

SYLLABUS (2022-23)
CLASS VIII

CONTENTS

S.No. Subject

1. English
2. Hindi
3. French
4. Sanskrit
5. Mathematics
6. Science
7. Social Science
8. Computer Science
9. General Knowledge
10. Art Education
11. Physical Education & Health Education

ENGLISH

Learning Objectives –

Reading

To enable the students to -

1. read silently at varying speed depending on the purpose of reading.
2. recognise the organisation of a text.
3. identify the main points of a text.
4. read extensively on their own.

Writing

To enable the students to -

1. express ideas in clear and grammatically correct English, using appropriate punctuation and cohesion devices.
2. write a clear description.
3. expand notes into a piece of writing.
4. use an appropriate style and format to write letters (formal and informal), articles etc.; monitor, check and revise written work.

Listening

To enable the students to -

1. adopt different strategies according to the purpose of listening (e.g. for pleasure, for general interest, for specific information).
2. understand and respond appropriately to directive language (e.g. instruction, advice, request and warning).
3. understand and interpret messages conveyed in person or by telephone.

Speaking

To enable the students to –

1. operate intelligibly using appropriate word stress, sentence series and intonation pattern.
2. narrate incidents and events, real and imaginary, in a logical sequence.

Textbooks

1. Enhanced English Alive Course Book- 8 (MCB)
2. Enhanced English Alive Literature Reader- 8 (LR)
3. Collins English Grammar and Composition-8
4. The Hound of the Baskervilles by Sir Arthur Conan Doyle

General Note:

A thorough reading of the text on regular basis is a must as questions from within the lesson will be given in the exams/tests. Questions in the exams are likely to be different from those attempted in the notebooks.

FIRST TERM

Reading Comprehensions

- MCB -
1. Journey to Jo'burg
 2. The Landlady
- LR-
3. As a Boy

Writing Skills

1. Notice Writing
2. Message Writing
3. Formal Letter Writing
4. Article Writing

Grammar

1. Nouns
2. Pronouns
3. Sentences
4. Conditional Sentences
5. Transformation of Sentences
6. Synthesis of Sentences
7. Adjectives
8. Verbs
9. Agreement of Subject and Verb
10. Non-Finite Verbs
11. Adverbs
12. Active and Passive Voice
13. Test I

Literature and Long Reading Text

- MCB -
1. The Cookie Thief (Poem)
- LR
2. The Butterfly and the Caterpillar (Poem)
 3. Mike Teavee (Poem)

- MCB- 4. While the Auto Waits
- 5. The Ransom of Red Chief
- LR - 6. Rajam and Mani
- 7. The Vet's Miracle

N.B.: Diary entry from the following chapter is to be done in class and assessed in literature section as long answer (80-100 words)

- 1. The Vet's Miracle

The Hound of the Baskervilles - Chapters 1 to 7

Note: There will be separate assessment of listening and speaking skills.

Listening Activities to be taken up in the term -

- MCB - 1. The Landlady (Pg. 56)
- 2. While the Auto Waits (Pg.71)
- 3. Journey to Jo' burg (Pg.88)
- 4. The Ransom of Red Chief (Pg.135)

Creative Writing (Expressions)

1. Sonam Wangchuk was bestowed with the Rolex Award for Enterprise for his unique idea of making ice stupas to overcome the problem of acute water scarcity in Leh-Ladakh region. Read the chapter 'Sonam Wangchuk' (MCB) and write a paragraph about his special qualities which helped him to achieve such a remarkable milestone.
2. Read the lesson 'Thirst : A Story from Spain' (LR). Imagine that you are the ghost of one of the crew members who mutinied on La Reina del Mundo. Write a diary entry explaining how it happened, what you did with the captain and what happened in the end.
3. 'Mother Nature's Treasures' (MCB) is a poem that asks the reader to empathise with nature. Refer to the poem and write an article for the school magazine about the problems man has created by exploiting natural resources. Also discuss the different ways by which you can conserve the nature's bounty.

SECOND TERM

Reading Comprehensions

- MCB - 1. Prayer of a Sportsman
- 2. Across the Sahara on a Bicycle
- LR - 3. Words to a Grandchild

Writing Skills

1. Dialogue Writing
2. Display Advertisement Writing
3. Guided Story Writing
4. Speech Writing

Grammar

1. Phrases and Clauses
2. Relative Clauses
3. Determiners
4. Articles
5. Modals
6. The Present Tense
7. The Past Tense
8. The Future Tense
9. Direct and Indirect Speech

10. Prepositions
11. Conjunctions
12. Punctuation
13. Grammar on the Go
14. Idioms and Phrasal Verbs
15. Words: A Mixed Bag
16. Test II, III

Literature and Long Reading Text

- MCB -
1. Partition (Poem)
 2. A Ballad of Sir Pertab Singh (Poem)
 3. The Way Through the Woods (Poem)
- LR -
4. The Last Leaf
 5. Clues on Canvas
 6. Packing for Travel
 7. Huck Finn Goes Hunting for News
 8. The Adventure of the Blue Carbuncle

N.B.: Diary entry from the following chapter is to be done in class and assessed in literature section as long answer (80-100 words)

1. Packing for Travel

The Hound of the Baskervilles - Chapters 8 to 15

Note: There will be separate assessment of listening and speaking skills.

Listening Activities to be taken up in the term -

- MCB -
1. Partition (Pg. 24)
 2. A Girl's Incredible Journey from Syria (Pg. 35)
 3. Across the Sahara on a Bicycle (Pg. 110)
 4. Raymond's Run (Pg. 153)

Creative Writing (Expressions)

1. "And I felt as though I had indeed the ability to understand and share others' feelings....." Think of a time when someone empathized with you or you empathized with someone around you irrespective of their social, economic or religious backgrounds. Refer to the chapter 'Partition' (MCB) and write a letter to your friend, narrating the incident in your own words.
2. Winning is important to everyone. Does sportsmanship apply only to the field of sports? Refer to the lesson 'Raymond's Run' (MCB) and create an interesting short story in about 120 words, expressing your views. Also illustrate it beautifully.
3. In the lesson, 'A Girl's Incredible Journey from Syria' (MCB) when Nujeen was in Syria, she had never got down from her fifth-floor apartment as there was no lift in it. She never attended school but learnt to speak English by watching T.V. What inspiration do you draw from her story?

हिंदी

हिंदी शिक्षण का उद्देश्य :

1. भाषा की बारीकी और सौन्दर्यबोध की क्षमता का विकास करना ।
2. दृश्य या श्रव्य माध्यमों की सामग्री को पढ़कर, देखकर और सुनकर समझने तथा उस पर स्वतंत्र व स्वाभाविक मौखिक एवं लिखित प्रतिक्रिया व्यक्त करने की क्षमता का विकास करना।
3. विभिन्न साहित्यिक विधाओं का आनंद उठाने की क्षमता का विकास करना ।
4. पठित, लिखित और सुने हुए भाषिक ज्ञान से संबंधित सामग्री का तार्किक दृष्टि से अध्ययन करने की प्रवृत्ति का विकास करना ।
5. अपने भावों व विचारों को सहज, स्वाभाविक और शुद्ध अभिव्यक्त करने की क्षमता का विकास करना ।
6. शब्दों, मुहावरों, लोकोक्तियों का सुचिंतित प्रयोग करने की क्षमता का विकास करना।
7. मौखिक एवं लिखित अभिव्यक्ति के संदर्भ और आवश्यकता के अनुसार समुचित भाषा-शैली व प्रयोग को चुनने की समझ का विकास करना।
8. भाषा की नियमबद्ध प्रकृति को पहचानना और उसका विश्लेषण करना ।

नोट. 1. प्रत्येक पाठ से शब्दार्थ, प्रश्नोत्तर और निबंधात्मक प्रश्न करवाए जाएँगे ।

2. परीक्षा में पाठ के मध्य से प्रश्न पूछे जाएँगे, अतः पाठ को ध्यानपूर्वक पढ़ना आवश्यक है।

पाठ्य पुस्तकें - 1. वसंत (भाग- 3) (एन.सी.ई.आर.टी)

2. साम्राज्य हिला चुटकी भर नमक से (सी.बी.टी प्रकाशन)

3. हिंदी व्याकरण सुधा - भाग-8 (गोयल ब्रदर्स प्रकाशन)

प्रथम-सत्र

वसंत भाग - 3

गद्य पाठ - 1. लाख की चूड़ियाँ

2. क्या निराश हुआ जाए

पद्य पाठ - 1. कबीर की साखियाँ

2. दीवानों की हस्ती

3. सूर के पद
4. भगवान के डाकिए

पूरक पुस्तक -

साम्राज्य हिला चुटकी भर नमक से - भाग 1 से भाग 6

व्याकरण - 1. वर्ण विचार

2. संज्ञा
3. लिंग, वचन, कारक
4. उपसर्ग, प्रत्यय
5. सर्वनाम
6. विशेषण
7. पर्यायवाची शब्द (1-15)
8. विलोम शब्द (अंत से उष्ण तक)
9. अनेकार्थक शब्द (1-10)
10. मुहावरे (1-10)
11. वाक्यांशों के लिए एक शब्द (1-15)

रचना कौशल -

1. अपठित-गद्यांश -(i) कंप्यूटर गाएगा गीत (वसंत)
(ii) पहाड़ से ऊँचा आदमी (वसंत)
2. अपठित-काव्यांश - चिट्ठियाँ (वसंत)
3. संवाद-लेखन - 2
4. विज्ञापन-लेखन - 2
5. चित्र-वर्णन - 2
6. पत्र-लेखन - 2 (अनौपचारिक एवं औपचारिक)
7. निबंध-लेखन - 2

ग्रीष्मावकाश प्रयोज्यकार्य हेतु -1. हम पृथ्वी की संतान (वसंत)
2. अकबरी लोटा (वसंत)

द्वितीय-सत्र

वसंत भाग- 3

गद्य पाठ - 1. बस की यात्रा
2. बाज और साँप
3. जहाँ पहिया है

पद्य पाठ - 1. ध्वनि

2. यह सबसे कठिन समय नहीं
3. सुदामाचरित

पूरक पुस्तक -

साम्राज्य हिला चुटकी भर नमक से - भाग 7 से भाग 12

व्याकरण - 1. क्रिया (संरचना के आधार पर)

2. काल
3. अव्यय (क्रिया-विशेषण, संबंधबोधक, समुच्चयबोधक, विस्मयादिबोधक)
4. वाक्य-विचार (वाक्य के अंग)
5. विराम-चिह्न
6. पर्यायवाची शब्द (16-30)
7. विलोम-शब्द (ऊँच से निंदा तक)
8. मुहावरे (11-20)

रचना कौशल - 1. अपठित-गद्यांश - (i) जब सिनेमा ने बोलना सीखा (वसंत)

(ii) चिट्ठियों की अनूठी दुनिया (वसंत)

2. अपठित-काव्यांश - (i) पिता के बाद (वसंत)
3. संवाद-लेखन - 2
4. विज्ञापन-लेखन - 2
5. चित्र-वर्णन - 2
6. पत्र-लेखन - 2 (अनौपचारिक एवं औपचारिक)
7. निबंध-लेखन - 2

शीतावकाश प्रयोज्यकार्य हेतु - 1. पानी की कहानी (वसंत)

2. टोपी (वसंत)

FRENCH

Learning Objectives

1. To enhance the level of the students both in written and spoken French.
2. To enable the students to express themselves more effectively, naturally and correctly in the productive skill of writing.
3. To enhance the level of vocabulary and strengthen their concepts of grammar.
4. To enable the students to write in an appropriate style for communication purposes.
5. To develop basic understanding, conjugation of verbs in present, past and future tense, articles, prepositions, conjunctions, adjectives, imperatives and different expressions.
6. To use an appropriate style and format to write messages.

7. To implement different strategies to make learning French an enjoyable and interesting experience.
8. To acquaint them with French culture and civilisation.

Textbook: Apprenons Le Français-4

Workbook: Cahier d'exercices-4

Dictionary: Larousse

General note:

Questions from within the lessons and related to Culture and Civilisation of France will be asked in the exams/tests, so the students must ensure a thorough reading of the text.

FIRST TERM

Detailed study

Textbook- Leçon 0 : Que savez-vous de la France? (Pg.9)

Leçon 1 : Une boum

Leçon 3 : La vie d'un mannequin, est-elle facile?

Leçon 4 : On voyage

Leçon 5 : Bon voyage!

Workbook: Leçons-0, 1, 3, 4, 5

Grammar:

1. Les articles (définis, indéfinis, contractés, partitifs)
2. Les adjectifs: possessifs, interrogatifs, démonstratifs
3. Les adverbes de quantité
4. Les conjonctions
5. Les verbes réguliers et irréguliers (au présent)
6. L'interrogation
7. Les adverbes interrogatifs
8. Les verbes pronominaux
9. Les expressions négatives
10. Les prépositions
11. Le passé composé avec <<avoir>>
12. Corrigez la faute
13. Mettez les phrases en ordre

SECOND TERM

Detailed study

Textbook- Leçon 0 : Que savez-vous de la France ? (Pgs 10-12)

Leçon 6 : Des nouvelles de Lyon

Leçon 7 : Bon Appétit

Leçon 8 : Des invitations

Leçon 9 : Aneesh partira bientôt

Workbook: Leçon 0, 6, 7, 8, 9

Grammar:

1. Le passé composé avec être

2. Les verbes réguliers et irréguliers (au passé)
3. Faire une recette
4. Les expressions négatives au passé composé
5. L'impératif (affirmatif, négatif, pronominal)
6. Le passé composé des verbes pronominaux
7. Le futur simple
8. Corrigez la faute
9. Mettez les phrases en ordre

संस्कृत

संस्कृत शिक्षण के उद्देश्य :-

1. संस्कृतभाषा एवं साहित्य के प्रति जिज्ञासा उत्पन्न करना ।
2. अर्थबोध के साथ संस्कृत गद्यांश को पढ़ने की क्षमता विकसित करना तथा संस्कृत श्लोकों को स्मरण कर सस्वर वाचन करने की योग्यता उत्पन्न करना ।
3. संस्कृतभाषा का सामान्यज्ञान कराना जिससे संस्कृत के सरलांशों को सुनकर या पढ़कर विद्यार्थी समझ सकें एवं मौखिक तथा लिखित अभिव्यक्ति कर सकें ।
4. संस्कृत में श्रवण-भाषण-वाचन से लेखन-कौशल तथा भाषागत कौशल का विकास करना।
5. दृश्य-श्रव्य साधनों को ध्यानपूर्वक देखकर, पढ़कर तथा सुनकर उन पर अपेक्षित क्रियाएँ करने में समर्थ होना ।
6. विद्यार्थियों में सौन्दर्यबोध, कल्पनाशीलता तथा चिन्तन की क्षमता का विकास करना।

सामान्य निर्देश :

1. रुचिरा में से परीक्षा हेतु पठित गद्यांशों, श्लोकों, संवादों पर आधारित प्रश्नोत्तर का अभ्यास करवाया जाएगा । भाषिक कार्य में जैसे – प्रश्न-निर्माण, पर्यायवाची, विलोम-शब्द, कर्तृ-क्रिया-पदचयन, विशेषण-विशेष्य, संज्ञा, सर्वनाम-प्रयोग आदि करवाये जाएंगे ।
2. रुचिरा के पाठ्यक्रमानुसार पाठों का सम्पूर्ण अभ्यास तथा समस्त शब्दार्थ करवाये जाएंगे।
3. श्लोकों का अन्वय रिक्तस्थान के रूप में आएगा।
4. सन्धि, प्रत्यय, अव्यय, संख्या, उपसर्ग, शब्दरूप और धातुरूप वाक्यों में आएंगे।
5. प्रश्नपत्र संस्कृतभाषा में आएगा ।

पाठ्य-पुस्तकें -1. रुचिरा (तृतीयो भागः)

2. संस्कृत व्याकरण मणिका (8)

प्रथम सत्र

1. रुचिरा-

1. प्रथमः पाठः - सुभाषितानि
2. द्वितीयः पाठः - बिलस्य वाणी न कदापि में श्रुता
3. तृतीयः पाठः - डिजीभारतम्
4. चतुर्थः पाठः - सदैव पुरतो निधेहि चरणम्
5. पञ्चमः पाठः - कण्टकेनैव कण्टकम्
6. अष्टमः पाठः - संसारसागरस्य नायकाः
7. नवमः पाठः - सप्तभगिन्यः

2. व्याकरण-

1. उपपद विभक्तियाँ - उपपद विभक्तियों पर आधारित अशुद्धि संशोधन , रिक्त स्थानादि
 2. स्वर सन्धि (वाक्यों में) - दीर्घ सन्धि, वृद्धि सन्धि, यण् सन्धि
 3. उपसर्ग (वाक्यों में) - उपसर्ग युक्त धातुएँ (संस्कृत व्याकरण मणिका - पृष्ठ संख्या 101)
 4. प्रत्यय (वाक्यों में) - तुमुन् प्रत्यय, तुमुन् प्रत्यय के योग से वाक्य संयोजन
 5. शब्द रूप (वाक्यों में) - नदी, पितृ, अस्मद्, युष्मद्
 6. धातु रूप (वाक्यों में) - (पाँचों लकारों में) (लट्, लृट्, लङ्, लोट्, विधिलिङ् लकारों में) धातुएँ - नम्, दृश्, गम्, कृ
3. 1. अपठित-गद्यांश
2. पत्रलेखनम् - संकेताधारितं पत्रम्
 3. चित्रवर्णनम् - प्रदत्त चित्र के आधार पर संस्कृत में वाक्य
 4. हिन्दी से संस्कृत में अनुवाद (पाँच वाक्यों का)

द्वितीय सत्र

1. रुचिरा-

1. षष्ठः पाठः - गृहं शून्यं सुतां विना
2. सप्तमः पाठः - भारतजनताऽहम्
3. दशमः पाठः - नीतिनवनीतम्
4. एकादशः पाठः - सावित्री बाई फुले
5. द्वादशः पाठः - कः रक्षति कः रक्षितः
6. त्रयोदशः पाठः - क्षितौ राजते भारतस्वर्णभूमिः
7. चतुर्दशः पाठः - आर्यभटः
8. पञ्चदशः पाठः - प्रहेलिकाः

2. व्याकरण-

1. स्वर सन्धि - (वाक्यों में) गुण सन्धि, अयादि सन्धि
 2. अव्यय - (रिक्तस्थान के रूप में) - समस्त अव्ययशब्द
 3. प्रत्यय - (वाक्यों में) - क्त्वा तथा ल्यप् प्रत्यय, इन प्रत्ययों के योग से वाक्य संयोजन
 4. संख्या - (वाक्यों में) - 51 से 100 तक
 5. शब्दरूप - (वाक्यों में) - राजन्, मातृ, मुनि, इदम् (तीनों लिंगों में)
 6. धातुरूप - (वाक्यों में) - (पाँचों लकारों में) (लट्, लृट्, लङ्, लोट्, विधिलिङ्ग लकारों में)
धातुएँ - खाद्, अस्, पच्, इष्
 7. वाक्यसंशोधनम् – वचन, लिंग, पुरुष, लकार, तथा विशेष्य-विशेषण पर आधारित
3. 1. अपठित-गद्यांश
 2. पत्रलेखनम् – संकेताधारितं पत्रम्
 3. चित्रवर्णनम् – प्रदत्तचित्र के आधार पर संस्कृत में वाक्य
 4. हिन्दी से संस्कृत में अनुवाद (पाँच वाक्यों का)

MATHEMATICS

Learning Objectives

Teaching of Mathematics helps the learners to

- acquire knowledge and understanding of the terms, symbols, concepts, principles, processes, proofs etc.
- consolidate the Mathematical knowledge and skills acquired at the primary level.
- develop mastery of basic algebraic skills.
- develop drawing skills.
- apply Mathematical knowledge and skills to solve real life problems by developing abilities to analyze, to see interrelationship involved, to think and reason.
- develop interest in Mathematics as a problem solving tool in various fields.
- develop reverence and respect towards great Mathematicians, particularly towards the Indian Mathematicians for their contributions to the field of Mathematics.

Textbook : Mathematics Textbook for Class VIII (NCERT)

Practice Book : NCERT Practice Workbook Mathematics
(Goyal Brothers Prakashan) – Class VIII

FIRST TERM

Chapter-1 : Rational Numbers

- Introduction
- Properties of Rational Numbers
- Representation of Rational Numbers on the Number Line
- Rational Numbers between two Rational Numbers
Ex. 1.1, 1.2 with examples

Practice Book : Worksheets 1 to 5

Chapter-2 : Linear Equations in One Variable

- Introduction
- Solving Equations which have Linear Expressions on one Side and Numbers on the other Side
- Some Applications
- Solving Equations having the variable on both sides
- Some More Applications
- Reducing Equations to Simpler Form
- Equations Reducible to the Linear Form
Ex. 2.1 to 2.6 with examples

Practice Book : Worksheets 8 to 15

Chapter-3 : Understanding Quadrilaterals

- Introduction
- Polygons
- Sum of the Measures of the Exterior Angles of a Polygon
- Kinds of Quadrilaterals
- Some Special Parallelograms
Ex. 3.1 to 3.4 with examples

Practice Book : Worksheets 18 to 22

Chapter-5 : Data Handling

- Looking for Information
- Organising Data
- Grouping Data
- Circle Graph or Pie Chart
- Chance and Probability
Ex. 5.1 to 5.3 with examples

Practice Book : Worksheets 31 to 36

Chapter-6 : Squares and Square Roots

- Introduction
- Properties of Square Numbers
- Some More Interesting Patterns
- Finding the Square of a Number
- Square Roots
- Square Roots of Decimals
- Estimating Square Root
Ex. 6.1 to 6.4 with examples

Practice Book : Worksheets 39 to 46

Chapter-7 : Cubes and Cube Roots

- Introduction
- Cubes
- Cube Roots
Ex. 7.1, 7.2 with examples

Practice Book : Worksheets 49 to 52

Chapter-8 : Comparing Quantities

- Recalling Ratios and Percentages
 - Finding the Increase or Decrease Percent
 - Finding Discounts
 - Prices Related to Buying and Selling (Profit and Loss)
 - Sales Tax / Value Added Tax / Goods and Services Tax
 - Compound Interest
 - Deducing a Formula for Compound Interest
 - Rate Compounded Annually or Half Yearly (Semi Annually)
 - Applications of Compound Interest Formula
- Ex. 8.1 to 8.3 with examples

Practice Book : Worksheets 55 to 64

Chapter-16 : Playing With Numbers

- Introduction
 - Numbers in General Form
 - Games with Numbers
 - Letters for Digits
 - Tests of Divisibility
- Ex. 16.1, 16.2 with examples

Practice Book : Worksheets 111 and 112

Vedic Mathematics

1. Solving equations of the type $ax + b = cx + d$ by Parvartya Yojayat Method.
2. Solving equations of the type $\frac{ax+b}{cx+d} = \frac{m}{n}$ by Parvartya Yojayat Method.
3. Division of 4 and 5 digit numbers by 9 using Nikhila Sutra.
4. Multiplication of numbers with special case using Antyayordasake pi method.

SECOND TERM

Chapter-4 : Practical Geometry

- Introduction
 - Constructing a Quadrilateral
 - Some Special Cases
- Ex. 4.1 to 4.5 with examples

Practice Book : Worksheets 25 to 28

Chapter-9 : Algebraic Expressions and Identities

- What are Expressions?
- Terms, Factors and Coefficients
- Monomials, Binomials and Polynomials
- Like and Unlike Terms
- Addition and Subtraction of Algebraic Expressions
- Multiplication of Algebraic Expressions : Introduction
- Multiplying a Monomial by a Monomial
- Multiplying a Monomial by a Polynomial

- Multiplying a Polynomial by a Polynomial
 - What is an Identity?
 - Standard Identities
 - Applying Identities
- Ex. 9.1 to 9.5 with examples

Practice Book : Worksheets 67 to 75

Chapter-10 : Visualising Solid Shapes

- Introduction
 - Views of 3D Shapes
 - Mapping Space Around Us
 - Faces, Edges and Vertices
- Ex. 10.1 to 10.3 with examples

Practice Book : Worksheets 78 and 79

Chapter-11 : Mensuration

- Introduction
 - Let us Recall
 - Area of Trapezium
 - Area of a General Quadrilateral
 - Area of a Polygon
 - Solid Shapes
 - Surface Area of Cube, Cuboid and Cylinder
 - Volume of Cube, Cuboid and Cylinder
 - Volume and Capacity
- Ex. 11.1 to 11.4 with examples

Practice Book : Worksheets 82 to 89

Chapter-12 : Exponents and Powers

- Introduction
 - Powers with Negative Exponents
 - Laws of Exponents
 - Use of Exponents to Express Small Numbers in Standard Form
- Ex. 12.1, 12.2 with examples

Practice Book : Worksheets 92 to 94

Chapter-13 : Direct and Inverse Proportions

- Introduction
 - Direct Proportion
 - Inverse Proportion
- Ex. 13.1, 13.2 with examples

Practice Book : Worksheet 97

Chapter-14 : Factorisation

- Introduction
- What is Factorisation?
- Division of Algebraic Expressions
- Division of Algebraic Expressions Continued

(Polynomial \div Polynomial)

— Can you Find the Error?

Ex. 14.1 to 14.4 with examples

Practice Book : Worksheets 100 to 103

Chapter-15 : Introduction to Graphs

— Introduction

— Linear Graphs

— Some Applications

Ex. 15.1 to 15.3 with examples

Practice Book : Worksheets 106 to 108

Vedic Mathematics

1. Finding squares of numbers ending in 5 by Ekadhikena Purvena Sutra.
2. Finding HCF of algebraic expressions of the type:
($ax^2 + bx + c$) and ($ax^2 + dx + e$) by Lopana Sthapana Sutra.
3. Multiplication of any number by 12 using Urdhava TiryakSutra.
4. Finding squares of numbers not ending in 5 by Ekadhikena Purvena Sutra.

SCIENCE

Learning Objectives

- to strengthen the knowledge acquired at primary level
- to emphasize the acquisition of scientific knowledge
- to appreciate nature and sensitise the students about the environment.
- to understand scientific language i.e. symbols, formulae, equations etc.
- to develop scientific aptitude/temper
- to apply the theoretical knowledge of science to daily life
- to make the students abreast with the latest technological developments that have taken place and their impact on the society
- to enable the students to develop the process of problem solving and decision making

Textbook : Science textbook for Class VIII (NCERT)

Assignment Book : Science Exemplar Problems for Class VIII (NCERT)

PHYSICS

FIRST TERM

Chapter-11 : Force and Pressure

Force : A push or a pull, forces are due to an interaction, exploring forces, a force can change the state of motion, force can change the shape of an object, contact forces, non-contact forces, pressure, pressure exerted by liquids and gases, atmospheric pressure.

Chapter-12 : Friction

Force of friction, factors affecting friction, Friction : A necessary evil, increasing and reducing friction, wheels reduce friction, fluid friction.

Chapter-13 : Sound

Sound is produced by a vibrating body, sound produced by humans, sound needs a medium for propagation, we hear sound through our ears, amplitude, time period and frequency of a vibration, audible and inaudible sounds, noise and music, noise pollution.

Chapter-15 : Some Natural Phenomena

Lightning, charging by rubbing, types of charges and their interaction, transfer of charge, the story of lightning, lightning safety, earthquakes.

SECOND TERM

Chapter-14 : Chemical Effects of Electric Current

Do liquids conduct electricity? Chemical effects of electric current, electroplating.

Chapter-16 : Light

What makes things visible? Laws of reflection, regular and diffused reflection, reflected light can be reflected again, multiple images, sunlight - white or coloured, what is inside our eyes? care of the eyes, visually challenged persons can read and write, what is braille system?

Chapter-17 : Stars and the Solar System

The moon, the stars, constellations, the solar system, some other members of the solar system.

CHEMISTRY

FIRST TERM

Chapter-3 : Synthetic Fibres and Plastics

What are synthetic fibres? Types of synthetic fibres, characteristics of synthetic fibres, plastics, plastics as material of choice, plastics and the environment.

Chapter-4 : Materials : Metals and Non-metals

Physical properties of metals and non-metals, chemical properties of metals and non-metals, uses of metals and non-metals.

SECOND TERM

Chapter-5 : Coal and Petroleum

Coal, petroleum, natural gas, some natural resources are limited.

Chapter-6 : Combustion and Flame

What is combustion? How do we control fire? Types of combustion, flame, structure of flame, what is a fuel? Fuel efficiency.

Chapter-18 : Pollution of Air and Water

Air pollution, how does air get polluted? Case study - The Taj Mahal, Greenhouse effect, what can be done? Water Pollution, how does water get polluted? What is potable water and how is water purified? What can be done?

BIOLOGY

FIRST TERM

Chapter-2 : Microorganisms : Friend and Foe

Microorganisms, where do microorganisms live? Microorganisms and us, harmful microorganisms, food preservation, nitrogen fixation, nitrogen cycle.

Chapter-7 : Conservation of Plants and Animals

Deforestation and its causes, consequences of deforestation, conservation of forest and wildlife, biosphere reserve, flora and fauna, endemic species, wildlife sanctuary, national park, red data book, migration, recycling of paper, reforestation.

Chapter-8 : Cell Structure and Functions

Discovery of the cell, the cell, organisms show variety in number, shape and size, cell structure and functions, parts of the cell, comparison of plant and animal cells.

SECOND TERM

Chapter-1 : Crop Production and Management

Agricultural practices, basic practices of crop production, preparation of soil, sowing, adding manures and fertilizers, irrigation, protection from weeds, harvesting, storage, food from animals.

Chapter-9 : Reproduction in Animals

Modes of reproduction, sexual reproduction, asexual reproduction.

Chapter-10 : Reaching the Age of Adolescence

Adolescence and puberty, changes at puberty, secondary sexual characters, role of hormones in initiating reproductive function, reproductive phase of life in humans, how is the sex of the baby determined? Hormones other than sex hormones, role of hormones in completing the life history of insects and frogs, reproductive health.

SOCIAL SCIENCE

Learning Objectives

The course in Social Science will help learners:

- develop an understanding of the processes of change and development - both in terms of time and space, through which human societies have evolved.
- deepen the knowledge and understanding of environment in its totality, their interactive processes and effects on the future life of people.
- develop scientific temper by promoting the spirit of enquiry and following rational and objective approach in analysing and evaluating data and information as well as views and interpretations.

Textbooks:

1. Our Past-III: Textbook in History for Class VIII (NCERT)
2. Social and Political Life-III: Textbook for Class VIII (NCERT)
3. Resources and Development: Textbook in Geography for Class VIII (NCERT)
4. Atlas - Oxford School Atlas

FIRST TERM

Our Pasts-III

Chapter-1: How, When and Where

Chapter-2: From Trade to Territory (The Company Establishes Power)

Map Work: World Political Map - Sea route to India via Cape of Good Hope; continent where slave trade began; continent from where British, French & Portuguese came; Portuguese base in India.

India Political Map -Battles fought, area ruled by Ranjit Singh, place ruled by Tipu Sultan, Areas annexed by Doctrine of Lapse and Subsidiary Alliance.

Chapter-3: Ruling the Countryside

Map Work: India Political Map – Place where movement against Indigo plantation started; state where famine in 1770 took place; Place governed by Thomas Munro; state where Kalamkari weavers were found; state where indigo was cultivated in India before the revolt.

Chapter-4: Tribals, Dikus and the Vision of a Golden Age (**PROJECT**)

Chapter-5: When People Rebel (1857 and After)

Map Work: India Political Map: Main centres of the Revolt of 1857; place ruled by Rani Lakshmbibai.

SOCIAL AND POLITICAL LIFE III

Chapter-1: The Indian Constitution

Chapter-2: Understanding Secularism

Chapter-3: Why do we need a Parliament?

Chapter-4: Understanding Laws

Chapter-5: Judiciary

RESOURCES AND DEVELOPMENT

Chapter-1: Resources

Chapter-2: Land, Soil, Water, Natural Vegetation and Wildlife Resources

Diagram: Soil Profile

Chapter-3: Mineral and Power Resources

Map Work: World Political Map - First country to develop hydroelectricity; First tidal energy station; Largest producer of bauxite, diamond, high grade iron-ore, tin; leading producers of copper, iron-ore.

SECOND TERM

Our Pasts-III

Chapter-6: Weavers, Iron Smelters and Factory Owners

Map Work: India Political Map - Tata Iron and Steel Plant; First Cotton Mill, Major centres of silk weaving in the 18th century

Chapter-7: Civilising the “Native”, Educating the Nation (**PROJECT**)

Chapter-8: Women, Caste and Reform

Map Work: India Political Map - Place where Brahma Samaj and Paramhans Mandali were found.

Chapter-9: The Making of the National Movement (1870s–1947)

Map Work: India Political Map - Champaran, Partition of Bengal, Jallianwala Bagh, Sabarmati to Dandi, Chauri Chaura

Chapter-10: India after Independence

Map Work: India Political Map - Linguistic States; State where Bhilai Steel plant is located, First linguistic state.

SOCIAL AND POLITICAL LIFE-III

Chapter-6: Understanding Our Criminal Justice System

Chapter-7: Understanding Marginalisation

Chapter-8: Confronting Marginalisation

Chapter-9: Public Facilities

Chapter-10: Law and Social Justice

RESOURCES AND DEVELOPMENT

Chapter-4: Agriculture

Map Work: World Political Map - Leading producers of jute, cotton, tea, coffee, rice, wheat, millets.

Chapter-5: Industries

Map Work: World Political Map - Countries which have Iron & Steel Industry; Manchester of Japan, Great Lakes.

India Political Map - States producing steel; States and cities rich in cotton textile, Manchester of India.

Chapter-6: Human Resources

Map Work: World Political Map - Most sparsely populated country; Most populous country; Densely populated continents

Diagram: Population Pyramid of India, Kenya.

COMPUTER SCIENCE

Learning Objectives

- to enhance the knowledge of website designing using HTML
- to familiarize the students with the concepts of Computer Networks, Artificial Intelligence
- to develop basic skills of programming using PYTHON

Textbook - Coding With Computer (Class 8)

FIRST TERM

Lesson 3: More in HTML

- What is HTML?
- Creating HTML files in Notepad
- Structure of HTML Document
- HTML Attributes
- Insert Hyperlink
- Insert an Image
- HTML Tables and Lists

Lesson 4: HTML-Forms

- How does a HTML Form work?
- <Form> tag
- The Elements used in HTML Forms
- Different Attributes of <Input> Tag
- <Select> tag
- The 'Action' Attribute
- The 'Method' Attribute

Lesson 8: Understanding Artificial Intelligence

- Machine Learning
- Supervised and Unsupervised Learning
- Who are Cloud Server Providers?
- Understanding AI by 'Do It Yourself'

CBSE -Artificial Intelligence

Unit 1 - Excite

Unit 2 - Relate

SECOND TERM

Lesson 2: Computer Networking

- Introduction to Computer Network
- Characteristics of a Computer Network
- MAC Address and IP Address
- Devices required for Networking
- Transmission Media/Communication Channels
- Types of Computer Network
- Network Topologies

Lesson 6: Programming in Python

- Features of Python
- Installing Python on Windows
- Programming in Script Mode
- Python Statements
- Converting Values

Lesson 7: Control Flow Statements in Python

- If Statement
- If...Else Statement
- Looping
- For-loop and Nested For-loop

CBSE -Artificial Intelligence

Unit 3 - Purpose

Unit 4 - Possibilities

Unit 5 - AI Ethics

For Practical Sessions only

Lesson 1: Database Management System

Lesson 5: Sensor Programming in App Inventor

Lesson 9: Creating Machine Learning Application

GENERAL KNOWLEDGE

Learning Objectives

The course in General Knowledge will help learners:

- grow both on personal as well as academic level.
- improve their reasoning and thinking skills.

- prepare for competitive exams.
- understand and analyse the situations.

TEXTBOOK: G.K. WHIZ – 8 (FRANK EMU BOOKS)

FIRST TERM

1. NATURE

- The World of Plants
- Distinctive Plants
- Animal Phobia
- Nocturnal Animals
- Which Animal?

2. INDIA

- Folk Art
- Handicrafts of India
- The Nine Yards
- Super South
- International Borders

3. WORLD

- Immortal Speeches
- The Philippines
- Natural Reserves
- Bloody Battles

4. LANGUAGE

- Indian Writers
- Must Reads

5. SCIENCE

- Phenomenal Scientists
- Scientific Studies
- Tech Talk
- Nobel Laureates
- Robotics
- Go GPS

6. SPORTS

- Great Cricketers
- Stress Management Life Skills
- Indian Tennis Stars

7. ENTERTAINMENT

- Lights, Camera, Action
- On the Red Carpet

Test Paper 1

Test Paper 2

SECOND TERM

1. NATURE

- Indian Mythology and Plants
- Rainforests
- Marine Life

- Cauvery Calling
- Womb of Life!

2. INDIA

- Geo India
- The First Citizen
- National Organisations
- Teenage Life Skills

3. WORLD

- Legends of the world
- Features of the World
- Which Country?
- International Organisations

4. LANGUAGE

- Colourful Speech
- The Bard of Avon

5. SCIENCE

- IT Greats
- Genetic Diseases
- Camera Clicks
- Dinosaurs
- Nuclear Science
- Space Odyssey

6. SPORTS

- Winter Olympic Sports
- Formula 1
- Bowling Alley

7. ENTERTAINMENT

- On the Canvas
- Folk Music

Test Paper 1

Test Paper 2

ART EDUCATION

Learning Objectives -

-Introduce the students to new media and technique and their use for creative expression and making objects of common use.

-Refine the sense of appreciation of the beauty of nature and the basic elements of art forms.

Textbook – Art, Craft and Me: Book-6

FIRST TERM

1. Know about colours (Primary. Secondary and Neutral)
2. Basic colouring strokes and techniques.

Art, Craft and Me: Book-6

Pages 7 to 37

SECOND TERM

Art, Craft and Me: Book-6

Pages 38 to 66

ART EDUCATION

MUSIC, DANCE AND DRAMA

Learning Objectives

- To identify what makes a performance effective.
- To demonstrate an understanding of the relationship between artists and artworks.
- To explore and learn about the ways in which dance, music and drama communicate the feelings and help us express them.

Theory

1. Concept of Art Education
2. Basic Knowledge of Performing Art
3. Definition of Raaga, Taal and Saptak
4. Forms of Dance
5. Basic elements of Dance and Drama
6. Written work of Teen Taal and Keherwa
7. 10 Alankaars
8. Raaga Bhoopali

Practical

1. Practice of Alankaars
2. Practice of Raaga Bhoopali
3. Practice of Taal
4. Practice of Prayers and Songs from School diary
5. Dance drama and Nukkad Natak
6. Practice of Facial expressions and Body language
7. Footwork of Different Western Dance forms, Classical dance and Folk dance
8. Practice of Voice Modulation and Anchoring

PHYSICAL EDUCATION AND HEALTH EDUCATION

Learning Objectives

- To enhance a scientific approach regarding Health and Physical Education
- To make them understand the importance of balanced diet and nutrition
- To impart knowledge of cardiovascular exercises
- To be familiar with the effects of Yoga & Physical exercises on respiratory system

Theory

1. Importance of good posture and advantages of correct Postures
2. Knowledge of weight training and food supplement for children
3. Medicinal drugs and their side effects on our body

Practical

1. Volley Ball
2. Basketball
3. Throw Ball
4. Badminton
5. Cricket
6. Table Tennis
7. Athletics.
8. Warming up & limbering down exercises