



BLM ACADEMY SR SEC SCHOOL
HOLIDAY HOMEWORK OF CLASS XII (SCIENCE)
Session 2026-27

Dear Parents,

As summer unfolds with brighter mornings and longer days, it offers our children a beautiful chance to slow down, explore, and grow beyond the classroom. Vacations are not only about relaxation—they are precious opportunities to strengthen family bonds and create meaningful experiences together.

A few thoughtful suggestions for the summer holidays:

- **Encourage independence:** Let children take small responsibilities at home to build confidence and life skills.
- **Spend quality family time:** Simple activities like cooking together, evening walks, or storytelling create cherished memories.
- **Support healthy habits:** Maintain balanced routines with proper sleep, outdoor play, and nutritious meals.
- **Explore learning beyond books:** Visit parks, museums, libraries, or engage in nature-based activities to spark curiosity.
- **Teach the value of empathy:** Encourage children to help others, share, and practice compassion in daily life.

May this summer bring joy, positivity, learning, and togetherness to every home. Wishing you and your family a safe, refreshing, and memorable vacation.

Warm regards,

Dr. Gayatri Kanwar

Principal

STREAM-SCIENCE

Subject – English

Q1. Prepare a project on the chapter Deep Water by William Douglas. The project should be neat, creative, and informative.

Your Project Must Include:

1. Cover Page
2. Introduction of the Chapter
3. About the Author
4. Summary of the Chapter
5. Themes of the Chapter
6. Character Sketch of William Douglas
7. Literary Devices Used in the Chapter
8. Real-Life Connection of Fear and Courage
9. Write a diary entry as William Douglas after overcoming his fear
10. Conclusion

Project Guidelines

- Use A4 sheets/file.
- The project should be handwritten.
- Add relevant pictures and illustrations.

Q2. Prepare the poem A Thing of Beauty for Viva.

Subject- Chemistry

Q1. PROJECT: Scientific investigations involving laboratory testing and collecting information from other sources. A few suggested Projects

- a) Study of the presence of oxalate ions in guava fruit at different stages of ripening.
- b) Study of quantity of casein present in different samples of milk.
- c) Preparation of soybean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, etc.
- d) Study of the effect of Potassium Bi sulphate as food preservative under various conditions (temperature, concentration, time, etc.)
- e) Study of digestion of starch by salivary amylase and effect of pH and temperature
- f) Comparative study of the rate of fermentation of following materials: wheat flour, gram flour, potato juice, carrot juice, etc.
- g) Extraction of essential oils present in Saunf (aniseed), Ajwain (carom), Illaichi (cardamom).
- h) Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chili powder and pepper.

Note: The project be developed in the following sequence:

- The cover page/slide should have the title, student information, school logo, teacher name and school name and year.
- List of contents.
- Acknowledgments and preface (acknowledging the institution, books online websites and persons from you took help).
- Introduction.
- Topic with a suitable heading.
- Activities/Research done during the investigating project, if any.
- Conclusions (summarized suggestions or findings, the future scope of study).

Subject- Physics

Q1. Suggested Investigatory Projects

1. To study various factors on which the internal resistance/EMF of a cell depends.
2. To study the variations in current flowing in a circuit containing an LDR because of a variation in (a) the power of the incandescent lamp, used to illuminate; the LDR (keeping all the lamps at a fixed distance). (b) The distance of an incandescent lamp (of fixed power) used to & illuminate the LDR.
3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equiconvex lens (made from a glass of known refractive index) and an adjustable object needle.
4. To investigate the relation between the ratio of (i) output and input voltage and (ii) number of turns in the secondary coil and primary coil of a self-designed transformer.
5. To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.
6. To estimate the charge induced on each one of the two identical Styrofoam (or pith) balls suspended in a vertical plane by making use of Coulomb law.
7. To study the factor on which the self-inductance of a coil depends by observing the effect of this coil, when put in series with a resistor(bulb) in a circuit fed up by an A.C. source of adjustable frequency.
8. To study the earth & magnetic field using a compass needle -bar magnet by plotting magnetic field lines and tangent galvanometer.

Note: The project is developed in the following sequence:

- The cover page/slide should the title, student information, school (logo) and year.
- List of contents.
- Acknowledgments and preface (acknowledging the institution, books online websites and persons from you took help).
- Introduction.
- Topic with a suitable heading.
- Activities/Research done during the investigating project, if any.

Conclusions (summarized suggestions or findings, the future scope of study).

Subject- Mathematics

Q1. Daily Nutrition/Calorie Tracker: Follow the Following instructions given below and prepare a project on this basis.

- List 3 items you eat daily (e.g., fruit, rice, lentils) and create a row matrix representing the quantity consumed.
- Create another matrix representing the nutrient content (calories, protein, fat) for one unit of each item.
- Use matrix multiplication to calculate total daily nutrient intake.

Note: The project be developed in the following sequence:

- The cover page / slide should the title, student information, school and year.
- List of contents.
- Acknowledgments and preface (acknowledging the institution, books online websites and persons from you took help).
- Introduction
- Topic with a suitable heading.
- Activities / Research done during the investigating project, if any.

Conclusions (summarized suggestions or findings, the future scope of study).

Subject-Biology

PROJECTS:- Scientific Investigations involving laboratory testing and collecting information from other sources. A few suggested Projects chapters are

- Reproduction
- Genetics and Evolution
- Biology and Human Welfare
- Biotechnology and its Applications
- Ecology and Environment

Note:- The project be developed in the following sequence:

- The cover page / slide should the title, student information, school and year
- List of contents
- Acknowledgements and preface (acknowledging the institution , books online websites and persons from you took help)
- Introduction
- Topic with a suitable heading
- Activities / Research done during the investigating project , if any
- Conclusions (Summarizes suggestions of findings the future scope of study)

Optional Subject

Subject- Painting

Topic-Bengal School

Instructions:- Prepare a hand-written project on A4sheets.

Covering-History , origin, development, art ,painting of the time period.

Subject-Computer Science

Q1. Prepare a Python Program File containing 15 programs based on the CBSE Practical Examination syllabus.

Instructions:

- Write each program neatly with:
 - Program Statement
 - Program Code
 - Output Screenshot

- Include programs based on:
 - Python Basics
 - Conditional Statements
 - Loops
 - Strings
 - Lists
 - Functions
 - File Handling

- Maintain the file neatly with proper headings and indexing.

Subject-Music (Vocal & Instrumental)

Q1. Write the notation of musical composition and detail study of following Ragas :-

1. Bageshree
2. Malkauns
3. Bhairav

Q2. Write the notation of following talas :-

1. Rupak Tala
2. Jhaptaal
3. Dhamar Taal

Subject-Physical Education

Q1. “Yoga Through Indian Art” Scrapbook Project

Select any 2 lifestyle diseases with preventive yoga asana from the syllabus. Draw or paste pictures of each asana.

i) Learning element

- Procedure of asana
- Benefits of asana
- Contraindication of asana

ii) Fun addition:

Students have to click one photo performing yoga asana and add it to their scrapbook.

Q2. Make a project file of any one IOA (INDIAN OLYMPIC ASSOCIATION) recognized sport/game of your choice from syllabus.

Sports history, basic skills and terminology related to games.

i) Project must include:

- Newspaper cuttings
- Famous athlete profiles
- Sports tickets/photos
- Drawings of medals/logos

ii) Add sections:

- Indian sports heroes
- Paralympics

Instructions

-Use A4 sheets/file folders.

- Include drawings/photos wherever possible.
- Keep handwriting neat and colorful.
- Add one self-reflection page at the end.
- Total pages: 10–15 only.

Subject-Yoga

Prepare a Project/Practical File using one of the following topic.

1. Lifestyle diseases 1.Hypertension 2. Asthma 3. Back pain 4. Diabetes 5. Obesity

Write any two asanas for each Life style diseases (Procedure, contraindications, Benefits) with pictures.

2. Shat karma 1. Dhauti 2. Basti 3. Neti 4. Trataka 5. Nauli 6. Kapalbhathi .

Write importance of Shat karma (Benefits, precautions) with pictures.

3. Types of Bandhas 1. Jalandhara bandha 2. Moola bandha 3. Uddiyana Bandha 4. Maha Bandha
Write Technique, benefits, Contraindications.

4. Yoga and Health Promotion / Pictorial presentation of any five Asanas for improving concentration.

5. Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Shashankasana, Naukasana, Vrikshasana (Tree pose), Garudasana (Eagle pose)

Make sure your file neatly maintained , front page, acknowledgement , index page , certificate

Subject- Hindi

Q1. उत्तराखंड आंदोलन के सांस्कृतिक स्वर

उत्तराखंड के इतिहास और समाज पर लेखन करने वाले इन लेखकों पर चित्र, प्रमुख रचनाएँ, पुरस्कार, लेखन शैली और साहित्यिक योगदान जोड़कर सुंदर प्रोजेक्ट तैयार कीजिए। हिन्दी के समकालीन कवि एवं लेखक -लीलाधर जगूड़ी-आधुनिक हिंदी कविता के प्रमुख हस्ताक्षर, साहित्य अकादमी पुरस्कार से सम्मानित

मंगलेश डबराल- सरल भाषा और गहरे सामाजिक सरोकारों के लिए प्रसिद्ध

वीरेन डंगवाल -जनवादी चेतना और आधुनिक संवेदनाओं के कवि

गिरीश तिवारी 'गिर्दा'

(इस कार्य हेतु रचनात्मक अभिव्यक्ति, क्राफ्ट तथा चित्रों का उपयोग भी करें।)

Q2. पत्रकारिता के विभिन्न पहलुओं का वर्णन रचनात्मक अभिव्यक्ति, क्राफ्ट तथा चित्रों का उपयोग करते हुए करें तथा किसी दैनिक अखबार के विभिन्न खण्डों का सजीव चित्रण करते हुए एक फाइल तैयार करें।

(समस्त कार्य ए-4 शीट में साफ एवं सुंदर तरीके से करें।)

Subject- Psychology

Q1. Create a Case Profile of a Psychological Disorder. Choose One Psychological Disorder. Structure of the project must include -

- I. Introduction
- II. What is psychological disorder in general
- III. About the specific disorder (chosen for the case profile)
- IV. Symptoms of the specific disorder
- V. Possible Causes of that specific disorder
- VI. Case profile ----please include the following details in your main case profile:-
Basic Information, Family Background , Presenting Problem, Symptoms Observed, History, Daily Life Impact, Diagnosis, Possible Causes, and Treatment Suggested
- VII. Treatment and Management
- VIII. Role of Family and Society

IX. Conclusion

Q2. Students are required to administer and interpret five psychological tests related to various psychological attributes like intelligence, aptitude, attitude, personality, etc.

Subject- Artificial Intelligence

Q1. Study unit 5: Introduction to Big Data and Data Analytics and prepare file covering activities of Orange Data Mining. Consider the following instructions: -

- File must be in printed format
- Use A4 sheets
- Font size: heading - 14, content – 12
- Font type: Times New Roman
- Output images must be cropped properly

Social Emotional Learning (SEL)

Dear Students,

This holiday, we invite you to look inward, reach outward, and grow. These tasks are not just writing exercises, these are real experiences to live, reflect on, and share. There are no wrong answers. Be honest, be curious, and enjoy the process. Happy Holidays!

Think of a time when YOU felt sad, left out, or worried. What did someone say or do that helped you feel better? Now use that memory to help a friend!

Before you write, DO this task with your family during the holiday. Then write about what happened!

Most of us hear — but few of us truly listen. This holiday, do a Listening Experiment and then write about it.

Before writing, spend 3 days doing a Social Media Audit. Then write your reflections based on real data — your own.

CLASS 12 | Emotional Resilience — A Capstone Task

This is a two-part task. It is personal, honest, and yours. There is no model answer.

Part A — Personal Resilience Narrative (200+ words):

Write about the hardest challenge you have faced so far. Be honest.

- What broke down — plans, relationships, confidence, performance?
- What did you draw on to keep going?
- What did you lose, and what did you gain?
- What does resilience feel like from the inside — not as a definition, but as your lived experience?

Part B — A Letter to Your Future Self:

Write a letter to yourself, to be read one year from now. Include:

- What you are afraid of right now?
- What you hope for?
- One promise you are making to yourself about how you will handle failure.
- One thing you have learned about yourself that you never want to forget.

Family / Holiday Connection: Seal the letter and give it to a trusted adult to return to you — or set a calendar reminder for a year from today. This letter is for you, not for a grade.

Optional Reading: Any excerpt from Viktor Frankl's Man's Search for Meaning. Add a short paragraph on how his experience reshapes how you think about your own challenges.

