1	Appreciate the applications of IT	• Introduction to IT and ITeS, BPO services, • BPM industry in India, • Structure of the IT-BPM industry, • Applications of IT in home computing, everyday life, library, workplace, education, entertainment, communication, business, science and engineering, banking, insurance, marketing, health care, IT in the government and public service	- Identify and list the various IT enabled services, Observe the application of IT in various areas.

UNIT 2: DATA ENTRY AND KEYBOARDING SKILLS

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Use keyboard and mouse for data entry	• Keyboarding Skills, • Types of keys on keyboard, Numeric keypad, • Home keys, Guide keys, • Typing and deleting text, • Typing ergonomics, • Positioning of fingers on the keyboard, Allocation of keys to fingers on four different rows, • Pointing device – Mouse, Mouse operations.	• Identify the keys and its use on the keyboard, • Demonstrate to use various keys on the keyboard, • Demonstrate to type the text, numbers, special character using appropriate keys on the keyboard, • Practice the correct typing ergonomics, • Practice to place fingers on correct key in four different row of keyboard, • Practice various mouse operations.
2.	Use typing software	• Introduction to Rapid Typing Tutor, • Touch typing technique, • User interface of Typing Tutor, • Typing text and interpret results, • Working with lesson editor, • Calculating typing speed, • Typing rhythm.	• Identify the user interface of • typing tutor, • Practice to type text in typing tutor software and interpret the results, • Practice to work in lesson editor, • Calculate the typing speed • Practice to improve typing • Using typing tutor software.

UNIT 3: DIGITAL DOCUMENTATION

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Create a document using a word processor	• Introduction to word processing, • Word processing applications, • Introduction to Word Processing tool • Creating a document, Parts of a Word Processor Window,	• List the available word processing applications. • Introduce with the parts of the main window. • Change document views. • Start a new document. • Open an existing document. • Save a document. • Close a document.
2.	Apply Editing features	• Text editing – Undo and Redo, • Moving and copying text, • Copy and Paste, • Selecting text, • Selection criteria,	• Editing of text in a document • Demonstrate to use undo and redo option, • Use the keyboard and mouse options to select, cut, copy, paste, and move text.

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
		• Selecting non-consecutive text items, • Selecting a vertical block of • text, • Find and replace option, • Jumping to the page number, • Non-printing characters, • Checking spelling and grammar, • Using Synonyms and Thesaurus.	• Demonstrate to select nonconsecutive text items, vertical block of text, • Search and replace text in a document. • Jump to the given page number in a document, • Insert non-printing characters in a document, • Apply Spelling and grammar option of document. • Demonstrate to use Synonyms and Thesaurus.
3.	Apply formatting features	• Page style dialog • Formatting text – Removing manual formatting, Common text formatting, Changing text case, Superscript and Subscript • Formatting paragraph – Indenting paragraphs, Aligning paragraphs, Font colour, highlighting, and background colour, Using bullets and numbering, Assigning colour, border and background to paragraph. • Page formatting – setting up basic page layout using styles, Inserting page break, Creating header/footer and page numbers, • Defining borders and backgrounds, Inserting images shapes, special characters in a document, Dividing page into columns, Formatting the shape or image.	• Apply various text formatting options for the text, • Demonstrate to format paragraphs – indent/align paragraphs, assign font colour, highlighting, and background colour, • Assign number or bullets to the lists items • Demonstrate to assign colour, border and background to paragraph • Demonstrate the page formatting – set up basic page layout using styles, • Insert page break, Create header/footer and page numbers • Define borders and backgrounds • Insert images, shapes, special characters in a document • Divide page into columns, • Format the shape or image.
4.	Create and work with tables	• Creating table in Word Processor • Inserting row and column in a table • Deleting rows and columns • Splitting and merging tables • Deleting a table • Copying a table • Moving a table.	• Demonstrate and do the following in Word Processor: • Create table, • Insert and delete rows and column in a table, • Split and merge tables, • Delete a table, • Copy or move from one location to another location of document.

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
5.	Use Print Options	• Printing options in Word Processor. • Print preview, • Controlling printing, • Printing all pages, single and multiple pages.	• Demonstrate to print the document, selected pages in the document • Print the document with various options, • Preview pages before printing.
6.	Understand and apply mail merge	• Introduction to mail merge • Concept of data source for mail merge.	• Demonstrate to print the letters using mail merge, • Do the following to achieve • Create a main document, • Create the data source, • Enter data in the fields, • Merge the data source with main document, • Edit individual document, • Print the merged letter, • Save the merged letter.

UNIT 4: ELECTRONIC SPREADSHEET

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Create a Spreadsheet	• Introduction to spreadsheet application • Starting a spreadsheet • Parts of a spreadsheet • Worksheet – Rows and Columns, Cell and Cell Address, • Range of cells – column range, row range, row and column range.	• Start the spreadsheet, • Identify the parts of Calc, • Identify the rows number, column number, cell address, • Define the range of cell, • Identify row range, column range, row & column range
2.	Apply formula and functions in spreadsheet	• Different types of data, • Entering data – Label, Values, Formula • Formula, how to enter formula, • Mathematical operators used in formulae, • Simple calculations using values and operators, • Formulae with cell addresses and operators, • Commonly used basic functions in a spreadsheet – SUM, AVERAGE, MAX, MIN, Count • Use of functions to do calculations.	• Demonstrate to enter the text, numeric data in a cell, • Identify the label, values and formula in the cell, • Demonstrate to enter formula in a cell, • Construct the formula using mathematical operators, • Identify formulae with cell addresses and operators, • Identify the correct syntax of formula, • Use the basic functions to perform calculations on data.

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
3.	Format data in the spreadsheet	• Formatting tool, • Use of dialog boxes to format values, • Formatting a range of cells with decimal places, • Formatting a range of cells to be seen as labels, • Formatting of a cell range as scientific, • Formatting a range of cells to display times, • Formatting alignment of a cell range, • Speeding up data entry using the fill handle, • Uses of fill handle to copy formulae.	• Identify the formatting tool, • Demonstrate to use of dialog boxes to format values, • Demonstrate to format range of cells with decimal places, • Demonstrate to format a range of cells to labels, • Demonstrate to format of a cell range as scientific, • Demonstrate to format a range of cells to display time, • Demonstrate to align cell data range, • Demonstrate to create • number series using fill handle, • Copy formula by dragging the formula using fill handle.
4.	Understand and apply Referencing	• Concept of referencing, • Relative referencing, • Mixed referencing, • Absolute referencing.	• Demonstrate to use Relative referencing in spreadsheet, • Demonstrate to use Mixed referencing in spreadsheet, • Demonstrate to use Absolute referencing in spreadsheet.
5.	Create and insert different types of charts in a spreadsheet	• Importance of chart in spreadsheet • Types of chart	• Create different types of charts supported by a spreadsheet, • Illustrate the example of chart in a spreadsheet.

UNIT 5: DIGITAL PRESENTATION

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Understand features of an effective presentation	• Concept of presentation, • Elements of presentation, • Characteristics of an effective presentation	• Identify and list the elements of presentation, • List the characteristics of an effective presentation.
2.	Create a presentation	• Introduction to presentation software, • Opening a presentation software • Parts of presentation window, • Closing a presentation • Creating a presentation using template, • Selecting slide layout, • Saving a presentation, • Running a slide show, • Save a presentation in PDF, • Closing a presentation, • Using Help.	• Start the presentation application • various components of main Impress window • Observe the different workspace views. • Create a new presentation using wizard. • Run the presentation, • Save the presentation, • Close the presentation, • Demonstrate to use Help in presentation.

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
3.	Work with slides	• Inserting a duplicate slide, • Inserting new slides, • Slide layout, • Copying and moving slides, • Deleting and renaming slides • Copying, moving and deleting contents of slide, • View a presentation, • Controlling the size of the view, • Workspace views – Normal, Outline, Notes, Slide sorter view.	• Demonstrate to insert a new slide and duplicate slide in a presentation, • Change the slide layout, • Demonstrate to copy and move slides in the presentation, • Demonstrate to copy, move and delete contents of the slide, • Demonstrate to view a presentation in different views.
4.	Format text and apply animations	• Formatting toolbar, • Various formatting features, • Text alignment, • Bullets and numbering. • Custom Animation	• Identify and list the various options in formatting toolbar, • Apply the appropriate formatting option • Align the text in presentation, • Apply bullets and numbering to the list items in presentation Apply Animation
5.	Create and use tables	• Inserting tables in presentation, • Entering and editing data in a table, • Selecting a cell, row, column, table, • Adjusting column width and row height, • Table borders and background	Demonstrate the following: • Insert table in presentation, • Enter and edit data in a table, • Select a cell, row, column, table, • Adjust column width and row height, • Assign table borders and background.
6.	Insert and format image in presentation	• Inserting an image from a file, • Inserting an image from the gallery, • Formatting images, • Moving images, • Resizing images, • Rotating images, • Formatting using the Image toolbar, • Drawing graphic objects – line, shapes, • Grouping and un-grouping objects	• Demonstrate to insert an image from file, gallery in presentation, • Apply formatting options to image in presentation, • Demonstrate to move, resize and rotate images, • Apply formatting options of Image toolbar, • Drawing line, shapes using graphic objects, Demonstrate to group and ungroup objects.
7.	Work with slide master	• Slide masters, • Creating the slide masters, • Applying the slide masters to all slide, • Adding transitions.	• Create the slide masters, • Apply the slide masters to the • presentation, • Add transitions to presentation.

LIST OF EQUIPMENT/ MATERIALS:

The list given below is suggestive and an exhaustive list should be compiled by the teacher(s) teaching the subject. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

S. No.	ITEM NAME, DESCRIPTION & SPECIFICATION	QUANTITY
A	**HARDWARE**	
1.	Computer with latest configuration or minimum Pentium Processor with minimum 2GB RAM, 512 GB HDD, 17" LED Monitor, NIC Card, 3 button Mouse, 105 keys key board and built-in speakers and mic.	15
2.	Laser Printer - Black	01
3.	Inkjet Printers (Colour & Black)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 Port Switches	01
7.	Air Conditioner 1.5 tonne	02
8.	Telephone line (For Internet)	01
9.	Fire extinguisher	01
B	**SOFTWARE**	
1.	Operating System Linux and Windows	
2.	Anti-Virus Latest version	
3.	Productivity Suite, Example –Libre Office	
C	**FURNITURE**	
1.	Class room chairs and desks	25
2.	Computer Tables	15
3.	Straight back revolving & adjustable chairs (Computer Chairs)	15
4.	Printer Tables	02
5.	Trainers Table	01
6.	Trainers Chair	01
7.	Steel cupboards drawer type	02
8.	Cabinet with drawer	01
9.	Steel Almira - big size	01
10.	Steel Almira- small size	01

TEACHER'S/ TRAINER'S QUALIFICATIONS:

Qualification and other requirements for appointment of teachers/trainers for teaching this subject, on contractual basis should be decided by the State/ UT. The suggestive qualifications and minimum competencies for the teacher should be as follows:

Qualification	Minimum Competencies	Age Limit
Diploma in Computer Science/ Information Technology **OR** Bachelor Degree in Computer Application/ Science/ Information Technology (BCA, B.Sc. Computer Science/ Information Technology) **OR** Graduate with PGDCA OR DOEACC A Level Certificate. The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.	• The candidate should have a minimum of 1 year of work experience in the same job role. • S/he should be able to communicate in English and local language. • S/he should have knowledge of equipment, tools, material, Safety, Health & Hygiene.	• 18-37 years (as on Jan. 01 (year)) • Age relaxation to be provided as per Govt. rules

Teachers/Trainers form the backbone of Skill (Vocational) Education being imparted as an integral part of Rashtriya Madhyamik Shiksha *Abhiyan* (RMSA). They are directly involved in teaching of Skill (vocational) subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure of selection of Teachers/ Trainers, Educational Qualifications, Industry Experience, and Certification/ Accreditation.

The State may engage Teachers/Trainers in schools approved under the component of scheme of Vocationalisation of Secondary and Higher Secondary Education under RMSA in following ways:

(i) Directly as per the prescribed qualifications and industry experience suggested by the PSS Central Institute of Vocational Education (PSSCIVE), NCERT or the respective Sector Skill Council (SSC).

OR

(ii) Through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level 2 or higher.

** The National Quality Assurance Framework (NQAF) provides the benchmarks or quality criteria which the different organizations involved in education and training must meet in order to be accredited by competent bodies to provide government- funded education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications.*

The educational qualifications required for being a Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers/ trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which he will be teaching. Copies of relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Teachers/Trainers, the State should ensure that a standardized procedure for selection of (Vocational) Teachers/Trainers is followed. The selection procedure should consist of the following:

(i) Written test for the technical/domain specific knowledge related to the sector;
(ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and (iii) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP.

The State should ensure that the Teachers/ Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education.

The Head Master/Principal of the school where the scheme is being implemented should facilitate and ensure that the (Vocational) Teachers/Trainers:

- Prepare session plans and deliver sessions which have a clear and relevant purpose and which engage the students;
- Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;
- Make effective use of learning aids and ICT tools during the classroom sessions;
- Engage students in learning activities, which include a mix of different methodologies, such as project based work, team work, practical and simulation based learning experiences;
- Work with the institution's management to organise skill demonstrations, site visits, on job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;
- Identify the weaknesses of students and assist them in up-gradation of competency;
- Cater to different learning styles and level of ability of students;
- Assess the learning needs and abilities, when working with students with different abilities
- Identify any additional support the student may need and help to make special arrangements for that support;
- Provide placement assistance

Assessment and evaluation of (Vocational) Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the (Vocational) Teachers/Trainers is appraised annually. Performance based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the (Vocational) Teachers/Trainers.

Following parameters may be considered during the appraisal process:

- Participation in guidance and counseling activities conducted at Institutional, District and State level;
- Adoption of innovative teaching and training methods;
- Improvement in result of vocational students of Class X or Class XII;
- Continuous up-gradation of knowledge and skills related to the vocational pedagogy, communication skills and vocational subject;
- Membership of professional society at District, State, Regional, National and International level;
- Development of teaching-learning materials in the subject area;
- Efforts made in developing linkages with the Industry/Establishments;
- Efforts made towards involving the local community in Vocational Education
- Publication of papers in National and International Journals;
- Organization of activities for promotion of vocational subjects;
- Involvement in placement of students/student support services.