

**BAL BHARATI PUBLIC SCHOOL, SSTPP, KHANDWA**  
**HOLIDAY HOMEWORK SESSION 2025-26**  
**CLASS-IX**

Dear Parents and Campers,

I am so excited to welcome you to our Summer Camp! 😊

We have a wonderful season planned full of learning, creativity, adventure, and lots of fun.

Each day, your child will have the opportunity to explore new activities, make friends, and build memories that will last a lifetime. Please ensure they come dressed comfortably and bring a water bottle, hat, and lots of enthusiasm!

We believe summer is a time to grow, discover, and shine — and I can't wait to see all the amazing things our campers will do.

Thank you for trusting us to be part of your child's summer journey. Let's make it a season to remember!

Regards

Mr. Yash Kumar Pateriya

Class Teacher

**Important Instructions for Holiday Homework**

1. All the given work must be **completed neatly in your notebooks**.
2. The assigned project is **integrated**, covering multiple subjects or themes.
3. **Holiday Homework will be evaluated and assessed** as part of your regular homework grades.
4. **The purpose of this Holiday Homework is to help you revise** the topics covered in **April** and prepare for the **upcoming Periodic Test 1 (PT1)**.
5. Make sure to **submit all work on time** after the vacation till 20/05/2025.

**SUBJECT – ENGLISH**

1. Read "The Sound of Music" (Beehive textbook) 🎵 📖

Feel the power of music. Understand the struggles and achievements of great musicians.

2. Read "The Adventures of Toto" 🐒 📖

Enjoy the funny adventures of a mischievous monkey bought by the narrator's grandfather.

3. Practice Tenses Every Day ⌚ 📝

- Revise Present, Past, and Future Tenses
- Write 5 sentences daily using different tenses
- Example: Toto was playing in the garden yesterday

4. Write a Diary Entry Every Week 🖋️ 📅

- Express your daily activities, feelings, or funny incidents
- Minimum 100 words per entry

- Be creative and honest
  - 5. Read "A Midsummer Night's Dream" by Shakespeare 🌟 🎭
  - Explore a world of magic, love, and mistakes
  - Pay attention to the magical characters and their dreams
  - 6. After Vacation: Discuss the Theme of the Play 🧙 ✨
  - We will have a class discussion
  - Prepare your thoughts on love, magic, and human foolishness
  - 7. Vocabulary Activity ✨ 📖
  - Make a vocabulary list from the lessons you read ("The Sound of Music" and "The Adventures of Toto")
  - Write at least 10 new words with their meanings and one sentence for each
- Example:
- Mischievous (adjective) — playful in a naughty way
  - Sentence: Toto was a mischievous monkey who loved creating trouble

### **Assignment: Make a vlog on the Importance of Empathy**

Topic: The Importance of Empathy

Instructions:

1. Video Presentation (3-4 minutes):

- Create a video highlighting the importance of empathy in today's world.
- Explain what empathy means and why it is important in building strong relationships and understanding others.
- Share real-life examples where empathy made a positive difference.
- Talk about how practicing empathy can create a better society and improve global issues like mental health, conflict resolution, and teamwork.

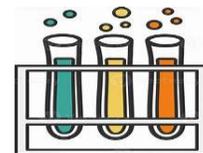
Tips for Students:

- Speak clearly and express your thoughts with feeling.
- Use simple examples from daily life to make your video relatable.
- You can include visuals, stories, or quotes to make your message more powerful.

Reminder:

Submit the video after the summer holidays.

### **SUBJECT-SCIENCE**



Dear Students,

This summer, let's explore science beyond the classroom! You are required to create a Science Exploration File titled "Summer Science Journal: Exploring Matter in My Surroundings" based on Chapter 1 – Matter in Our Surroundings.

Your task includes home-based observations, simple experiments, and creative documentation to understand the nature and behaviour of matter. All tasks must be completed neatly in a separate file with proper headings, diagrams, pictures (if any), and your observations.

This project is designed to enhance your observation skills, scientific thinking, and experiential learning.

Let's discover the magic of matter in your own home!

Wishing you a happy and learning-filled summer!

Warm regards,  
Science Teacher

### **Title: Exploring Matter Around Us – An Experimental File Work**

➤ **Objective:** To observe and document the physical nature, characteristics, states, and change in states of matter through simple experiments and real-life observations at home.

➤ **Instructions:**

Students will make a creative file with the title:

“Summer Science Journal: **Exploring Matter in My Surroundings**”

➤ Tasks to include in the file:

➤ Observation Journal (Daily Life Matter Log – 5 Days)

➤ Observe and record different types of matter (solid, liquid, gas) used or seen in daily life.

➤ Make a table with columns: Name of the Matter, State, Shape, Volume, Flow, and Compressibility.

➤ Mini Experiments (At least 3 of the following)

For each, write: Aim, Materials, Procedure, Observation, Conclusion.

❖ Evaporation Check: Place water in 3 bowls (open area, under fan, and in shade). Measure time taken to evaporate.

❖ Camphor or Naphthalene Experiment: Observe sublimation over days.

❖ Ice to Water to Vapour: Heat ice and observe changes of state.

❖ Compressibility Test: Try compressing a balloon (gas), sponge (solid), and a bottle of water (liquid).

❖ Rate of Dissolution: Check how fast sugar/salt dissolves in hot, cold, and warm water.

❖ Perfume Test: Spray perfume in a room and note how quickly the smell spreads.

➤ Creative Task – Matter Art

➤ Draw or paste pictures showing different changes in states of matter (melting, freezing, condensation, etc.) and label them

➤ Reflection Page

➤ Write what you learned about the nature of matter by observing and experimenting.

➤ Include one real-life situation where you understood a science concept from this chapter.

### **SUBJECT: SOCIAL SCIENCE**

Dear Students,

Please complete your holiday homework carefully by following the instructions given below:

#### **General Instructions:**

- Use **political/physical outline maps of India** and the **World** wherever required.
- **Label, mark, and color** neatly. Use only **blue or black pen** for labeling and **colored pencils** for marking.

- All maps should be **neatly pasted** in your notebook or in a separate folder.
  - Write the **map number** and **topic name** clearly at the top of each map.
  - Maintain the **sequence** as mentioned below.
  - **Maps should be completed systematically and neatly.** Marks will be awarded for neatness, accuracy, and presentation.
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### Map Work Details:

#### History:

##### **MAP-1: French Revolution (Outline political map of France)**

- Locate and label: **Bordeaux, Nantes, Paris, Marseille**

##### **MAP-2: Socialism in Europe and The Russian Revolution (Outline political map of the World)**

- Locate and label:
  - **Central Powers** of First World War: Germany, Austria-Hungary, Turkey (Ottoman Empire)
  - **Allied Powers** of First World War: France, England, Russia, USA

##### **MAP-3: Nazism and the Rise of Hitler (Outline Political Map of the World)**

- Locate and label:
    - **Axis Powers** of Second World War: Germany, Italy, Japan
    - **Allied Powers** of Second World War: UK, France, Former USSR, USA
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#### Geography:

##### **MAP-4: India – Size and Location**

- Mark and label:
  - **States and Capitals**
  - **Tropic of Cancer** ( $23\frac{1}{2}^{\circ}\text{N}$ ) and **Standard Meridian of India** ( $82\frac{1}{2}^{\circ}\text{E}$ )
  - **Neighbouring countries:** Pakistan, China, Nepal, Bhutan, Bangladesh, Myanmar, Sri Lanka

##### **MAP-5: India – Physical Features**

- Mountain Ranges: The Karakoram, The Zaskar, The Shivalik, The Aravali, The Vindhya, The Satpura, Western and Eastern Ghats
- Mountain Peaks: K2, Kanchenjunga, Anai Mudi
- Plateaus: Deccan Plateau, Chota Nagpur Plateau, Malwa Plateau
- Coastal Plains: Konkan Coast, Malabar Coast, Coromandel Coast, Northern Circars

##### **MAP-6: Drainage System**

- Rivers (Identification only): Indus, Ganges, Sutlej, Narmada, Tapti, Kaveri, Krishna, Godavari, Mahanadi
- Lakes (Identification only): Wular, Pulicat, Sambar, Chilka

##### **MAP-7: Climate**

- Show **Annual Rainfall** zones in India.
- Show the **direction of Monsoon Winds**.

##### **MAP-8: Population**

- Indicate the **population density** of all states.
  - Mark the **state with the highest** (e.g., Bihar) and **lowest** (e.g., Arunachal Pradesh) **population density**.
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### Important Points to Remember:

- You may take help from your textbook, atlas, and class notes.
- Practice rough work first before making the final maps.
- Each map should have a **proper title** and **legend (key)** wherever needed.
- Revise the concepts along with the map work for better understanding.

### ग्रीष्मावकाश गृह कार्य (कक्षा - IX)

1. संज्ञा, सर्वनाम, विशेषण और क्रिया विशेषण की परिभाषा तथा प्रत्येक के बीस उदाहरण लिखें-

2. चार अनुच्छेद लेखन तथा प्रत्येक से पांच-पांच प्रश्न बनाएं

आपका मन पसंद त्योहार, आतंकवाद : एक वैश्विक समस्या, नई शिक्षा नीति 2020, आर्टिफिशियल इंटेलिजेंसी : आधुनिक समय की माँग

3. चार अनौपचारिक पत्र तथा दो औपचारिक पत्र लिखें-

छात्रवृत्ति के लिए प्रधानाचार्य को पत्र, हिंदी व्याकरण की पुस्तक मंगवाने हेतु पी पी पब्लिकेशन - दिल्ली को पत्र, शहर में बढ़ती आपराधिक घटनाओं पर कार्रवाई हेतु पुलिस अधीक्षक को पत्र, बीमारी के कारण 10 दिन के अवकाश हेतु प्रधानाचार्य को पत्र

4. पांच संवाद लेखन -

- ऑनलाइन शिक्षा और तकनीकी असमानता पर दो छात्रों के बीच संवाद
- महिलाओं की सुरक्षा के विषय में माता-पिता और बच्चों के बीच संवाद
- नशा मुक्ति पर मित्रों के बीच संवाद
- प्लास्टिक प्रदूषण से जलीय जीवों पर प्रभाव विषय पर संवाद
- आतंकवादी घटनाओं पर दो बुजुर्गों के बीच संवाद

5. डायरी लेखन 20 मई 2025 से 10 जून 2025 तक

6. स्वयं का यात्रा वृत्तांत (300 शब्दों में)

7. किन्हीं दो पर्वतारोहियों की जीवनी लिखे (250 शब्द)

8. 20 शब्दों के पर्यायवाची लिखे

9. वाक्यांश के लिए एक शब्द (20 उदाहरण लिखें)

## SUBJECT - (INFORMATION TECHNOLOGY)

*Based on CBSE Subject Code 402 – IT (NSQF Level 1)*

Name: \_\_\_\_\_ Class: 9 Subject Code: 402 – IT

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### PART A: Employability Skills (CBSE IT 402)

#### 1. Communication Skills

**Activity:** Create a **dialogue** (5–6 lines) between two friends discussing how digital tools like email or WhatsApp help them in schoolwork.

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#### 2. Self-Management Skills

##### Question:

Write down **3 personal habits** you will follow this summer to manage your time effectively.

Example:

1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
- 

#### 3. ICT Skills

##### Activity:

Explore the following tools and write **what each is used for**:

- MS Word
  - MS Excel
  - Google Drive
  - Email
  - File Explorer
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### PART B: Subject Specific Skills (IT Applications)

#### 1. Answer the Following

1. What is the difference between **data** and **information**?
2. What are **Input and Output Devices**? Give 2 examples of each.
3. Define **Digital Documentation**. Name two examples of word processors.

4. What is a spreadsheet? How is it useful?
  5. Mention any **3 uses of ICT in daily life**.
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## 2. Practical Work

### A. Word Processing Activity

- Open MS Word or Google Docs
- Create a document titled: "**Benefits of Using ICT in Education**"
- Write **8–10 points**, use bullet points, heading styles, and insert a relevant image
- Save as ICT\_Education\_YourName.docx

### B. Spreadsheet Activity

- Use MS Excel or Google Sheets
- Create a sheet titled: "**Weekly Study Schedule**"
- Columns: Day | Subject | Time | Status
- Use formatting tools (color, borders, bold) and formula for total hours
- Save as StudySchedule\_YourName.xlsx

### C. File Management Task

- Create a folder on your desktop: Class9\_IT\_Homework
  - Save the Word & Excel files in it
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## 3. Internet Exploration

Visit **any one** of the following websites and note down **2 things you learned**:

- [www.code.org](http://www.code.org)
- [www.typingclub.com](http://www.typingclub.com)
- [www.khanacademy.org](http://www.khanacademy.org)

Your Notes:

1. \_\_\_\_\_

2. \_\_\_\_\_

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#### 4. Design a Poster – Cyber Safety

**Topic:** "Stay Safe Online"

Create a digital or handmade poster with:

- A slogan
  - 3 Dos  and 3 Don'ts  of internet use
  - A drawing or image (optional)
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#### 5. Coding Challenge (Fun Task)

Try using a block-based coding site like [www.scratch.mit.edu](http://www.scratch.mit.edu)

- Create a simple animation or game
  - Share what you made: (e.g., "I made a bouncing ball animation!")
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### SUBJECT: MATHEMATICS

1. Solve the following:

➤ If  $x = \frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$  and  $y = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ , find the value of  $x^2 + y^2 + xy$ .

➤ If find the value of  $x^2 - y^2$ .  $x = \frac{2-\sqrt{5}}{2+\sqrt{5}}$  and  $y = \frac{2+\sqrt{5}}{2-\sqrt{5}}$ .

➤ Determine rational numbers p and q  $\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = p - 7\sqrt{5}q$ .

➤ Simplify:  $\frac{6}{2\sqrt{3}-\sqrt{6}} + \frac{\sqrt{6}}{\sqrt{3}+\sqrt{2}} - \frac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}}$

➤ Simplify:  $\frac{3\sqrt{2}}{\sqrt{6}-\sqrt{3}} + \frac{2\sqrt{3}}{\sqrt{6}+2} - \frac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}}$

➤ Show that:  $\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5$

➤ If:  $x = \frac{\sqrt{p+q} + \sqrt{p-q}}{\sqrt{p+q} - \sqrt{p-q}}$ , then find the value of  $qx^2 - 2px + q$ .

➤ Show that:  $\frac{x^{-1}+y^{-1}}{x^{-1}} + \frac{x^{-1}-y^{-1}}{x^{-1}} = \frac{x^2+y^2}{xy}$

➤ If  $x = 2 + 3\sqrt{2}$ , then find the value of  $\left(x + \frac{14}{x}\right)$ .

# POLYNOMIALS

## Short Answer Type Questions

- If  $f(x) = 2x^3 - 15x^2 + 15x + 2$ , find  $f(2)$  and  $f(-3)$ .
- If  $x = 2$  is a root of the polynomial  $f(x) = 2x^2 - 3x + 7a$ , find the value of  $a$ .
- Check whether the polynomial  $f(x) = 4x^3 + 4x^2 - x - 1$  is a multiple of  $2x + 1$ .
- If  $x + 1$  is a factor of the polynomial  $2x^2 - kx$ , then find the value of  $k$ .
- Find the coefficient of  $x^2$  in  $(x^2 - 2)^3$ .
- Find the value of (using identity only) i)  $249^2 - 248^2$  ii)  $95 \times 96$ .
- On one day, principal of a particular school visited the classroom. Class teacher was teaching the concept of polynomial to students. He was very much impressed by her way of teaching. To check, whether the students also understand the concept taught by her or not, he asked various questions to students. Some of them are given below. Answer them.
- Find the value of  $a$ , when  $x + 1$  is a factor of  $x^3 - 2ax^2 + 16$ .
- Find the value of  $k$ , when  $x - 1$  is a factor of  $4x^3 - 3x^2 - 4x + k$ .
- How many zeroes are there in the polynomial  $x^2 + 4x + 2$ .

### 1. Fill in the blanks:

- a) The degree of the polynomial is \_\_\_\_\_.
- b) A polynomial with degree 1 is called a \_\_\_\_\_.
- c) The value of a polynomial at is called it's \_\_\_\_\_ at .

### 2. Choose the correct answer:

a) Which of the following is a quadratic polynomial?

- (i)  $x^3 + 2x + 1$
- (ii)  $3x^2 - 7x + 5$
- (iii)  $5x + 4$

b) If  $p(x) = 2x^2 + 3x - 5$ , then  $p(1) = ?$

- (i) 0
- (ii) -4
- (iii) 0

### 4. Long Answer Type Questions:

- a) Using the Factor Theorem, determine whether  $(x + 1)$  is a factor of  $p(x) = x^3 + x^2 - x - 1$ .
- b) Divide  $2x^3 + 3x^2 - 2x + 1$  by  $(x + 2)$  using the division algorithm.

### 5. Extra Practice:

- a) Find the remainder when  $x^4 + 3x^3 - x + 7$  is divided by  $(x - 1)$ .
- b) If  $(x - 3)$  is a factor of  $x^3 - 7x^2 + 15x - 9$ , verify it.

## Math + Science

### Project Title: "Mathematics in Environmental Conservation"

#### Idea:

Students calculate water usage, carbon footprints, or savings from eco-friendly practices like rainwater harvesting using volume and percentage calculation

## SUBJECT – PHYSICAL EDUCATION

### Part 1: Physical Activity Log (Daily Activity)

For 5 days a week during the holidays, engage in 30 minutes of physical activity (e.g., jogging, cycling, skipping, yoga, or playing a sport like cricket, football, badminton, etc.).

- Record the following:
- Sport/Activity Name
- Duration (in minutes)
- How you felt after the activity (e.g., energetic, happy, tired, etc.)
- You can use a notebook or create a simple table in a sheet to track the daily activities.

### Part 2: Sports Quiz (Multiple Choice)

Answer the following sports-related questions.

1 Which sport is known as the "king of sports"?

- a) Cricket                      b) Football                      c) Tennis                      d) Hockey

2 Who holds the record for the most Olympic gold medals?

- a) Michael Phelps      b) Usain Bolt                      c) Simone Biles                      d) Serena Williams

3 Which country invented the sport of badminton?

- a) China                      b) India                      c) England                      d) Japan

4 What is the maximum number of players allowed on the field for a soccer team?

- a) 9                      b) 11                      c) 12                      d) 1

### Part 3: Sports Journal (Weekly Activity)

Maintain a Sports Journal where you will record your sports activities for any 4 weeks of the holidays.

- Each week's entry should include:
- Name of the Sport/Activity you played (e.g., cricket, football, skipping, yoga, etc.)
- Duration (How many minutes per day?)
- What did you enjoy or learn?
- One tip for improvement in that sport.

### Part 4: Know Your Sport

Pick one sport of your choice and research the following

- History of the sport
- Basic rules
- Required equipment
- Famous players (India & World)
- One interesting fact
- Create a poster/chart or digital presentation to showcase your research.

### Part 5: Creative Corner

Choose any ONE:

- Make a motivational sports slogan or poem
- Design your own dream sports team jersey
- Create a comic strip about a sports adventure or funny moment

### Part 6: Skill Showcase (Optional Bonus)

- Record a short video (1-2 mins) of you performing your favorite skill (e.g., dribbling a basketball, doing yoga poses, skipping, etc.) and share it with your class teacher

**Use your summer break wisely—revise your subjects and strengthen your learning by solving extra questions from the recommended reference books!**

### **1. English - Together With**

- Tenses (Page 78–90)
- Revise the examples and solved exercises on pages 78 to 80. Then complete all practice exercises from pages 81 to 90. Focus on using the correct verb forms for simple, continuous, perfect, and perfect continuous tenses in present, past, and future.
- Determiners (Page 111–115)
- Read the rules and examples on pages 111 and 112. Complete the exercises on pages 113 to 115. Practice the use of articles, quantifiers, demonstratives, possessives, and distributives.
- Unseen Passages
- Solve unseen passages from the end of the grammar book. Read each passage twice, underline keywords, and answer questions in your own words. Attempt all question types carefully.

### **2. Maths - RD Sharma**

Topic - Exercise of Chapter 1 & 2

### **3. I.T. - Sumita Arora**

Unit 2 & Unit 3

### **4. Science – Lakhmir Singh & Manjeet Kaur**

Chemistry Chapter 1 & 2

## **Integrated Project: "Sustainable Cities and Communities" (SDG 11)**

### **1. Information Technology (IT):**

- Create a **digital presentation** using PowerPoint or Google Slides.
- Include visual aids, graphs, and charts to present data about sustainable cities.
- Use tools like Google Maps for city models and make use of charts to showcase findings.

### **2. Geography:**

- **Research the impact of urbanization** on the environment.
- Identify **sustainable city models** like Masdar City, or concepts like green buildings, waste management, and renewable energy.
- Create **maps** showing sustainable cities or resources that need protection in urban areas.

### **3. Science:**

- **Explore environmental impacts** of urban development on air, water, and land.

