

**VIDYA NIKETAN**  
**BIRLA PUBLIC SCHOOL, PILANI (RAJASTHAN)**  
**SUMMER HOLIDAY HOMEWORK – 2026**

**Class: X**

All students of Class X are hereby informed to complete the following Art assignments during the summer vacation and submit them immediately after reopening of the school.

**Landscape Assignments**

- Make 5 colourful landscape paintings.
- Make 5 black pen drawing landscapes.
- Size: A3
- Paper: Canson Water Colour Paper
- Maintain proper composition, neatness, creativity, light and shade effects.

**Important Instructions**

1. Write your Name, Class & Section on the back side of each sheet.
2. Use proper colouring techniques and clean finishing.
3. Submit all assignments on time after summer vacation.
4. Original and creative work will be appreciated.

**Pravin Kedar**  
Art Teacher

**PRINCIPAL**



**BIRLA PUBLIC SCHOOL, PILANI**  
**BPS FUTURE QUEST (SUMMERCATION HOMEWORK)**  
**“EXPLORE, DREAM, DECIDE YOUR PATH”**  
**CLASSES - IX & X**

**Objective:**

To enable students to explore their interests, understand diverse career pathways, interact with real professionals, and gain hands-on experience using the **CBSE Career Guidance Portal**, helping them make informed choices for their future.

**Task 1: Explore the CBSE Career Guidance Portal**

**Steps:**

**1. Visit the Portal:**

[CBSE Career Guidance Portal](https://cbsecareerguidance.in/) (<https://cbsecareerguidance.in/>)

**2. Create an Account:**

- Sign up using your details, or
- Log in via your Gmail account.

**Important:**

While creating your account, please choose **Rajasthan** as the State  
(Do not select your hometown state, as the school is located in Rajasthan).

After selecting the state, choose your school name from the drop-down list:

**Vidya Niketan Birla Public School, Pilani**

**3. Explore the Dashboard:**

Familiarize yourself with the following key sections:

- **Career Library / Courses:**  
Explore different career options and the courses related to them.
- **Colleges:**  
Learn about colleges offering courses in your areas of interest.
- **Exams:**  
Check entrance exams required for your chosen careers.

**Note:**

Take notes of the features you find most useful or interesting.

Think of it as a **career treasure hunt!**

## Task 2: Explore Five Careers

### Steps:

1. Choose **five careers** from the **Career Library** that interest you (e.g., Game Developer, Architect, Psychologist, Environmental Scientist, Graphic Designer).
2. For each selected career, write a brief note on:
  - **Nature of work**
  - **Required subjects in Classes 11–12**
  - **Skills needed**
  - **Growth prospects**
  - **Why you liked this option?**

## Task 3: Connect With a Professional

### Steps:

1. Reach out to at least one professional working in a career you are exploring. You can connect via:
  - LinkedIn or social media
  - School alumni or family friends
  - Professional networks
2. Ask about their daily work, challenges, and rewards.
3. Record your findings:
  - 5 Positive Aspects of the career
  - 5 Challenging Aspects of the career
4. Write a short reflection (100–150 words):
  - How did the interaction influence your understanding of the career?
  - Did it change your opinion or interest in this career?

**Note: Include a photo, screenshot, or short video clip from your interaction.**

## Submission Requirements: Students must submit

### 1.A PowerPoint Presentation (PPT):

Summarizing:

- The five careers explored
- Key highlights from the Career Library research
- Insights gathered from the professional interaction

### 2. A Reflective Sheet:

- What did you learn from this activity?
- How has your understanding of careers changed?
- Which career did you find most interesting and why?
- Did talking to a professional change your opinion about any career?

### Submission Deadline:

- First day after summer vacation
- Bring your PPT on a **Pendrive** and submit it to **Mrs.Aditi (Senior Asst.Academic Coordinator)** or share via email [priyanka020286@bpspilani.edu.in](mailto:priyanka020286@bpspilani.edu.in)/[varsha020071@bpspilani.edu.in](mailto:varsha020071@bpspilani.edu.in)

**BIRLA PUBLIC SCHOOL , Pilani**  
**SUMMER VACATION HOME ASSIGNMENT -2026-27**  
**SUBJECT-ENGLISH**  
**CLASS-X**

NAME-----H.NO. -----  
Class & Sec.: \_\_\_\_\_

**HOLIDAY HOMEWORK GUIDELINES**

- Use creative presentation and illustrations wherever required.
- Read all instructions carefully before attempting the questions.
- Submission will be assessed for Internal Assessment marks.

**SECTION A – ART INTEGRATED PROJECT**

**Theme:**

***“Cultural Connection between Rajasthan and Assam”***

**Objective:**

To explore and compare the rich cultural heritage, traditions, art forms, food, festivals, language, and lifestyle of Rajasthan and Assam.

**PROJECT TASKS**

**1. Cover Page**

Design a creative cover page with:

- Topic name
- Student’s name
- Class & section
- Roll number
- Relevant pictures/artwork

**2. Introduction (100–120 words)**

Write a short introduction on:

“Unity in Diversity: Cultural Heritage of Rajasthan and Assam”

**3. Comparative Study**

Complete the following table:

<b>Basis of Comparison</b>	<b>Rajasthan</b>	<b>Assam</b>
Traditional Dress	_____	_____
Famous Dance Form	_____	_____
Main Festival	_____	_____

**Basis of Comparison Rajasthan Assam**

Famous Food	_____	_____
Language Spoken	_____	_____
Tourist Attraction	_____	_____

**4. Picture-Based Activity** <https://padlet.com/aditiarnavchoudhary/summer-assignment-picture-based-activity-updbb7nwy25p1hl4>

( Submit the same on the link shared)

Create a **Canva Poster** on

- Folk dances
- Traditional attire
- Monuments
- Festivals
- Handicrafts

Write 2–3 lines below each picture.

**5. Art Integration Activity**

**Complete ANY TWO activities:**

Draw Warli/Madhubani-style art

Prepare a collage of Rajasthan and Assam culture

Make a travel brochure

Design a traditional costume sketch

Create slogans promoting cultural unity

**6. Attempt online Quizzes on Grammar**

1. <https://learnenglishteens.britishcouncil.org/grammar/b1-b2-grammar/modals-deduction>

2. <https://learnenglishteens.britishcouncil.org/grammar/b1-b2-grammar/passive-forms>

3. <https://learnenglishteens.britishcouncil.org/grammar/b1-b2-grammar/reported-speech>

4. <https://wayground.com/admin/quiz/62e88cac0b81cc001daf3f83/sentence-structure-rearranging?page=search-result-page&source=search-result-page&referrer=/admin/search/all/Puntuations%20and%20jumbled%20sentences>

5. <https://wayground.com/admin/quiz/5f6062c8490b65001b4078fe/tenses?page=search-result-page&source=search-result-page&referrer=/admin/search/all/tenses%20grade%2010>

**1. Conjuguez les verbes suivants au présent, à l'imparfait, au futur simple, au passé composé et à l'impératif:**

(i) Être (ii) Avoir (iii) Aller (iv) Faire (v) Venir (vi) Pouvoir (vii) Vouloir (viii)  
Prendre (ix) Voir (x) Mettre

**2. Répondez aux questions suivantes: (20-30 mots)**

(i) Que est le  $\frac{3}{4}$  de les  $\frac{3}{4}$  de l'élevé? / À quoi  $\frac{3}{4}$  de les  $\frac{3}{4}$  de l'élevé?

(ii) Qu'est-ce qui constitue les  $\frac{3}{4}$  de l'élevé?

(iii) Nommez 2 chaînes de  $\frac{3}{4}$  de télévision françaises.

(iv) Que peut-on faire dans une bibliothèque?

(v) Comment peut-on s'inscrire dans une bibliothèque?

(vi) Comment peut-on faire le jardinage?

(vii) Qu'est-ce qu'un quotidien? Donnez un exemple.

(viii) Quelles sont les rubriques d'un journal?

(ix) Nommez deux journaux français.

(x) Quelles sont les responsabilités du Président français?

# विद्या निकेतन बिरला पब्लिक स्कूल पिलानी

## ग्रीष्मावकाश गृहकार्य (2026 -27)

कक्षा 10 - विषय - हिंदी

### निर्देश:

- कार्य स्पष्ट, सुंदर और पठनीय होना चाहिए।
- परियोजना कार्य में चित्रों और रंगों का रचनात्मक प्रयोग करें।
- समस्त कार्य एक अलग पतली कॉपी या फोल्डर में व्यवस्थित रूप से जमा करें।

### 1. रचनात्मक लेखन (परियोजना कार्य)

- **विज्ञापन लेखन:** अपनी पसंद के किसी भी स्वदेशी उत्पाद (जैसे: मिट्टी के बर्तन, सूती वस्त्र या हर्बल उत्पाद) के लिए एक आकर्षक विज्ञापन **A4 साइज शीट** पर तैयार कीजिए। (शब्द सीमा: 25-50 शब्द)
- **अनुच्छेद लेखन:** निम्नलिखित विषयों में से किसी एक पर 120-150 शब्दों में अनुच्छेद लिखिए:

#### (क) डिजिटल इंडिया और छात्र

संकेत बिंदु : प्रस्तावना , शिक्षा के क्षेत्र में बदलाव, ज्ञान तक आसान पहुँच, चुनौतियाँ, निष्कर्ष:

#### (ख) जल संरक्षण: कल की आवश्यकता

संकेत बिंदु : प्रस्तावना, संकट का कारण, जल संरक्षण की आवश्यकता, संरक्षण के उपाय, जन जागरूकता, निष्कर्ष:

- संदेश लेखन

(क) अपने छोटे भाई को कक्षा 10वीं की बोर्ड परीक्षा में प्रथम स्थान प्राप्त करने पर एक बधाई संदेश (30-40 शब्दों में) लिखिए।

(ख) गणतंत्र दिवस के शुभ अवसर पर देशवासियों के नाम एक शुभकामना संदेश तैयार कीजिए।

### 3. कला समेकित गतिविधि (Art Integrated Activity)

- सिक्किम (या आपके आवंटित राज्य) की कला और संस्कृति: भारत के किसी अन्य राज्य (उदाहरण के लिए सिक्किम) की वेशभूषा, खान-पान और त्योहारों पर आधारित एक सचित्र 'ट्रेवल ब्रोशर' (Travel Brochure) तैयार कीजिए। (यह CBSE के आर्ट-इंटीग्रेटेड प्रोजेक्ट के अनुसार है)।

### 4. पठन कौशल

- छुट्टियों के दौरान अपनी पूरक पुस्तिका 'कृतिका' के तीनों पाठ (माता का आँचल, 'साना-साना हाथ जोड़ी' तथा मैं क्यों लिखता हूँ) पढ़ें और उसका सारांश अपने शब्दों में लिखिए।

### 5. व्याकरण एवं भाषाई कौशल (कार्य पत्र )

कृपया ध्यान दें इस कार्य पत्र का प्रिंट लेकर सम्बंधित प्रश्नों के उत्तर उचित स्थान पर लिखें -  
प्रश्न अगले पृष्ठ पर हैं -

## 5. व्याकरण एवं भाषाई कौशल (कार्य पत्र )

(क) अलंकार पहचानकर उसका भेद लिखिए - उत्तर सामने लिखें

1. अवधेश के बालक चारि सदा तुलसी मन-मंदिर मा बिहरे -
2. कोटि कुलिस सम वचन तुम्हारा-
3. उधो तुम हो अति बड़ भागी । ज्यों जल माहँ तेल की गगरी -
4. जगी वनस्पतियाँ अलसाई मुँह धोया जल से -
5. सरिता मानो चाँदनी की चमकती रस्सी हो -
6. उसके रोने से सारी धरती डूब गई -
7. देख लो साकेत नगरी है यहीं स्वर्ग से मिलने गगन में जा रही -
8. फाग गाता मास फागुन है -
9. मखमल के झूले पड़े हाथी-सा-टीला -
- 10 प्रीति-नदी में पाँव ना बोरयो -

(ख) पद परिचय पर आधारित प्रश्नों के रेखांकित पदों का परिचय लिखिए :

1. मैंने कुछ कविताओं का संकलन किया है ।
2. उन्होंने कोलकाता विश्वविद्यालय से एम. ए. किया ।
3. भोर में लोगों ने गीत नहीं सुना
4. उनके द्वारा मुझे सच्चाई का अहसास कराया गया ।
5. लेखिका ने बचपन में गिल्ली-डंडा भी खेला ।

(ग) वाच्य संबंधी प्रश्न

1. भोर में लोगोंने गीत सुना (वाच्य पहचानकर वाच्य-भेद का नाम लिखिए)

2. उनके द्वारा मुझे सच्चाई का अहसास कराया गया । (कर्तृ वाच्य में बदलिए)
3. उठो, अब पढ़ा जाय । (वाच्य पहचानकर वाच्य-भेद का नाम लिखिए)
4. रीतिका ने बचपन में गिल्ली-डंडा भी खेला । (कर्म वाच्य में बदलिए)
5. चलो, अब टहला जाय । (कर्तृ वाच्य में बदलिए)
6. कवि ने प्रकृति की व्यापकता का वर्णन किया है । (कर्म वाच्य में बदलिए)
7. शिक्षक द्वारा छात्रों को संबोधित किया गया । (कर्तृ वाच्य में बदलिए)
8. लेखिका ने अपने दैनिक अनुभवों को डायरी में लिखा । (कर्म वाच्य में बदलिए)

(घ) रचना के आधार पर वाक्य भेद

1. वह बाज़ार गया और फल लाया। रचना के आधार पर कौन-सा वाक्य भेद है?
2. जैसे ही सूर्यास्त हुआ, चारों ओर अँधेरा छा गया। (संयुक्त वाक्य में बदलिए)
3. शिक्षक के कक्षा में आते ही छात्र शांत हो गए। रचना के आधार पर वाक्य भेद है: ?
4. संयुक्त वाक्य 'वह बीमार था इसलिए स्कूल नहीं आया' का सरल वाक्य रूप होगा:
5. जहाँ तुम रहते हो, वहीं मैं भी रहता हूँ। रचना के आधार पर भेद है ?

**THE STUDENTS OF MENTIONED CLASSES SHOULD PREPARE FOR 33<sup>rd</sup> IPSC  
ONLINE G.K TEST IN SUMMER VACATION AS PER THE GIVEN SYLLABUS  
CLASS - IX & X (Category C)**

**Test Date: August 18, 2026 to September 10, 2026**

➤ **GEOGRAPHY & INDIAN**

**HERITAGE AND CULTURE**

- Significant events, personalities of Indian history
- Salient features of Indian Society, Diversity of India.
- Art and Culture of North India
- SDGs, India – Size and Location, Physical Features of India
- Major Rivers, Lakes and Seas
- Climate Change, Factors Influencing the Climate
- Natural Vegetation and Wild Life; Major Species, their Distribution,
- Discoveries & Theories.

➤ **SCIENCE AND TECHNOLOGY**

- Developments and their applications and effects in everyday life
- Achievements of Indians in science & technology
- Development in the field of science & new technology
- Global Warming
- Environmental pollution and degradation
- Bio reserves, Bio diversity Parks, Project Tiger
- Physics in daily life
- Acids, Bases & Salts.
- New inventions & discoveries.

➤ **ECONOMICS & POLITICAL SCIENCE**

- Democracy, Constitutional design
- Electoral Politics
- Working of Institutions (Role of Parliament, Role of Prime minister and President and other Ministers of government)
- Poverty; Human Capital; Banks and Credit, Political Parties.

➤ **CURRENT AFFAIRS**

- CBSE Heritage Quiz, Newspaper – Student edition, etc.
- Current affairs – From July 2025 to March 2026.
- Abbreviations, Antonyms, Synonyms, Authors and their famous books

➤ **IT & COMPUTER**

- Apps, Playstore, windows
- AI, FIT, Multimedia

➤ **LITERATURE**

- Books and authors; Awards; famous speeches & quotes;
- Latest Abbreviations, Antonyms, Synonyms, Indian poets

➤ **REASONING & MENTAL ABILITY**

- Logical reasoning and analytical ability.
- Decision-making and problem-solving, General mental ability.
- Basic numeracy (numbers and their relations, orders of magnitude)

➤ **Visual Arts & Performing Arts**

- Musical Instruments, famous Musicians & Singers, Awards.
- World Dance forms & styles

➤ **Games & Sports**

- Cups & shields, Awards, National Sports Day, Famous Sports Personalities –
- Cricket & Hockey



**BIRLA PUBLIC SCHOOL, PILANI**  
**SUMMER VACATION HOMEWORK-2026-27**

**CLASS-10**

**Subject – Mathematics**

1. **Indian Mathematicians:** Create a file on contributions of Aryabhata, Brahmagupta, and Bhaskaracharya.
  
2. **Household Statistics Project:** Collect data from household electricity bills for the last 6 months. Represent this data using bar graphs and calculate mean, median, and mode.
  
3. **Pythagorean Theorem Proof:** Create a visual display demonstrating Pythagorean Theorem ( $P^2 + B^2 = H^2$ ) using cardboard cutouts of triangles and squares.
  
4. Prepare a Mind map/Concept Map/ Summary of first three units including illustrative examples.  
  
1.Real Numbers    2. Polynomials    3. Pair of Linear Equations in Two variables.
  
5. **Explore** the history of Pi ( $\pi$ )

VIDYA NIKETAN

BIRLA PUBLIC SCHOOL, PILANI (RAJASTHAN)

SUMMER HOME ASSIGNMENT-2026-27

Class X

SUBJECT-HINDUSTANI MUSIC

S.NO	CLASS	PROJECT
1.	X	Project based on North Indian & South Indian Percussion Instruments (To be Made in chart Paper)
2.	X	<b>Learn and Practice of Lyrics Regional Bengali Song ( Muktir o Mondiro Sopano Tole)for Inter Bet Patriotic Song Competition 2026.</b> <b>Song lyrics and Listen Link given below</b>
3.	<b>Link of Lyrics and Listening song</b>	<a href="https://youtu.be/8EcWWoXgijE?si=b757lleozuwUS9i-muktiro mondiro sopano tole lyrics in hindi - Google Search">https://youtu.be/8EcWWoXgijE?si=b757lleozuwUS9i-muktiro mondiro sopano tole lyrics in hindi - Google Search</a>
4.	X	Pictorial Description of your Instrument. (Harmonium and Tabla } Project to be made in Chart Paper

HOD (Music)

Dr. Subroto Roy Chowdhury



# विद्या निकेतन बिरला पब्लिक स्कूल पिलानी

ग्रीष्मावकाश गृहकार्य (2026 -27)

कक्षा -10 (संस्कृत)

आवश्यक निर्देश - ग्रीष्मकालीन गृहकार्य के लिए अलग से एक पतली उत्तर पुस्तिका बनाएँ और यह सारा कार्य तथा अभ्यास पत्र उसमें लगाएं।

अभ्यास पत्रों में दिए गए विषयों

(अपठित बोधन , पत्र , चित्र वर्णन , अनुच्छेद, संवादपूर्ति , कथापूर्ति , संशोधन कार्य ) का कार्य पूर्ण करें।

शब्दरूप लिखें एवं स्मरण करें -

पुल्लिङ्ग शब्दरूप - देव, शिवि, शिशु, पितृ स्त्रीलिङ्ग शब्दरूप - रमा, गति, सरस्वती  
नपुंसकलिङ्ग शब्दरूप - फल, मधु

धातुरूप (पाँचों लकारों में)लिखें और स्मरण करें - पठ् , कृ , गम् , भू , अस्

पाठ्यक्रम पर आधारित सभी अव्यय स्मरण करें और प्रत्येक अव्यय का प्रयोग करते हुए एक-एक वाक्य बनाएँ।

**Class 10 Chemistry Worksheet**  
**Chapter 1: Chemical Reactions and Equations**

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**Section A: Multiple Choice Questions (20 × 1 = 20 marks)**

1. A chemical reaction involves:
  - a) Only physical change
  - b) Formation of new substances
  - c) Change in state only
  - d) None of these
2. Which of the following is a chemical change?
  - a) Melting of ice
  - b) Boiling of water
  - c) Rusting of iron
  - d) Cutting of paper
3. The reaction:  $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + \text{H}_2$  is an example of:
  - a) Combination reaction
  - b) Decomposition reaction
  - c) Displacement reaction
  - d) Double displacement reaction
4. Which gas is released when metals react with acids?
  - a) Oxygen
  - b) Hydrogen
  - c) Nitrogen
  - d) Carbon dioxide
5. The balanced form of  $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$  is:
  - a)  $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
  - b)  $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
  - c)  $\text{H}_2 + 2\text{O}_2 \rightarrow \text{H}_2\text{O}$
  - d)  $2\text{H}_2 + 2\text{O}_2 \rightarrow 2\text{H}_2\text{O}$
6. Which type of reaction is  $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2$ ?
  - a) Combination
  - b) Decomposition
  - c) Displacement
  - d) Redox
7. Oxidation is defined as:
  - a) Gain of electrons
  - b) Loss of oxygen
  - c) Gain of oxygen
  - d) Loss of hydrogen
8. Which is a reducing agent?
  - a) Substance that gains oxygen
  - b) Substance that loses electrons
  - c) Substance that gains electrons
  - d) Substance that gains hydrogen
9. What type of reaction is  $2\text{AgCl} \rightarrow 2\text{Ag} + \text{Cl}_2$ ?
  - a) Combination
  - b) Decomposition
  - c) Displacement
  - d) Neutralization

10. Rusting of iron requires:
- Oxygen only
  - Water only
  - Oxygen and water
  - Carbon dioxide
11. Which reaction is endothermic?
- Burning of fuel
  - Photosynthesis
  - Respiration
  - Explosion
12. What is the color change in rusting?
- Black to white
  - Grey to reddish-brown
  - White to blue
  - Yellow to green
13. Which is a precipitation reaction?
- $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{AgCl} + \text{NaNO}_3$
  - $\text{H}_2 + \text{Cl}_2 \rightarrow \text{HCl}$
  - $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$
  - $\text{Zn} + \text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$
14. Which substance is oxidized in  $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$ ?
- Zn
  - Cu
  - $\text{SO}_4$
  - None
15. Which reaction releases heat?
- Endothermic
  - Exothermic
  - Neutral
  - Reversible
16. What is rancidity?
- Spoilage of food due to oxidation
  - Evaporation
  - Dissolution
  - Freezing
17. Which method prevents rancidity?
- Heating
  - Adding oxygen
  - Refrigeration
  - Exposure to air
18. Which is a double displacement reaction?
- $\text{A} + \text{BC} \rightarrow \text{AC} + \text{B}$
  - $\text{AB} + \text{CD} \rightarrow \text{AD} + \text{CB}$
  - $\text{A} + \text{B} \rightarrow \text{AB}$
  - $\text{AB} \rightarrow \text{A} + \text{B}$
19. Which is NOT a sign of chemical reaction?
- Change in color
  - Formation of gas
  - Change in shape
  - Formation of precipitate

20. Which metal does NOT react with dilute acids?
- Zinc
  - Iron
  - Copper
  - Magnesium
- 

**Section B: Short Answer Questions (10 × 2 = 20 marks)**

- Define a chemical reaction with an example.
  - Write any two characteristics of chemical reactions.
  - What is a balanced chemical equation?
  - State the law of conservation of mass.
  - Define oxidation and reduction.
  - What is a displacement reaction? Give one example.
  - What is corrosion?
  - What is rancidity? How can it be prevented?
  - Differentiate between exothermic and endothermic reactions.
  - Write the steps involved in balancing a chemical equation.
- 

**Section C: Long Answer Questions (5 × 5 = 25 marks)**

- Explain different types of chemical reactions** with suitable examples:
  - Combination
  - Decomposition
  - Displacement
  - Double displacement
- Describe oxidation and reduction reactions** with real-life examples. Explain why they always occur together.
- Explain corrosion and rancidity** in detail. Suggest preventive measures for both.
- Activity-Based Question:**  
Perform an activity to show that a chemical reaction takes place when iron nails are dipped in copper sulphate solution.
  - Materials required
  - Procedure
  - Observation
  - Conclusion
- Analytical Question:**  
A student observes that when a white solid is heated, it decomposes into a solid and a gas.
  - Identify the type of reaction
  - Write a possible chemical equation
  - Explain whether it is endothermic or exothermic

# PHYSICS

## ART-INTEGRATED ASSIGNMENT

PHYSICS -Chapter: Light – Reflection and Refraction

Session 2026–27

As per CBSE Competency-Based Education Pattern

### Assignment Theme

“Exploring the World of Light Through Art & Creativity”

This assignment is designed to:

- Develop scientific thinking and creativity
- Connect physics with art and real-life experiences
- Promote observation, innovation, and problem-solving skills
- Encourage competency-based learning
- Enhance presentation and communication skills

### General Instructions

1. Use A4 size sheets or a scrapbook.
2. Draw neat labelled diagrams wherever required.
3. Use colours, charts, sketches, and creative borders.
4. Write all activities in your own words.
5. Use eco-friendly materials whenever possible.
6. Submission should be neat and creative. **(ANY 4 Assignment to be done)**

### Activity 1 – Light Around Us

Observe your surroundings and list and explain at least 10 situations where reflection or refraction of light takes place in daily life. (Support with diagrams or pictures)

Creative Thinking Task:

“How would life be different if reflection of light did not exist?”

(100–120 words)

### Activity 2 – Science Through Art

Draw and decorate the following ray diagrams artistically:

- Reflection from plane mirror
- Concave mirror – image formation
- Convex mirror – image formation
- Refraction through glass slab
- Refraction through convex lens

- Refraction through concave lens

### **Activity 3 – Model Making**

Prepare any ONE working model related to reflection or refraction and explain its working

- Simple telescope
- Microscope

### **Activity 4 – Role of Light in Indian Art & Culture**

Research how light is used in Indian culture, festivals, and art.

Examples:

- Diyas during Diwali
- Reflection in palaces and monuments
- Mirror work in traditional dresses
- Rangoli and decorative lighting

### **Activity 5 – Art and Daily Life**

Design a poster on road safety reflectors.

### **Activity 6 – Art-Integrated Mind Map**

Create a colourful mind map on “Reflection and Refraction of Light” including:

- Types of mirrors
- Types of lenses
- Laws of reflection
- Refraction
- Applications
- Important formulae
- Daily life uses

### **Activity 7 – Future Thinking Challenge**

Imagine you are a scientist in the year 2050 and design a futuristic device based on reflection or refraction of light.

Include:

- Name of the invention
- Purpose
- Scientific principle used
- Benefits to society

### **Self-Reflection Section**

1. Which activity did you enjoy the most?
2. What new concept did you learn?
3. How did art help you understand science better?
4. Which real-life application of light amazed you the most?

# **Biology**

## **Worksheet 1: Life Processes – Nutrition**

### **Knowledge based:**

- Q1. Define Holozoic nutrition and give one example.
- Q2. Write the two differences between autotrophic and heterotrophic nutrition.
- Q3. Name the enzyme present in human saliva and state its function

### **Application based:**

- Q4. If a plant's stomata are blocked with Vaseline, how will it affect the process of photosynthesis? Justify your answer.
- Q5. Why is the small intestine in humans long and coiled?

### **Analytical & HOTS:**

- Q6. Analyze: During an experiment, a student noticed that a leaf turned blue-black with iodine only in the green portions. What does this indicate about the requirement for photosynthesis?
- Q7. Design a flow chart showing the complete process of digestion in the human alimentary canal from mouth to anus.

### **Case based:**

Q8. Heterotrophic nutrition is a mode of nutrition in which organisms obtain readymade organic food from outside sources. The organisms that depend upon outside sources for obtaining organic nutrients are called heterotrophs. Heterotrophic nutrition is of three types: saprophytic, parasitic and holozoic nutrition.

1. In which of the following groups of organism's food material is broken outside the body and absorbed:

- (a) Mushroom, green plants, Amoeba      b) Yeast, mushroom, bread mould c) Paramecium, Amoeba, Cuscuta      d) Cuscuta, lice, tapeworm

2. Which of the following is a parasite:

(a) Tapeworm   b) Yeast   c) Amoeba   d) Earthworm

3. Which of the following is an example of saprotroph?

(a) Grass   b) Mushroom   (c) Amoeba   d) Paramecium

4. Heterotrophic nutrition involves :

a) production of simple sugar from inorganic compounds   (b) utilisation of chemical energy to prepare food   (c) utilisation of energy obtained by plants   (d) all of these

### Interactive and Research:

Plant a sapling on World Environment Day (5<sup>th</sup> June) in your garden or nearby area where you can water everyday. Check its growth, take images.

Research on the necessary condition for that particular plant growth, nutrients and fertilizers required, quantity of water and sunlight required and the season in which it flourishes. Prepare a report with images

## Worksheet 2: Life Processes – Respiration

### Knowledge based:

Q1. Name the different parts of human respiratory system

Q2. What are the end products of anaerobic respiration in yeast?

Q3. Give the full form of ADP and ATP.

### Application based:

Q4. Why do we get muscle cramps after sudden heavy exercise?

Q5. How are the alveoli designed to maximize the exchange of gases?

### Analytical & HOTS:

Q6. Comparison: Differentiate between the rate of breathing in aquatic organisms and terrestrial organisms. Why is there a difference?

Q7. Evaluate: A person is smoking regularly. How will this habit specifically affect the oxygen-carrying capacity of their blood?

Q8. Brain genie: Complete the challenge 1 to 7 on “Human Biology” module and share your badge screenshot

## Art Integrated Project (AIP)

**1. Topic:** 'The Living Canvas of Life Processes'

**Task:** Create a **Visual Infographic** or a **3D Model** using eco-friendly materials (like clay, dried leaves, or waste paper etc) representing either the 'Human Digestive System' or the 'Human Respiratory System'.

**Guidelines:**

- Incorporate vibrant colors to distinguish different organs.
- Label all parts clearly using calligraphy or printed tags.
- **Research Element:** Attach a 1-page report explaining the 'Art-Science' connection —how visual representation helps in understanding complex biological functions.

**OR**

**2. Topic: Flora and Fauna of Rajasthan and surrounding states**

**Task:** Create a collage of different plants, flowers, bird and animals' images of Rajasthan and surrounding states



# BIRLA PUBLIC SCHOOL, PILANI

## Holiday Homework (2026-27)

Class: X

Subject: Social Science

### General Instructions:

1. **Cover page**- Displaying the topic.
2. **Acknowledgement** – Thanking the people or institution that has helped you in completion of your project.
3. **Certificate**- Mentioning your name and the name of teacher under whose supervision you have completed your work.
4. **Index**- Giving the list of contents with page numbers.
5. **Introduction**- Giving the purpose and importance of a study.
6. **Chapters**- Give a title to each chapter along with details, pictures and newspaper cuttings.
7. **Conclusion**- What do you learn from your study?
8. **Bibliography**- Showing the sources from where you have gathered information.  
Present the following in your project report:
  - Data/Statistical Analysis/Map work
  - Analysis/Explanation and interpretation
  - Bibliography
9. The students must submit original work.
10. Project Report should be hand written only.
11. Eco-friendly materials can be used by students.
12. Students can use primary as well as secondary sources for the research work.

### QUESTION-1

➤ Every student has to compulsorily undertake any one project on the following topics:

#### 1. Consumer Awareness

The students must write about following key matter:

- a. Meaning of Consumer Awareness
- b. Forms of Consumer Exploitation / Malpractices
- c. Factors causing exploitation of the Consumers
- d. Enactment of COPRA 1986 and its benefits
- e. Various Consumer Rights
- f. Role of WTO in protection of Consumers
- g. Consumer Protection Measures

OR

#### 2. Social Issues

Prepare a project on any three of the following social evils still prevailing in our society. Social Issues; highlighting the reasons, effects and suggest solutions to get them eliminated from our country.

1. Poverty
2. Illiteracy
3. Corruption
4. Gender Inequality
5. Inflation, hoarding and panic buying during pandemic crisis

**6. Domestic violence against women and child abuse.**

The students must write about following key matter:

- a. Social issues in Indian Society**
- b. Reforms initiated to combat the social issues**
- c. Role of Popular leaders and movements.**

**OR**

**3. Sustainable Development**

The students must write about following key matter:

- a. Need of development.**
- b. Importance of development**
- c. Policies initiated to adopt measures for Sustainable Growth.**

**QUESTION-2**

**GEOGRAPHY** (Outline Political Map of India)

**Chapter 1: Resources and Development** (Identification only)

- a. Major soil Types

**Chapter 3: Water Resources** (Locating and Labeling)

**Dams:**

Salal , Bhakra Nangal, Tehri, Rana Pratap Sagar, Sardar Sarovar, Hirakud, Nagarjuna Sagar, Tungabhadra

**Major area of rice and wheat Largest /Major producer state of:-**

Sugarcane ,Tea ,Coffee ,Rubber ,Cotton ,Jute

**Indian National Congress Sessions:-**

Calcutta (Sept.1920) ,Nagpur (December 1920) ,Madras (1927) ,Lahore (1929)

**Important Centers of Indian National Movement**

Champaran , Kheda , Ahmedabad , Chauri Chaura , Dandi , Amritsar

**Software Technology Parks:-**

Noida,Gandhinagar, Mumbai, Pune, Hyderabad, Bengaluru, Chennai,Thiruvananthapuram.

**Power plants:-**

Thermal –Namrup, Ramagundam, Singrauli

Nuclear –Narora,Tarapur, Kakrapara, Kalpakkam

**Major Ports and International Airport:-**

Ports-Kandla, Mumbai, Marmagao, New Manglore, Kochi, Tuticorn, Chennai, Vishakhapattnam, Paradip, Haldia

Airports-Raja Sansi, Indira Gandhi, Chatrapati Shivaji, Meenam Bakkam, Netaji Subhash Chandra Bose, Rajiv Gandhi

**Iron Ore mines:-**

Mayurbhanj, Bellary, Durg, Kudremukh, Bailadila, Coal mines- Raniganj, Bokaro, Talcher, Neyveli,

**Oil Fields:-**

- a. Digboi, Naharkatia, Mumbai High, Bassien, Kalol, Ankeleshwar)

**NOTE:-Kindly submit the project and maps in spiral or hard bound file after summer vacations.**