

A decorative border surrounds the central text, featuring various tropical elements: large green monstera leaves, vibrant orange bird-of-paradise flowers, clusters of small yellow berries, and brown coconuts, some of which are cracked open to show white coconut meat.

MOTHER INDIA PUBLIC SCHOOL
BAZPUR

- H A P P Y -

Summer Holiday!

ENJOY

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CLASS - IX (2026-27)

GUIDELINES

Wishing you a joyful and refreshing summer break!

May this holiday be filled with laughter, discovery, and quality time with loved ones. Take time to relax, explore your interests, and enjoy every moment.

Along with fun, use this time to engage in your holiday homework—designed to spark creativity, deepen understanding, and make learning enjoyable. Complete it with sincerity, originality, and pride.

Stay safe, stay curious, and come back recharged, ready for new beginnings!

ENGLISH

Instructions

Complete this activity in a well-decorated presentation file.

Use headings, coloured sheets, pictures, cut-outs, charts, labels, or hand-drawn illustrations to make the work attractive and organised.

The work should reflect your creativity, practical thinking, and presentation skills.

1. Designing Our Ideal Smart Classroom

Your school is planning to set up a new classroom for students. Imagine that you are a member of the student committee chosen to help design this learning space. Prepare a creative presentation file/activity on ideas to make the classroom smart, clean, comfortable, creative, and student-friendly.

Include the following points in your work:

- ★ Essential items and facilities needed in the classroom.
- ★ Technology and smart-learning tools that can improve learning.
- ★ Ideas to keep the classroom clean, organised, and eco-friendly.
- ★ Creative decorations or learning corners students would enjoy.
- ★ Rules and responsibilities students should follow to maintain the classroom environment.

Assessment Criteria – Total 10 Marks

Creativity and Original Ideas – 3

Presentation and Neatness – 3

Relevance of Content – 2

Language and Expression – 2

2. Turning Point of the Story (10 Marks)

Every story has one important moment where everything changes.

- • Identify that event from Chapter 1 of Kaveri.
- • Explain in 4–5 sentences why it is the turning point.
- • Describe how the story changes after this event.

Do this activity in a separate English Literature File / A4 ruled sheets.

Word Limit: 80–100 words.

Assessment Criteria:

Understanding of the Turning Point – 3

Depth of Explanation – 3

Clarity of Expression – 2

Grammar and Sentence Formation – 2

3. Author Study (5 Marks)

Choose any one chapter/poem from your English Literature book and complete the following creative exploration tasks in your holiday homework file.


Find out:

- Who is the author/poet of the chapter?
- Which literary era or period did the writer belong to?
- What type of writing is the author famous for?
- Mention one famous work by the same author other than this chapter.


4. Workbook Practice

Do 4 sets of passages (Discursive and Case-based Factual) from pages 9–24 in the English Workbook.

HINDI

 निर्देश:

साफ-सुथरी कॉपी/फाइल में कार्य करें
चित्र, रंग, चार्ट आदि का प्रयोग करें
स्वयं के विचार लिखें (नकल न करें)


 भाग 1: रचनात्मक लेखन (Creative Writing) (5)

मेरी यादगार छुट्टियाँ

अपने छुट्टियों के अनुभव को 100–150 शब्दों में लिखिए और उससे संबंधित चित्र बनाइए।

यदि मैं एक पक्षी होता/होती...

कल्पना करते हुए सुंदर अनुच्छेद लिखिए।

 भाग 2: कला और भाषा (Art Integration)(5)

मुहावरा चार्ट बनाइए


10 मुहावरों को चित्र सहित प्रस्तुत करें

प्रत्येक का अर्थ और वाक्य भी लिखें

किसी एक त्योहार का पोस्टर बनाइए

(जैसे – दीवाली, होली, रक्षाबंधन)

उसके महत्व को 5–6 पंक्तियों में लिखें

 भाग 3: पठन कौशल (Reading Skill)(5)

कोई भी हिंदी कहानी पढ़ें


और निम्न लिखें:

कहानी का नाम

लेखक का नाम

मुख्य पात्र

शिक्षा (moral)


 भाग 4: व्याकरण (Grammar Activity)(5)

उपसर्ग-प्रत्यय तालिका बनाइए

5 उपसर्ग और 5 प्रत्यय के उदाहरण लिखें


वाक्य भेद गतिविधि


5 वाक्य लिखकर उनका प्रकार बताइए (प्रश्नवाचक, विस्मयादिबोधक आदि)

 भाग 5: बोलने का कौशल (Speaking Skill)(5)

किसी एक विषय पर 1 मिनट का भाषण तैयार करें

(जैसे – “स्वच्छ भारत”, “मेरा विद्यालय”)


 स्कूल में प्रस्तुत करने के लिए तैयार रहें

 विशेष गतिविधि (Fun Task)

‘मेरा दिनचर्या’ प्रोजेक्ट

पूरे दिन की गतिविधियों को चित्र/फोटो/ड्राइंग के साथ दर्शाइए

हर गतिविधि के नीचे 1–2 वाक्य लिखें

 मूल्यांकन आधार:

प्रस्तुति (Presentation)- 5

रचनात्मकता (Creativity)- 10

भाषा शुद्धता (Language Accuracy)- 5

समय पर कार्य पूरा करना- 5

MATHS

(Number System & Polynomials)

Do all work in a scrap book .Creativity carries marks

Q1. Design a Number System Quiz Book

- 5 MCQs

- 5 Assertion reason based question
- Mind map of Ch –3(World of numbers)

Q2. Square Root Spiral Activity

Construct a square root spiral up to $\sqrt{9}$ using ruler and compass.(2)

Label all roots clearly and answer:

1. Which of these are irrational?(1)
2. Why can $\sqrt{4}$ be shown as a rational number on the spiral?(1)

Decorate the spiral creatively.(1)

Q3. Polynomial Identity Design (5 marks)

Using colored paper or sketch pens, represent the identity:

$$(a+b+c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ac)$$

by drawing squares and rectangles (area model).

Label each part and color differently to show how the identity is formed.

Q4. Create a Polynomial Rangoli (5 marks)

Draw a rangoli pattern using only:

- Lines
- Triangles
- Squares

Assign algebraic terms to each shape, for example:

$$\text{Square} = x^2$$

$$\text{Rectangle} = 2x$$

$$\text{Small square} = 1$$

Form a polynomial from your design and write it in standard form.

Q5. Create your own polynomial of degree 3. Answer the following

1. Identify its terms, coefficients, and constant.(1)
2. Find its value for $x = 2$.(1)
3. Check whether $x = 1$ is a zero of the polynomial.(1)
4. Draw a mind map of chapter -2 (linear polynomials)(2)

SCIENCE

PHYSICS

INSTRUCTIOS

1. All questions are compulsory.
2. Each question is of 0.5 marks.
3. Solve these questions in your fair notebook.

Q1.Can the magnitude of displacement be greater than the distance traveled by an object? Explain your answer with a real-life example.

Q2.An object moves along a circular path with a constant speed. Is its motion "uniform" or "accelerated"? Justify your reasoning.

Q3.Is it possible for an object to have zero velocity but a non-zero acceleration? Give an example.

Q4.While traveling in a car, which of these two instruments measures a scalar quantity, and which measures a vector quantity (if any)?

Q5.If the displacement-time graph of a particle is a straight line parallel to the time axis, what can you say about the velocity and the forces acting on the object?

Q6.Derive first equation of motion using a velocity-time graph for an object moving with uniform acceleration.

Q7.Derive second equation of motion using the area under a velocity-time graph.

Q8.Using the velocity-time graph, derive the third equation of motion by calculating the area of the trapezium formed under the slope.

Q9.An athlete completes one round of a circular track of diameter **200m** in **40s**. What will be the distance covered and the displacement at the end of **2 minutes 20 seconds**?

- Q10. A bus decreases its speed from **80 km/h** to **60 km/h** in **5 seconds**. Find the acceleration (retardation) of the bus.
- Q11. A driver of a car traveling at **52 km/h** applies the brakes and accelerates uniformly in the opposite direction. The car stops in **5 seconds**. Another driver going at **30 km/h** in another car applies his brakes slowly and stops in **10 seconds**. On the same graph paper, plot the speed versus time graphs for the two cars. Which of the two cars traveled farther after the brakes were applied?
- Q12. An artificial satellite is moving in a circular orbit of radius **42,250 km**. Calculate its speed if it takes **24 hours** to revolve around the earth.
- Q13. A train starting from rest attains a velocity of **72 km/h** in **5 minutes**. Assuming the acceleration is uniform, find:
- The acceleration.
 - The distance traveled by the train for attaining this velocity.
- Q14. An object travels **16m** in **4s** and then another **16m** in **2s**. What is the average speed of the object?
- Q15. A stone is thrown in a vertically upward direction with a velocity of **5 m/s**. If the acceleration of the stone during its motion is **10 m/s²** in the downward direction, what will be the height attained by the stone and how much time will it take to reach there?
- Q16. Two cars, A and B, are traveling at the same speed. Car A has twice the mass of Car B. If both drivers apply identical braking force, which car will stop in a shorter distance? (Assume the deceleration is inversely proportional to mass).

CHEMISTRY

Total Marks: 8

Theme: "Chemistry Around Us"

Holiday Homework Instructions

- Use an A4 scrapbook/file.
- Make the work colorful, creative, and neatly presented.
- Use diagrams, pictures, flowcharts, tables, or real-life observations.
- Write in your own words.

Section A – Creative Chemistry Hunt (2 Marks)

"Find Chemistry in Your Home"

Observe your kitchen/home and find any 5 substances that are examples of Acid, Base, Mixture, Pure Substance, and Solution.

Substance	Category	Why?
Lemon juice	Acid	Sour taste due to citric acid

Paste small pictures/drawings beside each item.

Section B – Indicator Art Activity (2 Marks)

"Make Your Own Natural Indicator"

Prepare a natural indicator using Turmeric / Beetroot / Hibiscus flower / Red cabbage.

1. Write the procedure.
2. Test it on 3 household substances.
3. Record color changes in a table.
4. Draw or paste pictures.

Substance Tested	Acid/Base	Colour Change
Soap solution	Base	Red → Green

Section C – Scientific Investigation (2 Marks)

"Rusting Detective Activity"

- Nail exposed to air and water
- Nail in dry container

- Nail dipped in oil/water-covered container

Observe for 5 days and write:

- Which nail rusted most?
- Why did rusting occur?
- What conditions are necessary for rusting?

Present observations using a flowchart or comic strip.

Section C – Scientific Investigation (2 Marks)

Choose ONE activity:

- Option 1: 3D Model

Make a simple model on Atom structure, Water cycle and purification, or Separation of mixtures.

- Option 2: Awareness Poster

Create a poster on “Say No to Plastic”, “Chemistry in Daily Life”, or “Save Water, Save Earth”.

Add slogans, scientific facts, and creativity.

Creativity Ideas (Optional)

- Add QR codes of science videos.
- Use waste materials for decoration.
- Create chemistry memes/cartoons.
- Add “Did You Know?” facts.

BIOLOGY

CHAPTER: THE FUNDAMENTAL UNIT OF LIFE

PART A: WRITTEN INVESTIGATORY PROJECT

Project Title: The Structural Organisation Portfolio

- **Objective:** To systematically analyse the structural components of a cell and document how individual cell organelles maintain internal environments.
- **Format:** The project must be completely handwritten on 3 to 4 ruled A4 sheets and presented in a neat paper folder. Label the front cover clearly.

Project Sections to Write:

1. **Historical Introduction:** Document the milestone discovery of the cell using information from **NCERT Section 5.1**. Explain how Robert Hooke observed a slice of cork in 1665 and how it led to modern cell theory.
2. **Organelle Fact Dossier:** Select any **three** organelles from the textbook (e.g., *Mitochondria*, *Golgi apparatus*, *Chloroplasts*, or *Endoplasmic reticulum*). For each chosen organelle, research and write down:
 - Its structural features (e.g., whether it has a single, double, or no membrane).
 - Its precise primary function within the cell.
3. **Comparative Data Table:** Copy and complete this comparative grid using context from the chapter exercises:

Architectural Component	Plant Cell (Present/Absent & Key Location)	Animal Cell (Present/Absent & Key Location)
Cell Wall		
Nucleus		
Plastids		
Vacuoles		

PART B: CASE-BASED QUESTIONS

(Each scenario contains 4 specific sub-questions based on the NCERT Class 9 Science Textbook)

Case 1: The Kitchen Experiments with Osmosis

A student is performing a home experiment with raisins and fresh apricots. In Set A, she drops dry, wrinkled raisins into a beaker containing pure water. In Set B, she takes fresh, plump apricots and places them into a beaker containing a highly concentrated sugar syrup solution. She leaves both experimental setups undisturbed for four hours.

- **Question 1.** Predict the physical changes that will be observed in the raisins of Set A and the apricots of Set B.
- **Question 2.** Name the specific biological processes taking place in Set A and Set B respectively.
- **Question 3.** Define the type of solutions used in Set A and Set B relative to the cell sap of the fruit cells.
- **Question 4.** What would happen if a plant cell is kept in the solution used in Set B for a very long duration? Name the phenomenon.

Case 2: The Structural Framework of Membrane Biogenesis

The cell contains an extensive network of membrane-bound tubes and sheets called the Endoplasmic Reticulum (ER). It exists in two primary functional forms: Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER). Together, they act as an internal pipeline and manufacturing hub. The products generated here are critical for building the basic architecture of the cell itself.

- **Question 1.** What structural feature makes RER appear "rough" under an electron microscope?
- **Question 2.** What is the primary functional role of RER inside a eukaryotic cell?
- **Question 3.** What vital biochemical components are synthesized by the SER?
- **Question 4.** Explain the term "membrane biogenesis" using the functions of both RER and SER.

Case 3: The Cellular Scavengers and Internal Cleaners

During a routine microscopic observation, a researcher notices a cell that has been heavily damaged by an external physical impact. The internal environment of the cell has become chaotic, with damaged organelles leaking metabolic waste. Suddenly, certain small, spherical, single-membrane-bound sacs filled with powerful hydrolytic digestive enzymes rupture simultaneously across the cytoplasm. Within a short period, the entire damaged cell disappears.

- **Question 1.** Identify the specific cell organelle described as the spherical sac containing digestive enzymes.
- **Question 2.** Why are these organelles commonly referred to as the "suicide bags" of a cell?
- **Question 3.** Where are the powerful digestive enzymes found inside this organelle originally manufactured?
- **Question 4.** Why do these enzymes not destroy a healthy cell under normal, non-damaged conditions?

PART C: SHORT ANSWER TYPE QUESTIONS

(Directly extracted from the core concepts, intext boxes, and back exercises of the NCERT Class 9 Science Textbook)

1. Why is the plasma membrane called a **selectively permeable membrane**? *(NCERT Intext Question)*
2. How is a **prokaryotic cell** different from a **eukaryotic cell**? State three distinct structural criteria. *(NCERT Exercise Question 2)*
3. What would happen if the **plasma membrane ruptures or breaks down**? *(NCERT Exercise Question 3)*
4. Why are lysosomes known as the "**suicide bags**" of a cell? *(NCERT Intext Question)*
5. Which organelle is known as the **powerhouse of the cell**, and why? *(NCERT Exercise Question 5)*
6. Where do the **lipids and proteins** constituting the cell membrane get synthesised? *(NCERT Exercise Question 6)*
7. How does an **Amoeba obtain its food**? Name the physiological process involved. *(NCERT Exercise Question 7)*
8. Define **osmosis**. How do substances like carbon dioxide (CO₂) and water (H₂O) move in and out of the cell? *(NCERT Exercise Question 8 / Intext Question)*
9. Which type of cell division is required for the **growth and repair** of the body, and which type is involved in the **formation of gametes**? *(NCERT Section 5.3)*
10. Why are Mitochondria and Plastids able to make some of their own proteins? Mention the two structural components present inside them that allow this. *(NCERT Sections 5.2.5 & 5.2.6)*

SUBMISSION TRACKER FOR STUDENTS

- Write your Part B (Case-Based Questions) and Part C (Short Answers) sequentially in your standard Biology homework notebook.
- The written project report (Part A) must be maintained separately in a neat, eco-friendly assignment file folder.

Marking Scheme

Project file-----3 Marks

Case Base Questions-----2 Marks

SOCIAL STUDIES

General instructions for all:

- Use simple language, write in your own words.
- Give examples for each power, add one real life example.
- Neat presentation-use headings, colours and bullets.

Objective:

- It aims to engage students to explore the topics of the political system of India.
- It enhances the political knowledge among students.

TASK – 1

Draw/Paste a neat and clean picture of new parliament.

TASK –2

Write the functions and powers of:

- Parliament
- Lok Sabha
- Rajya Sabha
- President-Along with current details (Current President)
- Prime Minister
- Judiciary (Current CJI)
- Powers of Governor (Current Governor of UP & Uttarakhand)

Format:

- Do this Project in A4 size project file sheets.
- Cover page with title, name, class, Roll Number, school name, session.
- Acknowledgment
- certificate signed by Subject teacher and Principal,
- Index
- Introduction of the Topic
- Conclusion
- Bibliography

ASSESSMENT CRITERIA

MARKS (TOTAL – 25)

Presentation	05
Creativity	05
Neatness	05
Content Accuracy	05
On Time	05

● **Every student will solve the UT question paper in their fair notebook as part of the holiday homework.**

● **Make a Project:-**

- **Roll No – 1 to 10**–Make a typed file in Ms Word about IT and ITeS(BPO, Uses, Types of BPM, etc.) along with pictures related to topics.
- **Roll No – 11 to 20** –Make a typed file in Ms Word about Keyboard skills (Touch typing, Ergonomics, Speed of typing, etc.) along with appropriate images.
- **Roll No – 21 to 30**–Make a typed file in Ms Word on the topic Digital Documentation (Mail Merge, Images, Tables, etc.) along with appropriate images.
- **Roll No – 31 to 40** -Make a typed file in Ms Word on the topic Electronic Spreadsheet (Cell, Active Cell, Referencing, etc.) along with pictures.
- **Roll No – 41 to 48** – Make a typed file in Ms Word on the topic Digital Presentation (Slides, Transition, etc.) along with images.

The project file should consist of an Introduction page, Acknowledgement page, and Index along with 3-5 pages of work.

● **Marks Distribution:-**

Neatness	Proficiency	On Time	AccurateData	Personaleffect
5	5	5	5	5