



CAMBRIAN PUBLIC SCHOOL

Kanke Road, Ranchi

Summer Assignment (Session 2026-27)

Class: IX

General Instructions:

1. Complete all the questions neatly in your notebook / A4 size assignment sheet as instructed.
2. Maintain proper handwriting and presentation.
3. Revise the syllabus covered before attempting the assignment.
4. Submit the assignment on the first day after the Summer Vacation.
5. Parents are requested to guide and encourage their ward to complete the work independently.

Subject: English

1. Case-Based Questions (EXPLAIN ANY TWO)

Read the situation and answer:

Case 1:

Your grandmother wants to learn how to read but feels hesitant due to her age.

What qualities from the story How I Taught My Grandmother to Read will help her? Explain with examples.

Case 2:

If you were in Sudha Murthy's place, how would you motivate your grandmother differently?

Case 3:

"Education has no age limit."

Justify this statement using evidence from the story.

Case 4:

Relate the values shown in the story with present-day digital learning (online classes, apps).

Case 5: (Poem-based):

How does Bharat – Our Land reflect unity in diversity? Give two examples.

ANALYTICAL & VALUE-BASED QUESTIONS

- a) Why was the grandmother determined to learn reading before Dasara?
- b) What role did discipline play in her learning journey?
- c) How does the poem promote patriotism among youth?
- d) Compare traditional learning (grandmother) vs modern learning (students today).

ART-INTEGRATED TASKS

2. Creative Activity (Choose ANY ONE)

Activity 1: Create a 6-frame storyboard showing key events from How I Taught My Grandmother to Read with captions.

Activity 2: Cultural Poster

Make a poster on "Bharat – Our Land" showing:
Diversity (dress, food, language)

Unity (flag, culture, values)

Add a slogan of your own.

Activity 3: Map Integration

On a map of India:

Mark different languages/regions

Connect them with lines showing unity

Add 3–4 lines explaining how India stays united.

4. Editing & Error Correction

Edit the paragraph:

My grandmother don't knew how to read. She was very determination and learn every day. She practices regularly and become confidence.

5. Integrated Grammar

A. Fill in the blanks (Tenses/Modals/Determiners)

- She _____ (learn) reading last year.
- You _____ respect elders. (modal)
- _____ grandmother was very hardworking. (determiner)
- She _____ (practice) daily now.
- We _____ help others. (modal)

B. Sentence Transformation

- She is old. She can learn. (Combine using modal)
- He read the book. (Change tense)
- They was happy. (Correct SVA)

6 “Education empowers individuals and builds confidence.”

Write a paragraph (120–150 words) relating this idea to:

The grandmother's journey

Your own learning experiences.

Subject: Hindi

*निर्देश: (प्रिय विद्यार्थियों, खंड-क एक अलग फाइल में करना है, और पोर्ट फोलियो वाली फाइल में खंड-ख भी करना है।

दो अलग-अलग फाइल बनानी है)*

- सभी कार्य A4 साइज शीट पर करें व फाइल बनाकर जमा करें.
- लेखन स्वच्छ, शुद्ध व आकर्षक हो. चित्र/बॉर्डर से सजावट करें.
- अंतिम तिथि: विद्यालय खुलने के 5 दिन के अंदर.

खंड-क: रचनात्मक लेखन

- गर्मी की छुट्टियों का एक दिन विषय पर 250 शब्दों का अनुभव लेख लिखिए ।
- उपसर्ग -प्रत्यय से 20 नए शब्द बनाकर वाक्य प्रयोग करें ।
- गर्मी की छुट्टी का कोई यादगार दिन डायरी में लिखिए ।

4) समाचार संकलन: हिंदी के पांच समाचार पत्रों से खेल विज्ञापन साहित्य से जुड़े समाचार काटकर चिपकाइए और उसे एक मैगजीन बनाये।

खड़ख

पोर्टफोलियो: प्रेमचंद महादेवी वर्मा या हरिवंश राय बच्चन में से किसी एक का जीवन परिचय प्रमुख रचनाएं भाषा शैली A4 सीट पर सचित्र बनाए।

पाठ्य पुस्तक गंगा

दो बैलों की कथा हीरा मोती के चरित्र की तुलना करते हुए बताइए कि दोनों में से आपको कौन अधिक पसंद आया।

कठिन शब्दों के अर्थ

अथवा

ख. छोटे भाई को मोबाइल का सीमित व सार्थक उपयोग बताते हुए पत्र लिखिए।

3. संदेश लेखन – | 30-40 शब्द*

क. आपकी माताजी बाजार गई हैं. बिजली विभाग से फोन आया कि कल 8 से 2 बजे तक बिजली नहीं रहेगी. पिताजी के लिए संदेश लिखिए.

अथवा

ख. आपके मित्र ने बोर्ड परीक्षा में जिले में प्रथम स्थान प्राप्त किया है. उसे बधाई संदेश लिखिए.

Subject: Sanskrit

1. पर्यावरणं प्रदूषणम्” इति विषये चित्रेण सह

दश वाक्यानि रचयन्तु।

2. शब्दरूपाणि

फल, नदी, भवत्, अस्मद्, युष्मद्, (किम्, त्रिषु लिङ्गेषु) इत्येषां शब्दानां रूपाणि स्मरन्तु लिखन्तु च।

3. धातुरूपाणि –

(सेव, लट्, लृट् लकारयोः) कृ, नी(लट्, लृट्, लङ् लकारेषु

रूपाणि स्मरन्तु लिखन्तु च।

4. अधोलिखितान् संवादान् मञ्जूषायाः उचितपदैः पूर्यत-

आगन्तुकः- बालक! किं तव जनकः (1)अस्ति ?

बालकः-मान्य! जनकः औषधाय (ii)..... गतः।

आगन्तुकः-अहं तव (iii)..... मित्रं जगदीशचन्द्रः।

बालकः-नमस्ते ! उपविशतु (iv).....।

आगन्तुकः-तव (v)किम् ?

बालकः (vi).....नाम पीयूषः ।

आगन्तुकः- त्वं कस्यां (vii)पठसि ?

बालकः -अहं (viii)..... पठामि ।

आगन्तुकः-स्वजनकाय एतत् (ix)यच्छ। अधुना
अहं गच्छामि ।

बालकः-अहं (x)..... निवेदयिष्यामि ।

मञ्जूषा

भवान्, पुस्तकम्, जनकस्य, नाम, कक्षायाम्

आपणम्, गृहे, जनकस्य, सप्तमी -कक्षायाम्, मम ।

🏠 “निर्देशः — सर्वे प्रश्नाः व्याकरण-पुस्तिकायां लिखन्तु।”

Subject: Mathematics

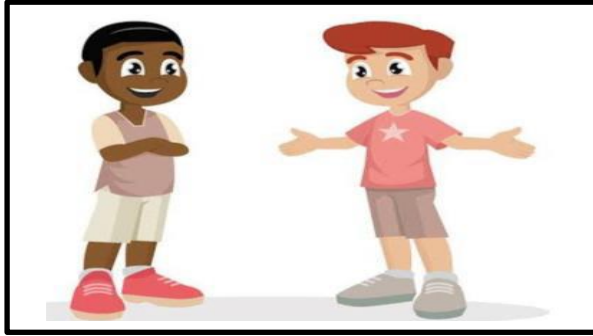
1. “Math Around Me” Scrapbook Create a scrapbook showing real-life uses of numbers like fractions in cooking and irrational numbers like π . Include pictures and explanations.
2. “Number Detective” Activity Find 10 examples from daily life and classify them into natural numbers, integers, rational and irrational numbers.
3. Square Root Art Use $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$ to create geometric patterns using ruler and compass.
4. Number Line Model Make a 3D number line using cardboard and represent integers, fractions and irrational numbers.

Solve Questions from 5 to 16.

5. Every Whole number is a Natural number. (State True or False)
6. If $x = \sqrt{3} - \sqrt{2}$ and $y = \sqrt{3} + \sqrt{2}$, find the value of $x^2 + y^2 + xy$.
7. If $x = 2 - \sqrt{5}$ and $y = 2 + \sqrt{5}$, find the value of $x^2 - y^2$.
8. Determine rational numbers p and q if $7 + \sqrt{57} - \sqrt{5} - 7 - \sqrt{57} + \sqrt{5} = p - 7\sqrt{5}q$.
9. Simplify: $6\sqrt{3} - \sqrt{6} + \sqrt{6}\sqrt{3} + \sqrt{2} - 4\sqrt{3}\sqrt{6} - \sqrt{2}$.
10. Simplify: $3\sqrt{2}\sqrt{6} - \sqrt{3} + 2\sqrt{3}\sqrt{6} + 2 - 4\sqrt{3}\sqrt{6} - \sqrt{2}$.
11. Show that: $13 - \sqrt{8} - 1\sqrt{8} - \sqrt{7} + 1\sqrt{7} - \sqrt{6} - 1\sqrt{6} - \sqrt{5} + 1\sqrt{5} - 2 = 5$.
12. If $x = \sqrt{p} + q + \sqrt{p} - q$, then find the value of $qx^2 - 2px + q$.
13. Show that: $x - 1 + y - 1 + x - 1 - y - 1 + x - 1 - y - 1 = x^2 + y^2 + xy$.
14. If $2a = 3b = 6c$, then show that $c = \frac{1}{6}ab + b$.
15. If $x = 2 + 3\sqrt{2}$, then find the value of $(x + 14x)$.
16. Prove that $\sqrt{3}$ is an irrational number.
17. Case Study 1:

During revision hours, two students Michael and Mohan were discussing with each other about the topic of rationalising the denominator. Michael explains the simplification of $\frac{1}{\sqrt{3}\sqrt{5} + \sqrt{3}}$ by

rationalising the denominator is multiplying numerator and denominator by $\sqrt{5} - \sqrt{3}$. And Mohan explains the simplification of $(\sqrt{5} + \sqrt{3})(\sqrt{5} - \sqrt{3})$ by using the identity $(a + b)(a - b) = a^2 - b^2$.



On the basis of the above given information, solve the following questions:

- The rationalising factor of $\sqrt{5} + \sqrt{3}$ is:
 - $1\sqrt{5}+\sqrt{3}$
 - $(\sqrt{5} - \sqrt{3})$
 - $-(\sqrt{5} - \sqrt{3})$
 - $(\sqrt{5} + \sqrt{3})$
- According to Michael's explanation, the simplification of $\sqrt{3}\sqrt{5} + \sqrt{3}$ is:
 - $5 - \sqrt{15}$
 - $5 + \sqrt{152}$
 - $\sqrt{15}-32$
 - $5 + \sqrt{15}$
- According to Mohan's explanation, the simplification of $(\sqrt{3} + \sqrt{2})(\sqrt{3} - \sqrt{2})$ is:
 - 1
 - 1
 - 2
 - 3
- Addition of two irrational numbers is:
 - always rational
 - always irrational
 - may be rational or irrational
 - always integer
- The square root of natural number is a/an:
 - Rational
 - Irrational
 - Rational or Irrational
 - None of these

18. Case Study – 2:

One day a Math teacher taught students about the Number System. She drew a number line on the black board and represented different types of numbers such as natural numbers, integers, rational numbers, etc. A number of the form p/q is said to be a rational number, if $q \neq 0$ and p, q are integers.



On the basis of the above information, solve the following questions:

- A rational number between 13 and 17 is:
 - 215
 - 1721
 - 521
 - 521
- An irrational number between $\sqrt{3}$ and $\sqrt{5}$ is:
 - 2.1
 - 2
 - $\sqrt{3.5}$
 - $\sqrt{7}$
- Decimal number 1.5 in the form of p/q is:
 - 143
 - 119
 - 149
 - 149

- d) The sum of two rational number is always:
i) Integers ii) Naturals iii) Rational iv) Irrational
- e) A terminating or repeating decimal number is a/an:
i) Rational ii) Irrational iii) Rational or Irrational iv) Whole number

Subject: Physics

Chapter: Motion

Objective:

To understand the concept of motion and relate it with real-life situations using different subjects.

Section A: Core Concepts

1. Define:
i) Distance and Displacement ii) Speed and Velocity iii) Acceleration
2. Differentiate between:
i) Uniform and Non-uniform Motion ii) Speed and Velocity
3. Solve numerical:
i) A car travels 120 km in 2 hours. Find its speed.
ii) A bicycle accelerates from rest to 10 m/s in 5 seconds. Find acceleration.

Section B: ICT / Computer Integration

1. Create table and graph using Excel/Google Sheets.
a) Distance-Time graph b) Velocity-Time graph
2. Optional: Record a video showing motion examples.

Section C: English Integration

Write a paragraph (100–150 words) on "How Motion Affects Our Daily Life".

Section D: Activity / Experiment

Observe a moving object, record time and distance, calculate speed, and write observations.

Bonus Task:

Imagine a world without motion. Write 5 points.

Do all NCERT Questions from book. (Light)

Instructions:

- Complete neatly in notebook. (Except Section B)
- Use diagrams
- Submit after vacation
- Maintain originality

Subject: Chemistry

Chapter: Exploring Mixtures and Their Separation


Activity Task: Creative Assignment

Mixtures Around Us – Poster / Journal Work

Create a poster or journal entry showing:

- At least 3 examples each of homogeneous and heterogeneous mixtures.
- Representation of true solutions, colloids, and suspensions.
- Add 3 catchy slogans related to mixtures and separation.

Example: “Mix smart, separate right – Chemistry makes it clear and bright!”

 Academic Task: Competency-Based Questions (CBQs)

1) Understanding Mixtures

Differentiate between homogeneous and heterogeneous mixtures with definitions and examples.

2) Case Study: Types of Mixtures

Riya prepared three mixtures:

- Sugar in water
- Milk
- Sand in water

a. Classify each as true solution, colloid, or suspension.

b. Which mixture shows the Tyndall effect?

c. Which mixture settles on standing? Give reason.

3) Concentration of Solutions

A student dissolves 10 g salt in 90 g water.

a. Calculate the mass percentage of the solution.

b. How will concentration change if more water is added?

c. Give one real-life example where concentration is important.

4) Separation Techniques

You are given a mixture of iron filings, sand, and salt.

a. Suggest a stepwise method to separate the components.

b. Name the techniques used.

c. Explain why each method works.

5) Life Skills-Based Question

Explain the importance of:

- Drinking clean water
- Avoiding impure food mixtures

How does knowledge of mixtures help in daily life?

 Skill-Based Task

Observe your surroundings and list 5 mixtures. Identify their type and suggest a method of separation.

 Wishing you a productive and curious holiday!

Subject: Biology

Chapter: Cell – The Fundamental Unit of Life

Section A: Long Answer Questions

- 1) Explain the structure of a cell in detail.
- 2) Describe the structure and function of the nucleus.
- 3) Explain the structure and functions of mitochondria with its importance.
- 4) Write detailed differences between plant cell and animal cell.
- 5) Explain the structure and functions of the plasma membrane.
- 6) Describe endoplasmic reticulum (RER and SER) and their functions.
- 7) What are plastids? Explain types like chloroplast, chromoplast, leucoplast.

- 8) Explain osmosis with a suitable example and diagram.
- 9) Describe the structure and functions of Golgi apparatus.
- 10) Explain the role of vacuole in plant cells in detail.

Section B: Art Integrated Work (A4 Colourful Diagrams)

- 1) 🌿 Plant Cell (Colorful & labeled)
- 2) 🐾 Animal Cell (Colorful & labeled)
- 3) 🦠 Bacterial Cell (Prokaryotic Cell)

Subject: Social Science

History

- 1) Create your own "cave painting" on brown paper showing hunting, animals, or daily life. Use natural colours, like charcoal, turmeric, or chalk.
- 2) Make a model of an early human hut or cave shelter using clay, cardboard, sticks, and leaves. Take a photo and write 5 lines about it.
- 3) Imagine if you were an Archaeologist and you discovered a new Stone Age site near your city. List items you found and what each item tells you about the people who lived there.

Geography

- 1) Prepare a 3D model on plate tectonics/ Interior of the Earth/ Weathering / Erosion/ The course of a River from its Source in the mountains to its Mouth at the Sea- (1) Upper course (2) Middle course (3) Lower course

Political Science

- 1) Prepare a project on fundamental rights and duties.
- 2) Explain the scope of social science by describing the roles of political science, how these disciplines connect and overlap in real life situations.
- 3) Discuss the meaning of society and explain how relationship and institution together shape social life.

Economics

- 1) Prepare a project on Different types of economy and central problems.
- 2) Define opportunity cost with example?
- 3) Write the reasons for economic problems.
- 4) What are the functions of an economist?
- 5) Describe or present your vacation trip in the form of a written report or a documentary (video/presentation).

Guiding Questions:

- 1) Introduction
 - Where did you go during your vacation?
 - Why did you choose this place?
- 2) Journey Details
 - How did you travel (train, car, flight, etc.)?
 - What was your experience during the journey?
- 3) About the Place
 - Describe the location (geography, climate, famous features).
 - What makes this place special?

- 4) Activities and Experiences
 - What did you do there?
 - Which places did you visit?
 - What was the most enjoyable?
- 5) Culture and People
 - What did you observe about the local culture, food, or traditions?
 - Did you interact with local people? What did you learn?
- 6) Challenges (if any)
 - Did you face any difficulties during the trip?
 - How were they managed?
- 7) Learning Outcome
 - What did you learn from this trip?
 - How did this trip change your perspective?
- 8) Conclusion
 - Would you recommend this place to others? Why?
 - How would you describe your overall experience in one paragraph?

Subject: Information Technology (402)

Competency based questions

- 1) Rajiv is working in a office. The CEO of the company asked him to prepare PPT reflecting achievements of the company and explain the viewers the relevant theme. He is fully stressed how to prepare for it. You are communication expert suggest him what steps he will take to present the content effectively. Explain briefly.
- 2) Create Art integrated design representing the Effective Communication skills II in organised way highlighting the key factors like Types of communication, Elements of communication, 7 C's of communication skills as well as Self-management skills II key factors.
- 3) Discuss the different factors responsible for stress in human life. Also suggest different techniques to reduce stress.
- 4) Complete exercise of ch-1 & Ch-2 in CW copy covering all topics.
- 5) Watch the significant videos of swati chawla on advanced digital documentation covering topic on keyboarding skills as well as application of fast typing. Prepare the report highlighting the key points.