



# THE VOYAGE OF LEARNING

*A Summer Message from the Desk of the Director*

*"Learning is a treasure that will follow its owner everywhere."*

**Dear Parents and Students,**

As we approach the vibrant summer break, I extend my warmest wishes to all our students and their families. Vacations are a wonderful time to relax, rejuvenate, and create beautiful memories together. However, it is also a golden opportunity to keep the spark of curiosity alive.

## **Important Summer Schedule**

- **Summer Vacation Begins:** Monday 1 June, 2026
- **Summer Vacation Concludes:** Tuesday, 30th June 2026
- **School Reopens:** Wednesday, 1st July 2026 (at the usual school time)

Our **Holiday Homework** has been thoughtfully designed not as a burden, but as a bridge—a way to connect classroom learning with creative, real-world exploration from **1 June to 30th June**. It aims to foster independent thinking, creativity, and self-discipline in our students.

### **TO OUR DEAR STUDENTS**

Use this time to read widely, explore new hobbies, and engage deeply with the projects assigned to you. Challenge yourselves, stay curious, and remember that consistent, daily efforts make learning effortless.

### **TO OUR RESPECTED PARENTS**

We view education as a shared partnership. We kindly request you to guide and supervise your children as they work through their assignments. Encourage them to manage their time effectively so they can balance both recreation and learning throughout this break. Your encouragement is the greatest catalyst for their academic growth.

Let us utilize this break to discover new passions and return to school on **1st July, 2026** with renewed energy, enthusiasm, and a deeper love for learning.

We wish you all a safe, happy, and intellectually fulfilling summer vacation!

Warm regards,

**Director**

**Jaycees Public School**



**JAYCEES PUBLIC SCHOOL RUDRAPUR**  
**Summer Break Holiday Homework-(2026-27)**  
**Class –XI (Science)**

**Subject-English**

**From Hornbill + Snapshots texts**

- **The Portrait of a Lady - Changing Family Structures:** Interview 2-3 grandparents/elderly people about family life 40-50 years ago vs today. Compare with Khushwant Singh's grandmother. Include photos, interview transcripts.

- **We're Not Afraid to Die - Disaster Survival Psychology:** Research real-life survival stories like the 2004 tsunami or recent air/sea disasters. Connect to themes of courage, teamwork, optimism in the chapter. (3-4 stories)

**Creative + Research Based:**

- **Adapting a Chapter to Film:** Take The Summer of the Beautiful White Horse. Write a screenplay for 2 scenes, design a poster, explain directorial choices.

**Letter Writing:**

- Write a letter to the editor of The Times of India in about 150-200 words highlighting the issue of environmental pollution in your city. Mention the causes, responsible factors and also suggest some practical solutions.
- Collect different types of advertisements from the classified columns of the English national dailies and paste them on A 4 size sheets.

**Structure Required**

1. Cover Page: Title, name, class, roll no, school
2. Certificate + Acknowledgement
3. Statement of Purpose: Why you chose this topic - 50 words
4. Introduction: Link to class XI text
5. Methodology: How you collected data
6. Report: (Topic wise) Main content with pics, graphs, quotes
7. Conclusion + Bibliography: MLA format
8. Reflection: What you learned - 100 words

**Subject - Physical Education**

Note- All 4 Practical work will be done in physical education Lab Manual .

➤ Practical 1: Labeled diagrams of 400 hundred Athletics track & 1 field events.

Practical-2: Fitness tests administration. (SAI Khelo India Test)

Practical-3: Detailed write-up on any one chosen in individual game/sport. IOA recognised. (history, rules, fundamental skills, terminology, and court/field measurements).

➤ Practical-4: Procedure for Asanas, Benefits & Contraindication for any two Asanas of Hypertension and Diabetes.

**Computer Science**

**-Prepare a Project Report on any one of the following topics:**

1. Artificial Intelligence (AI)
2. Machine Learning
3. Robotic Process Automation or RPA
4. Edge Computing
5. Virtual Reality and Augmented Reality
6. Cyber security
7. Block chain
8. Internet of Things (IoT)
9. BIG DATA

The Project ***may be typed or hand Written***. With following pages:

- a) *Cover Page*
- b) *Introduction*
- c) *Main Contents* (Minimum 4 Pages, may include images also)
- d) *Conclusion*
- e) *References*

### Subject-Fine Arts

Chapters:

- 1 - Six Limbs of Indian Painting and Fundamentals of Visual Arts
- 2 - Prehistoric Rock Paintings

#### **Short Questions**

1. What is Fine Art?
2. Define a point and a line.
3. What is the meaning of the term Sadrishya?
4. What are the six limbs (Shadanga) of Indian painting?
5. Give the translated meanings of the terms Pramana, Lavanyayojana, and Varnika Bhanga.
6. What do you mean by alignment in visual arts?
7. Write a short note on applied or commercial art.
8. Which two primary colors are mixed in equal ratio to get orange, violet, and green?Chapter 2:  
Prehistoric Rock Paintings
9. Who discovered the Bhimbetka rock shelters?
10. Who was Archibald Carlleyle?
11. In which state are the Bhimbetka rock shelters located?
12. How were colors prepared for prehistoric rock paintings?
13. Where have prehistoric rock paintings been found in India (name at least four key sites)?
14. What type of art is found in Bhimbetka?15. Why is Bhimbetka significant in the history of Indian art?

#### **PAINTING**

##### 1. Nature & Object Study (Still Life)

Practice observing light, shadow, and texture. These are foundational for your practical exams.

Task: Create 3 Still Life drawings.

Subjects: A composition of household objects (e.g., a kettle, a draped cloth, and a fruit bowl) or a group of geometric shapes.

Medium: Use Pencil Shading (2B to 8B) or Charcoal for one, and Watercolors or Oil Pastels for the others.

Focus: Accurate proportions, tonal values, and the "cast shadow" of the objects.

##### 2. Composition Painting

This section tests your ability to tell a story through art.

Task: Create 2 Original Compositions on A4 size sheets.

Themes:

Indian Festival: (e.g., Diwali celebrations, Holi, or a village fair).

Daily Life: (e.g., A vegetable vendor, children playing, or a railway station scene).

Medium: Poster colors or Watercolors.

Focus: Human figures in action, perspective, and a balanced color scheme.

##### 3. Traditional Indian Art (Folk Art)

Class 12 painting often includes a study of India's rich artistic heritage.

Task: Complete one detailed work of a traditional Indian art style.

Styles to choose from: Madhubani, Warli, Pattachitra, or Miniature style.

Medium: Fine-liner pens, Acrylics, or Poster colors.

### Subject- Mathematics

**Total Duration:** 30 Days

**Days 1–10: Chapter – Sets**

**Chapter 1: Sets** over the next 10 days.

1. Revise the definitions: sets, types of sets, subset, superset, universal set.
2. Draw and label Venn diagrams for: Union, intersection, complement, and difference of sets.

3. Prove the standard identities using Venn diagrams.
4. Practice at least **10 MCQs and 5 assertion-reason questions** from reference books.
5. Complete a worksheet based on set operations and word problems.
6. Create **3 real-life examples** where sets are used.
7. Attempt **5 HOTS questions** on union and intersection.
8. Prepare a **concept map** of the entire chapter.
9. Appear for a self-assessment test based on the chapter.

#### Days 11–20: Chapter – **Relations and Functions**

##### **Chapter 2: Relations and Functions:**

1. Write definitions of Cartesian product, relations, functions.
2. Write **5 examples of real-life functions** with proper domain and range.
3. Solve **10 MCQs and 5 short answer questions** from extra reference material.
4. Complete a worksheet on function mapping and domain-range.
5. Attempt **5 assertion-reason questions**.
6. Practice **5 HOTS level questions** on relations and mappings.
7. Appear for a self-assessment test based on the chapter

#### Days 21–30: Chapter – **Trigonometric Functions**

##### **Chapter 3: Trigonometric Functions:**

1. Revise angle measurements in radians and degrees.
2. Solve problems based on arc length and conversion.
3. Draw unit circle and explain the values of sin, cos, tan for standard angles.
4. Prepare a **table of trigonometric values** of standard angles.
5. Prove **standard trigonometric identities**.
6. Plot graphs of sin x, cos x, tan x.
7. Solve **10 MCQs and 5 case-based questions**.
8. Attempt **5 HOTS questions** involving identities and general solutions.
9. Attempt a test paper from previous year or reference book.

##### **General Instructions**

- Maintain a dedicated **Holiday Homework notebook** for all chapters.
- Use proper steps and labeling in all diagrams and graphs.
- Submit the completed notebook on the **first day after vacation**.
- Late submission may result in deduction of marks.

### **Subject-Chemistry**

#### **PROJECT (1 To 10 JUNE)**

Complete your investigatory project which you have been already allotted (except the observation part if you haven't performed your project).

#### **PROJECT FILE SHOULD CONTAIN PAGES IN FOLLOWING ORDER:**

- a. CERTIFICATE
- b. ACKNOWLEDGEMENT
- c. AIM OF PROJECT
- d. INTRODUCTION
- e. THEORY
- f. APPARATUS REQUIRED
- g. PROCEDURE
- h. OBSERVATION
- i. CONCLUSION
- j. PRECAUTION
- k. BIBLIOGRAPHY

**\*\* STRICTLY ADHERE TO ABOVE MENTIONED ORDER**

#### **LAB MANUAL WORK (11 To 15 JUNE)**

1. Determination of melting point of a solid organic compound.

- Determination of boiling point of a liquid organic compound.
- Preparation of (M/40) Oxalic acid solution.
- Preparation of (M/20) sodium hydroxide solution
- Determination of the concentration (strength) of a given sodium hydroxide solution by titrating it against a standard solution of oxalic acid.
- Determination of strength of a given hydrochloric acid solution by titrating it against standard sodium carbonate solution.

### PRACTICE QUESTIONS (16 To 30 JUNE)

#### CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES

- Assign the position of the element having outer electronic configuration (i)  $ns^2np^4$  for  $n=3$ , (ii)  $(n-1)d^2ns^2$  for  $n=4$  and (iii)  $(n-2)f^7(n-1)d^1ns^2$  for  $n=6$ .
- Which of the following species has the largest and the smallest size :  $Mg^{2+}$ ,  $Al$ ,  $Al^{3+}$ ?
- Arrange the given ions in order of decreasing radii;  $Li^{2+}$ ,  $Be^{2+}$ ,  $B^{3+}$  giving the reason.
- Why is the second ionisation enthalpy always higher than the first ionisation enthalpy?
- Why is the first ionisation enthalpy of  ${}^7N$  exceptionally higher?
- Give the order of the first ionisation enthalpies of Na, Mg, Al and Si. Explain your choice.
- Noble gases have larger size than halogens. Explain.
- Write the IUPAC name and symbol for the element having 119 as the mass number. On the basis of the periodic table, predict the electronic configuration of this element and also the formula of its most stable chloride and oxide.
- The formation of  $F(g)$  from  $F(g)$  is exothermic whereas that of  $O^{2-}$  is endothermic. Explain.
- First and second ionization enthalpies (IE1 and IE2) in  $\text{kJ mol}^{-1}$  for a few elements are given below:

Element	IE <sub>1</sub>	IE <sub>2</sub>
A	419	3051
B	1251	2297
C	2372	5250
D	738	1451

Which of the above elements is likely to be

- a reactive metal
- a reactive non-metal
- a noble gas
- a metal that forms a stable oxide of the formula  $MO$ ?

- Why is  $F_2$  more reactive than  $Cl_2$ ?
- Negative electron gain enthalpy of fluorine is less than that of chlorine. Why?
- Which element has the electronic configuration  $(Ar) 3d^6$ ?

### BIOLOGY

- Prepare a herbarium file on 5 economically important plants and 5 medicinal plants.
- Prepare a small report on useful and harmful microorganisms from the chapter Biological Classification.

Report Format

S No.	Microorganism	Group/Kingdom	Useful or Harmful	Role/Disease Caused

- Write the lab activity in your lab manual as discussed in class.

### SUBJECT- HOME SCIENCE

Project -1 Maintain a separate creative file for the Diet Journal. Record your meals regularly for one week. Make a record of nutritional intake of each meal. Use colourful headings, drawings, stickers etc à. Paste photographs/sketches of meals wherever possible. Write neatly and creatively.

Project 2- Developmental Norms (Birth to 3 Years) Prepare a colourful “Milestone Growth Chart/ File” showing development ( Physical , language, motor, social and emotional) from birth to 3 years.

Project -3 Imagine you are planning a birthday party with a budget of ₹ 25,000. Make a detailed expense sheet and suggest ways to save money.

## **PHYSICS**

WORKSHEET 1 (01/06/26 to 10/06/26) = Do any 15 numerical from MATHEMATICAL TOOLS

Worksheet 2 (11/06/26 to 20/06/26) = work of Lab manual

Write the following experiments in your lab manual:-

### **SECTION - A**

1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume.
2. To measure diameter of a given wire and thickness of a given sheet using screw gauge.
3. To determine radius of curvature of a given spherical surface by a spherometer.

### **SECTION - B**

1. To find the force constant of a helical spring by plotting a graph between load and extension.
2. To study the relation between frequency and length of a given wire under constant tension using sonometer.

After all experiments do write following activities:-

### **SECTION – A**

1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.
2. To determine mass of a given body using a metre scale by principle of moments.

### **SECTION – B**

1. To observe change of state and plot a cooling curve for molten wax.
2. To observe and explain the effect of heating on a bi-metallic strip.

### **INSTRUCTION:-**

1. In each experiment do write following content:-  
objective, apparatus required, theory, observation table(left page), diagram(left page with pencil), calculation, result, precaution.
2. Do not fill the observation table, just make the out work (with pencil).

## **PROJECT LIST**

**SELECT THE PROJECT ACCORDING TO YOUR ROLL NO.**

### **Mechanics & Motion**

1. Projectile Motion and its Applications
2. Uniform Circular Motion
3. Banking of Roads
4. Newton’s First Law of Motion
5. Newton’s Second Law and Momentum
6. Newton’s Third Law in Daily Life
7. Conservation of Linear Momentum
8. Friction: Static vs Kinetic Friction
9. Work-Energy Theorem
10. Conservation of Mechanical Energy
11. Elastic and Inelastic Collisions
12. Centre of Mass and Stability
13. Rotational Motion of a Disc

14. Moment of Inertia and its Applications
15. Angular Momentum Conservation
16. Dynamics of a Roller Coaster
17. Motion on an Inclined Plane
18. Parallelogram Law of Vectors
19. Resolution of Vectors
20. Circular Motion in Satellites

#### Gravitation

21. Kepler's Laws of Planetary Motion
22. Variation of Gravity with Height
23. Variation of Gravity with Depth
24. Escape Velocity of Earth
25. Geostationary Satellites
26. Artificial Satellites and Communication

#### Properties of Matter

27. Hooke's Law and Elasticity
28. Young's Modulus of Elasticity
29. Surface Tension of Water
30. Capillary Action in Liquids
31. Viscosity of Liquids
32. Bernoulli's Principle and Applications
33. Pascal's Law and Hydraulic Machines
34. Streamline and Turbulent Flow
35. Pressure Variation with Depth

#### Heat & Thermodynamics

36. Thermal Expansion in Solids
37. Black Body Radiation
38. Specific Heat Capacity of Materials
39. Latent Heat of Fusion and Vaporization
40. Zeroth Law of Thermodynamics
41. First Law of Thermodynamics
42. Heat Insulators vs Conductors
43. Greenhouse Effect and Global Warming
44. Solar Cooker Working Principle
45. Refrigeration and Heat Pumps

#### Oscillations & Waves

46. Simple Harmonic Motion (SHM)
47. Simple Pendulum and Time Period
48. Resonance in Everyday Life
49. Doppler Effect in Sound
50. Standing Waves in Air Columns

